

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

## Costa Rica

### Annual Report 2016

#### IAC Annual Report General Instructions

Annex IV of the Convention text states that each Contracting Party shall hand in an Annual Report. To complete this Annual Report, Focal Points should consult with various stakeholders involved in sea turtle issues. If you have any questions regarding this Annual Report, please write to the PT Secretariat at [secretario@iacseaturtle.org](mailto:secretario@iacseaturtle.org)

Please note that the date to submit this Annual Report is **April 30, 2016**.

#### Part I (General Information)

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

##### a.\_ Focal Point

Institution	Ministry of Environment and Energy
Name	Marco A. Solano
Date Annual Report submitted	May 20 <sup>th</sup> , 2016

##### b.\_ Agency or Institution responsible for preparing this report

Name of Agency or Institution	Ministry of Environment and Energy- Conservation Areas National System
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### c. \_ Others who participated in the preparation of this report

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#### **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 implemented by governmental, non-governmental and private institutions related to sea turtles.*

Costa Rica does not have a national action plan for sea turtle conservation, however its development has been proposed for the next Strategic Annual Plan. Two workshops have taken place for this purpose with participation of researchers, NGOs representatives, academy and governmental reps. The workshops aimed for the following objectives: To create a permanent forum, for discussion, analysis and recommendations, to have an updated diagnosis of sea turtles current status in the country, and begin with the development of a national sea turtle conservation strategy and policy (Workshops reports is attached).

On the other hand, representatives of the country have taken part in the development of regional action plans proposals such as the Regional Action Plan to prevent the Eastern Pacific Leatherback Turtle Decline (<http://savepacificleatherback.org/es/>). Participation in this plan is voluntary and comprised by researchers, non-governmental organizations, and some governmental representatives. Costa Rica representative is the IAC consultative committee rep, Rotney Piedra, and scientific committee rep, Didiher Chacón, together with other researchers.

The Ministry of Environment and Energy (MINAE) Conservation Areas National System (SINAC) is the agency in charge of managing Marine Protected Areas including sea turtle nesting sites, as well as of protecting, managing and conserving wildlife. The Marine Protected Areas have or are in the process to have or update general management plans. Those MPAs including sea turtle conservation within their objectives include at least 80% of the areas, a monitoring program, and a conservation and management plan specific for each site. This program aims to promote and implement protection, conservation, research and environmental



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education activities regarding sea turtles. These activities are implemented by SINAC, NGOs, academic institutions, local guides associations, communal development associations, researchers and governmental institutions such as the Fisheries and Aquaculture National Institute (INCOPECSA) and the Coast Guard National Service (SNG), inside and outside the Protected Areas.

Costa Rica has made important efforts in terms of improving ecological representativeness and considering how threatened sea turtles are, these species are one of the conservation targets. Five species nest and reproduce in the country, use foraging areas, and are found in different stages of their life cycle in both, the Caribbean and Pacific coasts: leatherback (*Dermochelys coriacea*), green turtle (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), olive ridley (*Lepidochelys olivacea*) and loggerhead turtle (*Caretta caretta*).

Current conservation efforts are kept in important place such as Santa Elena Bay, Cabo Blanco, South Pacific, and the Caribbean, which include sea turtles in their conservation targets. Other conservation gaps are pending, but there are important stakeholders willing to collaborate with the regulation process which is the case in Punta Pargos – Punta Gorda, in the Pacific North coast, an important area for sea turtles nesting and movement.

Research, hatcheries management, tourism and volunteering activities regarding sea turtles required procedures and permits issued by MINAE through SINAC, when performed in protected areas. Outside protected areas, the two former and according to the new Wildlife Law, depend on SINAC. However, some procedures regarding research permits in protected areas require clarification, and INCOPECSA will also issue requests. Tourism activities are related to the Costa Rican Tourism Institute (ICT) and Municipalities. All research involving genetic and biochemical access is regulated by the Biodiversity Management National Council (CONAGEBIO). Regarding scientific fishing INCOPECSA issues a research permit.

The country has 11 conservation areas (AC), and 7 of these have sea turtle related sites. Each AC has a Research Program in charge of procedures and permits requests regarding sea turtles, including monitoring of approved research projects. It also establishes regulations and procedures related to research on biodiversity and cultural resources:



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#### Conservation Area La Amistad Caribe (ACLAC)

There are 10 nesting sites in ACLAC. Through its Marine and Coastal Program, ACLAC manages marine and coastal ecosystems involving local Caribbean communities regarding use and conservation of their resources. This comprehensive management enables better information management, strengthening citizens' participation and collaboration complying with the goals established by current national and international regulations. There is an ecosystem approach combined with research, education, enforcement, monitoring and outreach activities.

Cahuita National Park and Gandoca-Manzanillo Wildlife Mixed National Refuge (RNVS) are two important nesting sites for sea turtles within ACLAC. These places have their management plans, including all the actions required to comply with natural resources conservation, use and control responsibilities, including the sea turtles visiting this area: leatherback (*D. coriacea*), green (*C. mydas*), hawksbill (*E. imbricata*) and loggerhead (*C. caretta*). There are established sea turtle monitoring and research programs developed within the conservation area, such as the Sea Turtle Station, at rivers Mondonguillo and Serafin ([www.estacionlastortugas.org](http://www.estacionlastortugas.org)), The Endangered Wildlife Trust at Pacuare Reserve in Mondonguillo beach ([www.pacuarereserve.org](http://www.pacuarereserve.org)); the Save Parismina Sea Turtles Association (ASTOP, [www.parisminaturtles.org](http://www.parisminaturtles.org)); the Canadian Organization for Tropical Education and Rain Forest Conservation (COTERC, [info@coterc.org](mailto:info@coterc.org)), as well as with local communities, especially with the management of sea turtle sighting activities.

#### Conservation Area Tortuguero (ACTo)

Tortuguero National Park and Barra del Colorado Wildlife Refuge have been considered as important nesting and reproduction areas for green sea turtles (*C. mydas*). Other species of turtles are also monitored and protected such as the leatherback (*D. coriacea*), hawksbill (*E. imbricata*) and loggerhead (*C. caretta*). Management plans of these areas define as a priority sea turtles conservation, protection and research. Research on sea turtles nesting at Tortuguero National Park is done in coordination with non-governmental organizations such as Sea Turtle Conservancy (STC), which has been running a protection, conservation and monitoring program for more than fifty years. Regarding Barra del Colorado Wildlife National Refuge, sea turtle research is done in coordination with the non-governmental organization *The Canadian Organization for Tropical Education and Rainforest Conservation* (COTERC).



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#### Conservation Area Guanacaste (ACG)

There are 10 nesting sites at the ACG, among the most important are: Nancite, Naranjo, Coloradas, Potrero Grande, Junquillal, Blanca, Cabuyal and San Jose Island. The ACG general management plan is being finalized, including sea turtle management actions sustainability. Robust research and monitoring are being carried out in four main places: Nancite Beach, an olive ridley (*L. olivacea*) massive arrival and nesting beach, and San Jose Island, a nesting site in the Pacific for an important population of green sea turtles (*C. mydas*). Three species nest in Naranjo Beach, mainly green sea turtles. ACG supports this monitoring developed by Biocenosis Marina, The Leatherback Trust, and Last.

#### Conservation Area Tempisque (ACT)

There are 27 nesting sites in ACT, only 40% are protected with a management category, the beaches remaining are not declared as protected areas. However, this has not been an obstacle for monitoring, research, and protection of females and their nests.

Las Baulas Marine National Park management plan update is in its final stage. This is one of the most important nesting sites for the leatherback (*D. coriacea*) in the Pacific. Ostional Wildlife National Refuge management plan is being developed. This is one of the most important massive arrivals beaches for the olive ridley (*L. olivacea*) in the world. Both plans have identified sea turtles and their nesting habitats as management focal elements. Implementation of activities include, research, monitoring, habitat enhancement, mitigation activities, climate change adaptation, nests and hatchlings protection among other, performed with the participation of the local community through local guides associations, communal development associations and coordinated actions with several non-governmental organizations, state agencies, and national and international academic institutions. Camaronal and Caletas Arío Wildlife National Refuges, which are important nesting sites as well, also have management plans.

In the particular case of Las Baulas NMP, information from monitoring and research has contributed to the establishment of guidelines ensuring biodiversity sustainable protection and conservation along with local communities. For instance, the guidelines for infrastructure development in the buffer zone were defined by the National Environmental Technical Secretary (SETENA), based on a previous technical study (See attachment: NMP Las Baulas Setena case resolutions), and a Public Use Regulation.

ACT supports different non-governmental organizations and the academy, in the establishment and consolidation of sea turtle monitoring and research programs both inside and outside protected areas, as in the case of the Protected Areas Volunteer Service (ASVO); University of Costa Rica (UCR); Sea Turtles Forever; Verdiazul



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Association; Kuemar Association; The Leatherback Trust; Biocenosis Marina and PRETOMA.

The North Pacific Marine Commission was created in 2012, comprised of public agencies, academy and NGOs representatives. Since 2014, this commission became the Marine Local Council. The objective is to advise, support, lead and implement, according to their skills, actions required for the protection, conservation and sustainable management of resources, and coastal and marine environments under the principles of sustainability and responsibility.

#### Conservation Area Central Pacific (ACOPAC)

ACOPAC research program gives special attention to sea turtles considering their population status. Playa Hermosa Wildlife National Refuge was created attending the need of protecting olive ridley (*L. olivacea*) nesting, as a vital rescue and conservation area at the Central Pacific. The refuge has a Management Plan considering sea turtles as a focal management point. Similarly, one of the main elements for Manuel Antonio National Park expansion in Playa del Rey was olive ridley conservation. The protocol to measure rocky and sandy beaches ecological integrity using biological and abiotic indicators is being developed jointly with the Sea and Limnology Research Center (CIMAR) and BIOMARCC Project (German Cooperation).

#### Conservation Area Osa (ACOSA)

There are at least 16 nesting sites in ACOSA. As in the other Conservation Areas, ACOSA has a research and monitoring program with goals, objectives, and activities, including those that are a priority for sea turtles, mainly the nesting population monitoring. The Prevention, Enforcement, and Protection program is in charge of protection nesting beaches, and to give attention to complaints and other environmental coastal and marine crimes. Work is in coordination with non-governmental organizations making conservation, monitoring and research efforts such as Conservation Osa, Corcovado Sea Turtle Conservation Committee (COTORCO), Corcovado Foundation, Tortuga Beach Reserve and Latin American Sea Turtle (LAST), as well as other initiative like Punta Banco Association and Progreso Sea Turtles Conservation Association (ACOTPRO).

#### Conservation Area Isla del Coco (ACMIC)

This conservation area comprises Isla del Coco National Park and Montes Submarino Marine Managed Area (AMMMS). The later was created on June 23rd, 2011 by



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Executive Decree No. 36452-MINAE. This is a marine area without islands, surrounding Isla del Coco. The objective is to protect and manage several species inhabiting/transiting throughout a series of geological structures rising from the depths of Costa Rica economic exclusive zone which have an important value attracting and aggregating marine biodiversity.

Migratory species present at the AMMMS and Isla del Coco reflect the quality and importance of the variety of ecosystems such as the Equatorial Current, the Thermic Dome and Upwelling. AMMMS surrounding waters are important for sea turtle migration including the leatherback (*D. coriacea*), green turtle (*C. mydas*), and olive ridley (*L. olivacea*) (Shillinger *et al.*, 2008, Seminoff *et al.*, 2008; Plotkin, 2010). Studies using satellite devices have shown that sea turtles that nest in Central America, Colombia, and Peru travel thousands of kilometers migrating to these areas after their reproductive periods. Also, green sea turtles nesting in Galapagos Archipelago aggregate in this area which is one of the most important nesting sites for this species in the Eastern Tropical Pacific (ETP) (Seminoff *et al.*, 2008).

There is a great ecological richness of migratory species within the AMMMS, including birds, cetaceans, sea turtles, pinnipeds, and elasmobranchs. This is probably due to the tropical conditions, the oceanographic currents and geological substrate that provide an appropriate environment for these animals. Therefore, this area is used as a biologic corridor with conditions suitable for their reproduction, feeding, and resting.

Marine Managed Areas *Montes Submarinos* has a management plan approved, including actions for sea turtle conservation and protection.

*In addition to the above, please fill out the following tables and explain the level of progress in the comments column.*

	YES/NO	Comments
	In Progress	
Does your country have a national plan of action in accordance with Article XVIII?	In Progress	Started developing process in 2015, with two workshops (Diagnosis)
Does your country have policies and programs at local and regional levels in accordance with Article	Yes	See text above



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XVIII?		
Does your country have monitoring programs in accordance with Article IX?	Yes	<p>There are monitoring programs to ensure the enforcement of protection and conservation of sea turtles and their habitat inside and outside the protected areas, implemented through the projects approved by SINAC and INCOPECA, which are being implemented mainly in nesting beaches (for instance, through permanent research/monitoring programs, along with their respective reports; control and enforcement plans, and management plans implementation). Activities are implemented by governmental, academic, and non-governmental institutions, and local communities. Currently, an ecologic monitoring was established by SINAC in Protected Areas and biological corridors. Among indicators are the sea turtles and nesting beaches. Currently, there is a protocol to monitor the indicators identified.</p>

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

*Describe any national regulations, international agreements and other legal instruments adopted during the preceding year (April 30, 2015-April 30, 2016) related to sea turtles and/or relevant activities. Provide a 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.*

<b>National Legislation</b>		
Type and name of legal instrument (No.)	Description (Range of application)	Sanction(s) Imposed
<b>International Instruments</b>		



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Treaty, Convention, Agreements, Memorandum of Understanding	Year signed/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.*

#### **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. In the case that a Resolution does not apply to your country, please mark the box 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:**

IS COMPLYING WITH THE FOLLOWING	RESOLUTION DOES NOT APPLY		DESCRIBE ACTION (*)	DOES NOT APPLY
	YES	NO		
1a) Have you created conservation plans and long-term programs that can reverse the critical situation of the leatherback turtle in the Eastern Pacific?	<b>X</b>		Nesting beaches in protected areas have a Management Plan with an ecosystem approach where nesting beaches and sea turtles are focal elements for management. There is a regular and permanent monitoring in each of the nesting beaches allowing assessing their status. In nesting beaches outside protected areas, there are local and non-governmental organizations implementing monitoring and conservation actions to protect the species in the Costa Rican Pacific. Two leatherback index beaches of the Eastern Tropical Pacific are in the Marine National Park Las Baulas where there is a permanent monitoring program and activities toward reversing their current status.	
1b) Are you implementing these conservation plans and monitoring programs?	<b>X</b>		In protected areas implementation is done through Annual Work Plans including Environmental Education, Research, Volunteering, Protection, Control and Eco-tourism. Outside this protected areas, besides of implementing nest protection actions there are environmental education activities and volunteering.	

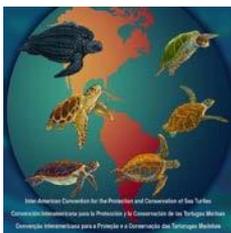


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			These activities are included in research proposals approved by SINAC through the respective research coordination. At the end of each season, a report must be handed to the research coordinator.	
2. Have you taken conservation measures to eliminate poaching of leatherback turtles?	<b>X</b>		<p>In most of the leatherback nesting beaches (Pacific and Caribbean) inside and outside protected areas, there are permanent patrols during nesting season aiming to reduce eggs poaching. In some cases, nests are relocated or hatcheries are used for the same purpose.</p> <p>Currently, MINAE is studying the option to declare a new protected area in Moín to protect the sea turtles nesting on this beach, mainly the leatherback. Research results and permanent monitoring annual reports must be considered in each protected area annual planning. Once a year, the protected areas should assess their management effectiveness and consider the corrections required. Each research and monitoring project inside or outside these protected areas should present a report with results and basic information such as the number of nests, the number of females, hatching success, emerging success, and respective recommendations which should be included in future proposals or work plans accordingly.</p>	
3. If your country has leatherback turtle nesting beaches in the Eastern Pacific: Have you taken conservation measures to protect the nesting sites and their associated habitats?	<b>X</b>		<p>In the National Marine Park, Las Baulas nests 85% of the females visiting the Costa Rican Pacific each season. Therefore, Las Baulas NMP is in a process of territorial, operational and economic consolidation. Two important monitoring programs have been established in the index beaches Grande, Langosta, and Ventanas. Other monitoring and conservation programs are also being established in other sites inside and outside protected areas where leatherbacks nest sporadically, such as RNVS Camaronal, RNVS Ostional, and beaches known as Jesus-Zapotillal, Junquillal, Cabuyal other beaches in the south of the country. There is an important effort to protect leatherback nests inside or near the beach, as much as possible in all these places. At the end of each nesting season, responsible for each monitoring or research with a permit should hand out the corresponding reports which should be considered in the development of the annual work plan and in future monitoring and research.</p> <p>Also, researchers from organizations and SINAC, responsible for coordinating monitoring in specific sites should assess the results and make relevant recommendations, which should be analyzed and considered in the following monitoring.</p>	
4. Has your country adopted fishing techniques that reduce incidental capture and mortality of this species?			<p>According to the Executive Decree No. 38681-MAG-MINAE mandating the use of better practices for the attention of sea turtles incidentally caught and the use of adequate equipment, training for fishermen and government officials on “techniques to increase post-catch survival of sea turtles incidentally caught” was provided during March 2016. A total of 300 fishermen have been trained in the main ports of the Pacific coast (Cuajiniquil, Playa del Coco, Puntarenas, Quepos and Golfito) and in Playa Lagarto and San Juanillo. Additionally, approximately 80 government officials from governmental agencies (INCOPECA, MINAE/SINAC, SNG and SENASA) have been trained in Puntarenas and Ostional. 300 dehookers donated by the IAC have been distributed (150 type “j” and 150 “pigtail”).</p> <p>Also, different models of nets to bring sea turtles on board have been shown while knowledge on best techniques to handle and release sea turtles have been exchanged. The activity was organized by INCOPECA and MINAE/SINAC with technical</p>	



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			support from the organizations SUBMON and EcoPacífico. AMMMS Management Plan mandates the use of tools and techniques to release sea turtles.
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**(\*) 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.**

#### **Resolution CIT-COP3-2006 R-1: Hawksbill turtle conservation**

*(Eretmochelys imbricata)*

**ACCORDING TO RESOLUTION CIT-COP3-2006-R1, REPORT WHETHER YOUR COUNTRY:**

IS COMPLYING WITH THE FOLLOWING		YES	NO	RESOLUTION DOES NOT APPLY	DOES NOT APPLY
1. Are you strengthening monitoring of the illegal use and trade of hawksbill turtles and their products?		x		Each conservation area is responsible for reporting about inspections in markets, therefore, hawksbill products can be confiscated.	
2. Are you enforcing pertinent hawksbill legislation?		x		Hawksbill commercialization is illegal and there are efforts to enforce national regulations.	
3. Are activities being carried out in order to stop the illegal trade of hawksbill products?		x		Customs and border police personnel have been trained about the current regulations regarding trafficking of hawksbill products and byproducts.	
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	x		Particularly at Cahuita National Park	
	b) Protection of feeding habitats	x		Costa Rica has declared protected areas which are important for hawksbill turtles, and have been assigned with personnel such as Cahuita National Park (Caribe), Camaronal Wildlife National Refuge (Pacific), Caletas-Arrio Playa Caleta Wildlife National Refuge (Pacific), the Marine Protected Area of Conservation Area Guanacaste (Pacific).	

**(\*) Specify actions implemented, 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.**



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#### **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:**

IS COMPLYING WITH THE FOLLOWING	YES	NO	DESCRIBE ACTION (*)	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:				
<b>A. Research and monitoring of adverse impact of fisheries on sea turtles</b>				
• Collect information by fishery	x		Results from the experiments carried out in the surface longline fisheries in Costa Rica between 2012 and 2015 were presented at the experts meeting on Costa Rica sea turtles (September 4 <sup>th</sup> , 2015) and during training of fishermen and governmental officials on “techniques to increase post-catch survival of sea turtles incidentally caught” in March 2016.	
• Observer programs	x		According to the IATTC resolution C-11-08, INCOPECA is developing an observer on board program in longline vessels larger than 20 m, including training on how to handle sea turtle on board. Data on sea turtles incidentally capture are being gathered.	
• Research on sea turtle/fishery interactions	x		During the training on “techniques to increase post-catch survival of sea turtles incidentally caught” information on sea turtle interaction was updated during conversations with fishermen and observers.	
• Information on non-Party vessels	x		Purse seine boats category IV with a permit to fish in the EEZ should bring observers on board who report interaction with turtles to the IATTC.	
• Cooperation with non-Party states to obtain information		x		
<b>B. Mitigation measures for the following fisheries:</b>				
i. Long-line	x		Measures in Decree No.38681-MAG-MINAE on tuna and AMMMS management plan.	
ii. Gillnets		x		
iii. Trawling (e.g., 1. TEDs: specify legally approved	x		The Constitutional Chamber order stays in force where it declared that INCOPECA, cannot issue any more permits for shrimp trawl fishing, nor authorize new permits, renovations or reactivations; while those still in the activity should do it following legal regulations strictly and with the most environmentally friendly technologies possible. For instance, TED use is mandatory in Costa Rica’s shrimp trawl fishing. All those using trawling nets are required to use it. Also, before this decision, as a member of OSPESCA, Costa Rica signed the Regulation OSP-06-13 on the Appropriate Use of Turtle Excluder Devices (TEDs). Likewise, INCOPECA inspectors have received training from NOAA.	
iv. TEDs, their dimensions, material, and target species for that fishery, 2. time-area closures: specify geographical area, time of closure and target species for that fishery., 3. tow times and/or 4. other measures)				



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V.	Other fishing gear (indicate which one(s))	x		Foreign purse seine vessels catching tuna with Costa Rican license should report interactions and comply with the resolution.	
	vi. Training programs for fishermen about best practices for safe handling and release of sea turtles incidentally caught.	x		Tuna zoning Decree (No. 38681-MAG-MINAE), includes as mandatory to have training on sea turtle handling techniques. Training for fishermen and government officials on “techniques to increase post-catch survival of sea turtles incidentally caught” was provided during March 2016. A total of 300 fishermen have been trained in the main ports of the Pacific coast (Cuajiniquil, Playa del Coco, Puntarenas, Quepos and Golfito) and in Playa Lagarto and San Juanillo. Additionally, approximately 80 government officials from governmental agencies (INCOPECSA, MINAE/SINAC, SNG and SENASA) have been trained in Puntarenas and Ostional. 300 dehookers donated by the IAC have been distributed (150 type “j” and 150 “pigtail”). Also, different models of nets to bring sea turtles on board have been shown while knowledge on best techniques to handle and release sea turtles have been exchanged . The activity was organized by INCOPECSA and MINAE/SINAC with technical support from the organizations SUBMON and EcoPacífico .	
C. Socio-economic considerations					
	• Support socio-economic activities that help mitigate adverse impacts of fisheries on sea turtles	x		San Juanillo Artisanal Fishermen Association and ISV are seeking profitable alternatives to fishing. Also, Puerto Coyote and Playa Bejuco fishermen Associations are looking for opportunities for a more sustainable market of their products.	

**(\* 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.**

#### 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.)*

The Ministry of Public Safety and its units, the National Coastguard Service, the Public Force and Tourist Police jointly with SINAC take part in the protection and compliance with the national environmental law. Marine patrols, night and day journeys on land, inspections, and confiscation of sea turtle products and byproducts are carried out. INCOPECSA responsibility is to authorize, regulate and control fishing gears.

#### *d. Application [presentation] 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 with the*



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*procedure established by the COP (Doc. CIT-COP5-2011-R2). Attach management program.*

Regarding this item, the information reported in 2015 remains. There is a new Five Year plan and the progress report is in progress according to the Scientific Committee request during their last meeting. The report will be submitted to the Consultative Committee on July first of the current year and will be analyzed during the Scientific Committee 13<sup>th</sup> meeting.



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#### 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)	Action(s)
Lo	<input checked="" type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Contamination <input checked="" type="checkbox"/> Incidental capture <input checked="" type="checkbox"/> Pathogens <input checked="" type="checkbox"/> Direct use <input checked="" type="checkbox"/> Climate change	<p>Pacific</p> <p><i>Coastal Development:</i> In some of the protected areas buffer zones there is more control on homing projects in terms of lighting, noise, tourism, activities on the beach, among other. For instance, there are instruments that should be used properly in order that its implementation is not a threat to sea turtles nesting habitat, such as environmental feasible from SETENA and coastal regulation plans considering sea turtles. In the specific case of Las Baulas, there are two SETENA resolutions regarding guidelines to build up that developers should consider the request of environmental feasibility. Likewise, there is a series of recommendations provided by Camaronal RNVS Administration to its neighbors.</p> <p><i>Incidental Capture:</i> MINAE and MAG have a legal mechanism to regulate incidental catches through tuna zoning decree (No. 38681-MAG-MINAE). Additionally, some marine protected area have measures within their management plans and regulations.</p> <p><i>Direct use:</i> Egg poaching is recurrent, mainly outside the protected areas, therefore diurnal and nocturnal patrols</p>



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		<p>are carried out in addition to other protection activities (hatcheries).</p> <p><i>Contamination:</i> Most of the pollution comes from the river mouth, natural debris or littering and organic trash. Beach cleaning takes place.</p> <p><i>Pathogens:</i> In natural conditions, nests are exposed to pathogens. When required hatcheries are built and nest relocation is done respecting best practices.</p> <p><i>Climate Change:</i> Change in the river mouths dynamics, erosion and higher temperatures in the beach are associated with climate change affecting nesting and nests survival. When required, hatcheries are used to avoid these impacts, respecting appropriate temperatures for the development of the egg.</p>
Lk	<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	
Dc	<input checked="" type="checkbox"/> Coastal development <input checked="" type="checkbox"/> Incidental capture <input checked="" type="checkbox"/> Direct use <input checked="" type="checkbox"/> Contamination <input checked="" type="checkbox"/> Pathogens <input checked="" type="checkbox"/> Climate change	<p><i>Pacific and Caribbean Coastal Development:</i> In some of the protected areas buffer zones there is more control on homing projects in terms of lighting, noise, tourism, activities on the beach, among other. For instance, there are instruments that should be used properly in order that its implementation is not a threat to sea turtles nesting habitat, such as environmental feasible from SETENA and coastal regulation plans considering sea turtles. In the specific case of Las Baulas, there are two SETENA resolutions regarding guidelines to build up that developers should consider the request of environmental feasibility. Likewise, there is a series of recommendations provided by Camaronal RNVS Administration to its neighbors.</p> <p><i>Incidental Capture:</i> MINAE and MAG have a legal</p>



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		<p>mechanism to regulate incidental catches through tuna zoning decree (No. 38681-MAG-MINAE). Additionally, some marine protected area have measures within their management plans and regulations.</p> <p><i>Direct use:</i> Permanent patrols for control and nest protection during nesting season. Regular and permanent monitoring of nests.</p> <p><i>Contamination:</i> Beach cleaning takes place.</p> <p><i>Pathogens:</i> Best practices to work with sea turtles and their nests.</p> <p><i>Climate Change:</i> Beach profile and temperature monitoring.</p>
<p>Ei</p>	<p><input checked="" type="checkbox"/>Coastal development</p> <p><input checked="" type="checkbox"/>Incidental capture</p> <p><input checked="" type="checkbox"/>Direct use</p> <p><input checked="" type="checkbox"/>Contamination</p> <p><input checked="" type="checkbox"/>Pathogens</p> <p><input checked="" type="checkbox"/>Climate change</p>	<p><i>Pacific and Caribbean Coastal Development:</i> In some of the protected areas buffer zones there is more control on homing projects in terms of lighting, noise, tourism, activities on the beach, among other. For instance, there are instruments that should be used properly in order that its implementation is not a threat to sea turtles nesting habitat, such as environmental feasibility from SETENA and coastal regulation plans considering sea turtles.</p> <p><i>Incidental Capture:</i> MINAE and MAG have a legal mechanism to regulate incidental catches through tuna zoning decree (No. 38681-MAG-MINAE). Additionally, some marine protected areas have measures within their management plans and regulations.</p> <p><i>Direct use:</i> Control and protection patrols take place during nesting season. Inspections in markets and places selling hawksbill products.</p> <p><i>Contamination:</i> Beach cleaning takes places</p>



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		<p><i>Pathogens:</i> Use of best practices to manage sea turtles and their nests.</p> <p><i>Climate Change:</i> Beach and sea temperature monitoring.</p>
Cm	<input type="checkbox"/> Coastal development <input type="checkbox"/> Contamination <input checked="" type="checkbox"/> Incidental capture <input type="checkbox"/> Pathogens <input type="checkbox"/> Direct use <input type="checkbox"/> Climate change	<p><i>Pacific and Caribbean Coastal Development:</i> More control on homing projects in terms of lighting, noise, tourism, activities on the beach, among other. Some individuals show injuries indicating interaction with boats, there are no actions to deal with this issue. There is work in a better control of tourist activities in beaches without a management category, such as good practices implementation for sighting sea turtles.</p> <p><i>Incidental Capture:</i> MINAE and MAG have a legal mechanism to regulate incidental catches through tuna zoning decree (No. 38681-MAG-MINAE). Additionally, some marine protected area have measures within their management plans and regulations.</p> <p><i>Direct use:</i> Regular and permanent monitoring of nests.</p> <p><i>Contamination:</i> Beach cleaning takes place.</p> <p><i>Pathogens:</i> Best practices to work with sea turtles and their nests.</p> <p><i>Climate Change:</i> Beach profile and temperature monitoring (nests and sand). ACT jointly with key stakeholders continues with the process of defining action in the marine area: Attention to Conservation gaps at Punta Gorda-Punta Pargos (Gruas II) (Process will be led by SINAC-ACT).</p>
Cc	<input type="checkbox"/> Coastal development <input type="checkbox"/> Contamination <input type="checkbox"/> Incidental capture <input type="checkbox"/> Pathogens <input type="checkbox"/> Direct use <input type="checkbox"/> Climate change	

***b.\_ Research***



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*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.*

Overall, governmental, academic and non-governmental institutions are investing time and resources in research and protection of the sea turtles nesting in Costa Rica.

Tortuguero is the area with the world's longest running research on a green sea turtle population. The green turtle tagging and monitoring program began with Dr. Archie Carr in the 50's, a renowned expert, and Sea Turtle Conservancy (STC), previously Caribbean Conservation Corporation. Tagging and monitoring of leatherbacks in Gandoca and Playa Grande, and of olive ridleys in Ostional, Nancite, and Camaronal began in the 80's. Sea turtle research and conservation in Costa Rica throughout the years has not only increased our knowledge of their biology but has also provided information to assess the status of populations in the region to evaluate and implement effective conservation measures. It is important to highlight that nowadays there is a big effort to carry out sea turtle monitoring and/or tagging programs in almost all of the nesting beaches in the country inside and outside protected areas. These efforts have resulted in information about population trends of the five sea turtle species found in Costa Rica. Most of the projects also assess hatching success and possible factors affecting it. Publications from research done in the country are listed below.

With the purpose of understanding sea turtles migratory movements and habitat use, several organizations have placed satellite transmitters on sea turtles shells and reported information in national reports. An important amount of information has been obtained regarding migratory routes and vertical movements, habitat use during inter-nesting periods and horizontal movements, as well as marine surface environmental characteristics and movement patterns influenced by climate conditions.

PRETOMA and LAST have conducted research on hawksbill sea turtles including genetic characterization at Isla del Coco, Coyote Beach, and San Jose Island. Recent research has confirmed the occurrence of resident hawksbill feeding in coastal habitat of Costa Rica North Pacific.

WIDECAS/LAST has started a genetic analysis of turtles from Golfo Dulce, since through mitochondrial DNA it would be possible establishing the origin of turtles using this area allowing to maximize regional actions. KUEMAR, TLT and LAST are doing research on green sea turtles, including genetic characterization. Recently, Chacón *et al*, 2015 have determined *C. mydas* population structure in Golfo Dulce. There is a recent publication on genetics by Dutton *et al.*, 2014 (Population structure and phylogeography reveal pathways of colonization by a migratory marine reptile *Chelonia mydas* in the central and eastern Pacific), including a sample of nesting turtles from Nombre de Jesús.



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Similarly, Caño Palma Biologic Station (COTERC) in Barra del Colorado (Playa Norte) is starting *Chelonia mydas* genetic analysis.

Some projects are in the process of identifying and implementing management measures regarding climate change impact, starting with permanent records of key indicators such as temperature, precipitation, slope of the beach, beach profile, among other, this is the case of Playa Grande, Playa Langosta, and the beach complex at Nombre de Jesús.

Since 2007, PRETOMA has worked in Peninsula Nicoya with two artisanal fishermen associations, Punta Coyote and Pescadores de Bejuco Associations, aiming to monitor fishing efforts, capture rates of target and bycatch species parameters, including sea turtles, and to promote sustainable fishing practices (Mongeon et al., 2013). Since 2006, Gates and Valverde transects method has been implemented to estimate massive arrivals nesting size at Ostional and Nancite nesting beaches (Valverde et al., 2012) (Orrego, 2015, Orrego, 2016). According to transects estimate, between 2012 and 2016 4,243,633 olive ridley turtles have arrived to lay their eggs.

Olive ridley tagging program resumed in Ostional and Camaronal (Orrego, 2015). Between 2009 and 2015 10,078 olive ridley turtles have been tagged in Ostional with a 5,03 % recapture rate (Wen et al., 2015).

*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 specie(s).*

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

#### *c. \_ Other activities*

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

Efforts to assist sea turtle strandings in the Pacific coast. There is a coordination to assist emergencies through SINAC wildlife coordination.

Environmental education is a strong component of the Protected Areas Management Plans,



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and other key stakeholders' sea turtle conservation programs. There are talks, field tours, booklets delivery, activities such as the Leatherback Festival, opportunities for kids to visit monitoring and research programs, training and certification of local guide's communal associations, and strengthening of the volunteering program, among other environmental education activities.



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#### 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 Ocean	Atlantic Ocean	Caribbean Sea
Lo	X		
Lk			
Dc	X		X
Ei	X		X
Cm	X		X
Cc			X

**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.
- 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.



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- 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.*



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Spp	Name of Index Nesting Site or Beach	Nesting Season		Monitoring period		Survey Frequency	Geographic Location (Lat/Lon)			Declared Protected Area (Yes/No)	Annual Nesting Abundance			Tagging Program (FS, ST, PIT)	Tissue Sampling (Yes/No)	Organization or entity providing data
		Start	Finish	Start	Finish		Latitude	Longitude	Extension of monitored beach (km)		Females Exact Count	Clutches Exact Count	Number of Nests			
Lo	Nancite	July 15th, 2015	July 14th, 2016	July 15th, 2015	January 30th, 2016	Daily	10.804811	85.669346	1.05	Yes	1321	79831		FS	Yes	Biocenosis Marina
	Ostional <sup>3A</sup>	January 1st, 2015	January 31th, 2015	January 1st, 2015	January 31th, 2016	Daily	9.993913	85.700403	7.00	Yes	1231056	1231056		FS	No	Carlos Mario Orrego
	Ostional <sup>3B</sup>	January 1st, 2015	January 31th, 2015	January 1st, 2015	January 31th, 2016	Daily										UCR did not provide information on time for this reports
	Naranjo	July 15th, 2015	July 14th, 2016	December 15th, 2015	February 15th, 2016	Daily	10.775138	84.971067	4.00	Yes	45	279		FS	Yes	Luis Fonseca
	Playa Camaronal	January 1st, 2015	December 31st, 2015	January 1st, 2015	December 31st, 2015	Daily (greater effort in September and October)	9.5727856	84.5869478	8.0	Yes				None	No	There is not established monitoring program
Dc	Playa Grande	October 1st, 2015	March 15th, 2016	October 1st, 2015	March 15th, 2016	Daily	10.334675	85.847822	3.6	Yes	22	121		PIT	No	Maria del Pilar Santidrian-Tomillo (TLT) and Rotney Piedra (SINAC-ACT)
	Playa Langosta <sup>5</sup>	October 1st, 2015	March 15th, 2016	October 1st, 2015	March 15th, 2016	Daily	10.290453	85.8502471	1.3	Yes	6	20		PIT	No	Elizabeth Vélez (KUEMAR) and Rotney Piedra (SINAC ACT)
	Tortuguero	February 28th, 2015 <sup>6A</sup>	July 22nd, 2015 <sup>6B</sup>	January 3rd, 2015 <sup>7A</sup>	December 26th, 2015 <sup>7B</sup>	Variable <sup>9</sup>	10.586675 <sup>9</sup>	83.522247 <sup>9</sup>	29	Yes	52 <sup>10</sup>	ND	181/24 <sup>11</sup>	FS	No	Sea Turtle Conservancy



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	Playa Norte	March 1 <sup>st</sup> , 2015	June 30 <sup>th</sup> , 2015	April 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	Daily	10.615947	83.534036	5	Yes	16	ND	34	FS	No	Canadian Organization for Tropical Education and Rainforest Conservation (COTERC)
	Pacuare Norte	February 15 <sup>th</sup> , 2015	November 16 <sup>th</sup> , 2015	February 26 <sup>th</sup> , 2015	November 26 <sup>th</sup> , 2016	Daily	10.244813	83.299166	7.1	No	223	388		FS	No	LAST
	Mondonguillo (Pacuare Reserve)	March 1 <sup>st</sup> , 2015	September 30 <sup>th</sup> , 2015	March 1 <sup>st</sup> , 2015	September 30 <sup>th</sup> , 2015	Daily	10.182438	83.245296	5.8	Yes (Partially)	421	793		FS and PIT	No	The Endangered Wildlife
Ei	Cahuita <sup>4</sup>	April 1 <sup>st</sup> , 2015	August 16 <sup>th</sup> , 2015	April 1 <sup>st</sup> , 2015	August 16 <sup>th</sup> , 2015		9.4527	82.5179	10.45							No report for this year
	Tortuguero	April 7 <sup>th</sup> , 2015 <sup>12A</sup>	October 11 <sup>th</sup> , 2015 <sup>12B</sup>	January 3 <sup>rd</sup> , 2015 <sup>7A</sup>	December 26 <sup>th</sup> , 2015 <sup>7B</sup>	Variable <sup>8</sup>	10.5866759	83.5222479	29	Yes	14 <sup>10</sup>	ND	11/28 <sup>13</sup>	FS and ST	No	Sea Turtle Conservancy
Cm	San Jose Island (Murciélagos Archipelago)	July 15 <sup>th</sup> , 2015	July 14 <sup>th</sup> , 2016	October 9 <sup>th</sup> , 2015	February 16 <sup>th</sup> , 2016	Daily	10,855792	85,911412	0.35	Yes	164	544		FS	Yes	Biocenosis Marina
	Naranjo	July 15 <sup>th</sup> , 2015	July 14 <sup>th</sup> , 2016	December 15 <sup>th</sup> , 2016	February 15 <sup>th</sup> , 2016	Daily	10.775138	10.775138	4.00	Yes	12	20		FS and PIT	Yes	Luis Fonseca
	Playa Cabuyal	Throughout the year	Throughout the year	August 6 <sup>th</sup> , 2015	March 25 <sup>th</sup> , 2016	Daily	10.6738815	85.6542719	1.4	No	25	109		FS and PIT	No	Elizabeth Vélez (KUEMAR) and Rotney Piedra (SINAC ACT)
	Nombre de Jesús	January 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	January 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	Daily	10.3942333	85.8359831	0.9	No	352 <sup>2A</sup>	1408 <sup>2B</sup>		FS and PIT	No	Elizabeth Vélez (KUEMAR) and Rotney Piedra (SINAC ACT)
	Punta Pargos <sup>14</sup>	January 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	January 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	Daily	10.206417	85.828583	6.7	No				FS	No	Sea Turtles Forever Pending
	Tortuguero	February 28 <sup>th</sup> , 2015 <sup>15A</sup>	November 21 <sup>st</sup> , 2015 <sup>15B</sup>	January 3 <sup>rd</sup> , 2015 <sup>7A</sup>	December 26 <sup>th</sup> , 2015 <sup>7B</sup>	Variable <sup>8</sup>	10.586675	83.522247	29	Yes	1492 <sup>10</sup>	ND	92749 <sup>16</sup>	FS and ST	No	Sea Turtle Conservancy
	Playa Norte	April 16 <sup>th</sup> , 2015	October 31 <sup>st</sup> , 2015	April 1 <sup>st</sup> , 2015	December 31 <sup>st</sup> , 2015	Daily	10.615947	83.534036	5	Yes	103	ND	242	FS	Yes	Canadian Organization for Tropical Education
Cc	Tortuguero	July 5 <sup>th</sup> , 2015 <sup>17</sup>	-	January 3 <sup>rd</sup> , 2015 <sup>7A</sup>	December 26 <sup>th</sup> , 2015 <sup>7B</sup>	Variable <sup>8</sup>	10.586675	83.522247	29	Yes	1 <sup>10</sup>	-	-	-	-	Sea Turtle Conservancy



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1. Playa Hermosa does not have a permanent monitoring program, however the Wildlife National Refuge Personal carries out surveys.
- 2A. Number of females tagged 2B. Estimated number of nests based on a nesting frequency of 4 nests per female.
- 3A. Transects Method: Focusing only on females laying eggs, therefore a female is equivalent to a nest. 3B. Method UCR
4. Cahuita NP, there was not monitoring program in 2015
5. Playa Langosta is part of Las Baulas Marine National Park, and has a strong connection with playa Grande in terms of Leatherback nesting.
- 6A. Date of nesting leatherback first sighting. 6B. Date of nesting leatherback last sighting
- 7A. Date of first weekly tracks counting. 7B. Date of last weekly tracks counting.
8. Monitoring frequency varied throughout 2015: Weekly tracks counting (29 km) was from January 3<sup>rd</sup> to December 26<sup>th</sup>, counting was every three days (29 km) from April 4<sup>th</sup> to May 28<sup>th</sup>, daily tracks counting (8 km north and 5 km south) from June 7<sup>th</sup> to November 1<sup>st</sup>, and night daily patrols (8 km north and 5 km south) from April 1<sup>st</sup> to October 19<sup>th</sup>.
9. STC monitoring area north boundary coordinates.
10. Number of individuals (females) observed during night patrols; is not the total number of females nesting
11. The first value is a leatherback total nest count (from the every 3 days count in 29 km) and the second value is the estimated number of leatherback nest from weekly counts.
- 12A. Date of first observation of hawksbills nesting activity. 12B. Date of last observation of hawksbill nesting activity.
13. First value is a hawksbill nest total count (from every 3 days counting in 29 km) and the second value is the number of hawksbill nests observed during the daily tracks counting (8 km to the north and 5 km to the south).
14. Punta Pargos information is pending
- 15A. Date of first observation of green turtle nesting activity. 15B. Date of last observation of green turtle nesting activity.
16. Estimated number green turtle nests; based on weekly tracks counting and the method by Troëng, S. & Rankin, E. 2005 Long-term conservation efforts contribute to positive green turtle *Chelonia mydas* nesting trend at Tortuguero, Costa Rica. *Biol. Conserv.* 121, 111-116.
17. Date of the loggerhead turtle only observation in 2015.



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**Table 3: Important foraging sites for sea turtle conservation**

- a. *This table is intended to contain information for foraging sites being studied for each species. For marine habitats that have multiple species present, enter the specific site under the heading for the priority species at that site.*
- b. *Name and geographic location: Provide the name of the site and geographic location in decimal degrees in Lat/Long (one reference point).*
- c. *Area: Indicate the size of the study site (in Kilometers<sup>2</sup>).*
- d. *Declared protection area: Indicate if the area is declared as some type of protected area.*
- e. *Life stage: Indicate the life stage or stages found in the study area (juvenile, subadult or adult).*
- f. *Information from tagging program: Indicate if there have been any tagging activities at the in-water site 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.*
- g. *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?*
- h. *Indicate the organization or entity providing the data.*
- i. *When adding new rows, please copy and paste the drop down menus when applicable.*



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Species	Name of the Study Site	Geographic Location (Lat/Long) in Decimal Degrees			Area (Km <sup>2</sup> )	Declared Protection Area (Yes/No)	Life Stages (Juvenile, Sub-adult, Adult)	Tagging Program (FT, ST, PIT)	Tissue Sampling (Yes/No)	Organization or entity providing data
		Latitude	Longitude							
Lo			°		°					
			°		°					
Lk			°		°					
			°		°					
Dc			°		°					
			°		°					
Ei	Bahía Matapalito	10.934603	°	85.791877	°	No	Juvenile and Sub-adult	FS and PIT	Yes	PRETOMA
	Golfo Dulce	8.3851	°	83.2554	°	No	Juvenile and Adult	FS and PIT	No	WIDECAST
Cm	Bahía Matapalito	10.934603	°	85.791877	°	No	All of the them	FS and PIT	Yes	PRETOMA
	Golfo Dulce	8.3851	°	83.2554	°	No	Juvenile and Adult	FS and PIT	No	WIDECAST
Cc			°		°					
			°		°					



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#### References

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