

Women's Association of Barra de Santiago (AMBAS) Sea Turtle Conservation Project Report 2019-2020



2019/2020 Sea Turtle Nesting Season

Sea turtle egg hatchery construction

The Barra de Santiago hatchery was built with the collaboration of the community and the sea turtle egg collectors, known as *tortugueros* (men and women). The dimensions are 17 x 18 meters, having a total of 306 m², with availability for 1,224 sea turtle nests. All the work was carried out based on the manual for the management of incubation hatcheries. A grid was made out of string to trace the nest squares inside the hatchery. The sand was removed in search of roots mainly, since the site has been used for several seasons and kept clean so it does not have the presence of very much debris. The structure of the roof was prepared with palms placed to provide shade for the nests that will enter the hatchery. The conditions of the hatchery hut were improved so that the hatchery managers have greater comfort in their work, with proper conditions to work on the site. Approximately 30 meters of sand bag walls was built to this hatchery, to protect against strong waves.



Building of the Barra de Santiago hatchery, July 18, 2019

Building of the El Tamarindo hatchery: since this hatchery was not removed the previous season, the interior was rehabilitated. The substrate was prepared with a change of sand, the roof was improved, and we changed the beams made of bamboo and palm, as well as built a canopy outside to welcome the public to the hatchery facilities. The hatchery has dimensions of 18 x 18 meters, having 324 m², and can fit 1,296 nests inside. The hatchery was filled with sand to form a high edge, for protection against strong waves.



El Tamarindo hatchery construction, July 19, 2019

Building of the Costa Azul hatchery: This hatchery was built completely from scratch. A prior meeting was held with the tortugueros and the local community organization (ADESCO) to identify the optimal site. Finding the ideal place, the hatchery was built. The dimensions are 14 x 15 meters, 210 m², with space for 840 nests inside. The site was completely prepared, the

sand was filled and cleaned, the perimeter posts were placed, and the screen mesh was mounted. The roof and hut were built to improve the conditions of the hatchery managers.



Building of the Costa Azul hatchery, July 31, 2019

Identification cards for tortugueros and KoBoToolbox app implementation

Identification cards were created for the tortugueros that contribute to the project in Barra de Santiago and El Tamarindo, thanks to their constant work during the sea turtle season. The hatchery managers in charge of filling out paperwork and documentation were personally trained in using the KoBoToolbox application for data collection. They are in charge of transferring the data from the sea turtle egg log book to the digital format of the KoBoToolbox application. The advances in the digital collection of data from the log book makes the information easier to use when you want to analyze the data, with the ability to make graphs according to the parameters needed.



Identification cards given to the tortugueros and screenshot of the KoBoToolbox app for digital collection of sea turtle egg data

2019/2020 Sea turtle nesting season inauguration event

The inauguration event for the 2019/2020 sea turtle nesting season was held in the community of El Tamarindo to give this community the leading role in the event. This was in recognition of their consistent collaboration for the development and success of the project. The National Civil Police was invited and there was participation by FIAES staff who spoke on the guidelines and directives for the execution of the project.



Sea turtle nesting season inauguration event, August 22, 2019

Sea turtle egg incubation

As of September 30th 2019, 89,646 sea turtle eggs were being incubated. Barra de Santiago and El Tamarindo collected the most eggs and where the most tortugueros have collaborated with a volunteer contribution during the closed “veda” nights (when paid collection is banned).

PLAYA	FONDO FIAES	DONADOS	VEDA		
TAMARINDO	24,918.00	4,284.00	2,667.00		
BARRA DE SANTIAGO	36,774.00	6,023.57	1,218.00		
COSTA AZUL	11,796.00	1,966.00		TOTAL GLOBAL	AVANCE
	73,488.00	12,273.57	3,885.00	89,646.57	69%



Hatcheries in El Tamarindo and Costa Azul with incubating sea turtle eggs

Sea turtle hatchling release events to raise environmental awareness

The first public release of hatchling sea turtles was carried out with the students from the Franciscan school ESFE-AGAPE. It was publicized to invite the general population as well. In the end more than 80 people participated. There was the participation of AMBAS, PNC, a musical band from the Mandinga school, the collaboration of the Jujutla Mayor's Office, and the presence of the congress person Mayte Iraeta. A program was carried out in which ESFE-AGAPE participated as host. The audience was given an educational talk on sea turtles by AMBAS. There were the performances of the Mandinga musical band Stomp Percussion, giving a joyful touch to the event. Subsequently, the release was carried out in which about 800 sea turtle hatchlings were released into the sea.



Hatchling sea turtles in Barra de Santiago and El Tamarindo



First public sea turtle hatchling release, September 8, 2019

The second public hatchling release event was carried out in Playa El Tamarindo in which there was the collaboration of the San Francisco Menendez mayor's office and the Cara Sucia County school. Students, community and people interested in hatchling releases were present. The objective was to raise awareness among people and students not to consume turtle eggs due to human health and for the conservation of the species. This event was also broadcast by local and national media.



Public sea turtle hatchling release event, September 26, 2019

We conducted a hatchling release event with conservation managers from La Reserva and Mundo Vida Youth Network. Approximately 30 people attended and were also invited to carry out mangrove restoration activities. They learned about techniques for transplantation and seed dispersal, removal of weeds from the white mangrove nursery quadrants, etc. In total they transplanted 60 white mangrove trees. Later, they went to the sea turtle hatchery and learned about the initiative, and then carried out the sea turtle hatchling release.

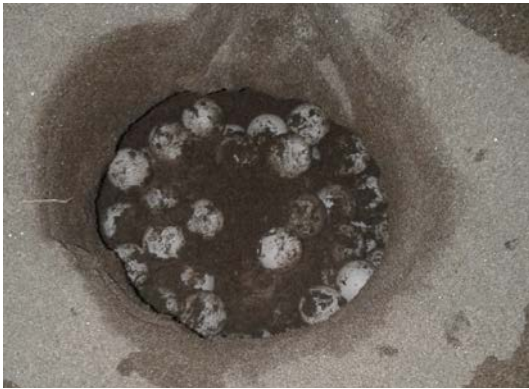




Sea turtle hatchling release event with managers and youth network of the Apaneca Biosphere Reserve - Ilamatepec, September 27, 2019

Green sea turtle egg incubation

Two green sea turtle nests were collected, one in Barra de Santiago with 112 eggs and the other in El Tamarindo beach with 70 eggs, making a total of 182 incubated eggs of these species.



Incubation of 112 green turtle eggs in Barra de Santiago



Incubation of 70 green turtle eggs in El Tamarindo

Exchange of experiences with FIAES and the Central American Commission (CICA) of the CCAD GIZ Network

There was a visit from different Central American commissions focused on the conservation of natural resources. They came to Barra de Santiago to see the experience in mangrove restoration work and learn the different application techniques for restoration that have been implemented. Later they visited the organized natural resource user groups (PLAS) to learn about the organization and management of the blue and mangrove crab that has been carried out since 2012. The honey collection process that they are implementing was also observed.



Exchange visit with Central American organizations of the CCAD GIZ Network, January 28, 2020

Green sea turtle hatchling releases

180 green sea turtle hatchlings were released on El Tamarindo beach and Barra de Santiago beach.



Birth and release of 70 hatchlings of green turtles in El Tamarindo



Birth and release of 110 hatchlings of green turtles in Barra de Santiago

2019/2020 sea turtle nesting season closing event and celebration of World Wetlands Day

For this celebration we joined forces with IUCN to organize a fairly large event. Each of the participating institutions contributed something to develop the activity. In the case of AMBAS, we merged it with the project closure event. There was the participation of a national and community artistic cast where the schools offered their support. This event was published on social networks and on a local television channel



2019/2020 sea turtle nesting season closing event and celebration of World Wetlands Day, February 2020

2020/2021 Sea Turtle Nesting Season

Update of database and identify tortugueros for the 2020/2021 nesting season

The tortugueros that work on the project was summoned in order to update personal data including economic, social, and environmental factors. This database has been prepared by means of the KoBoToolbox application, digitized for data processing, in this way there is an accessible data base for this information. In total there are 66 people from the different communities around Barra de Santiago, such as Gloria Linda, Villas de Shasca, El Ceibillo, El Centro, El Tamarindo, Bola de Monte, and Botoncillo registered to participate in sea turtle egg collection activities.

Núm. id	Nombre del tortuguero	Playa o vivero con el que trabaja	Comunidad o caserío en el que reside	Municip.	Edad	Número de personas que				Núm. de hijos	Núm. de hijas	Tipo de actividad	Actividad								
						Hombre	Mujer	Niño	Niña				Agropecuaria	Ganadería	Mecánica	Comercio	Industria	Turismo	Pesca		
2	...	Barra de Santiago	santiago	Acuña	41	4	1	1	1	1	1	Pesca Rec	0	0	0	0	0	0	0	0	1
3	...	Barra de Santiago	Juítita	Juítita	40	6	2	2	1	1	1	Pesca Rec	0	0	0	0	0	0	0	0	1
4	...	Barra de Santiago	los Imones	Juítita	77	2	1	1				Pesca Rec	0	0	0	0	0	0	0	0	1
5	...	Barra de Santiago	santiago	Acuña	27	5	2	2			1	Pesca Rec	0	0	0	0	0	0	0	0	1
6	...	Barra de Santiago	el espino	Juítita	70	3	1	1				Pesca Rec	0	0	0	0	0	0	0	0	1
7	...	Barra de Santiago	cooalito	Juítita	27	5	2	3				Agricultor F	0	1	0	0	0	0	0	0	0
8	...	Barra de Santiago	los Imones	Juítita	27	3	2	1				Pesca Rec	0	0	0	0	0	0	0	0	1
9	...	Barra de Santiago	miramar	Acuña	39	3	1	1	1			Pesca Rec	0	0	0	0	0	0	0	0	1
10	...	Barra de Santiago	Flancho el pescador	Juítita	28	4	2	1	1			Comercio F	0	0	0	0	1	0	0	0	0
11	...	Barra de Santiago	Villas de Shasca	Juítita	45	8	2	3		3		Pesca Rec	0	0	0	0	0	0	0	0	1
12	...	Barra de Santiago	los Imones	Juítita	47	6	2	2	1	1		Pesca Rec	0	0	0	0	0	0	0	0	1
13	...	Barra de Santiago	los Imones	Juítita	28	4	1	2	1			Pesca Rec	0	0	0	0	0	0	0	0	1
14	...	Barra de Santiago	Barra de Santiago	Juítita	37	6	1	2	1	2		Pesca Rec	0	0	0	0	0	0	0	0	1
15	...	Barra de Santiago	Barra de Santiago	Juítita	26	5	1	1	1	2		Pesca Rec	0	0	0	0	0	0	0	0	1
16	...	Barra de Santiago	Villas de Sibaca	Juítita	30	8	3	3		2		Pesca Rec	0	0	0	0	0	0	0	0	1
17	...	Barra de Santiago	Barra de Santiago	Juítita	27	5	1	2	1	1		Pesca Rec	0	0	0	0	0	0	0	0	1
18	...	Barra de Santiago	Barra de Santiago	Juítita	20	3	1	1	1			Pesca Rec	0	0	0	0	0	0	0	0	1
19	...	Barra de Santiago	Barra de Santiago	Juítita	35	4	1	2	1			Pesca Rec	0	0	0	0	0	0	0	0	1
20	...	Barra de Santiago	El Cebillo	Juítita	39	5	1	1	2	1		Agricultor F	0	0	0	0	0	0	0	0	0
21	...	Barra de Santiago	gloria linda	Juítita	44	4	2	2		2		Pesca Rec	0	0	0	0	0	0	0	0	1
22	...	Barra de Santiago	el cooalito	Juítita	21	4	3	1				Agricultor F	0	0	0	0	0	0	0	0	0
23	...	Barra de Santiago	cooalito	Juítita	43	4	1	2		1		Pesca Rec	0	0	0	0	0	0	0	0	1
24	...	Barra de Santiago	shasca	Juítita	35	4	1	1	2			Comercio F	0	0	0	0	0	0	0	0	0
25	...	Barra de Santiago	cebillo	Juítita	38	3	1	1		1		Comercio F	0	0	0	0	0	0	0	0	0
26	...	Barra de Santiago	Barra de Santiago	Juítita	58	1	1	1		3		Agricultor F	0	0	0	0	0	0	0	0	0
27	...	Barra de Santiago	Costa brava	Acuña	53	6	2	3	1	1		Agricultor F	0	0	0	0	0	0	0	0	0
28	...	Barra de Santiago	Barra de Santiago	Juítita	35	4	1	1	1	1		Salvador	0	0	0	0	0	0	0	0	0
29	...	Barra de Santiago	Barra de Santiago	Juítita	39	6	2	2	1	1		Pesca Rec	0	0	0	0	0	0	0	0	1

Image of the database of the Barra de Santiago tortugueros

In light of the problem of illegal egg consumption and the mistreatment of turtles through the poaching of their eggs, the relevant authorities make regular patrols of the beaches at night. Due to this, credentials were designed and elaborated that accredit our collaborators as official egg collectors and that they are working based on the guidelines established by the Ministry of the Environment. We handed out a total of 200 credentials for the tortugueros.



Figure: Design of credentials for tortugueros

Sea turtle egg hatchery construction

Construction of a sea turtle hatchery at El Tamarindo Beach: The El Tamarindo hatchery was prepared. Sand was removed to heat the substrate and some patches were cleaned. The posts

on the periphery of the hatchery were strengthened. The bamboo of the roof was changed, palms were erected, and the sand was divided into squares to mark the placement of each nest.



Preparation of the El Tamarindo hatchery, July 2020

Construction of a sea turtle hatchery in Playa Barra de Santiago: The Barra de Santiago hatchery was prepared, sand was removed to heat the substrate and cleaning of some patches. The bamboo of the roof was changed, palms were erected, and the sand was divided into squares to mark the placement of each nest.



Preparation of the Barra de Santiago hatchery, July 2020

Equipped two huts for hatchery managers for the incubation of turtle eggs on the beaches of El Tamarindo and Barra de Santiago: Barra de Santiago and El Tamarindo's existing huts were improved. The roof, was changed— as were some of the beams. An external canopy was also installed to welcome people for public events.



Huts in Barra de Santiago and El Tamarindo, July 2020

2020/2021 Sea turtle nesting season inauguration event

The inauguration event for the 2020/2021 sea turtle nesting season was held virtually due to the effects of the pandemic. These are the links to the event that was shared live on social networks.

<https://www.facebook.com/fiaes.sv/videos/2167136536744287>

<https://www.facebook.com/fiaes.sv/videos/208372257265784/>



Inauguration event announcement, July 29, 2020

Plastic trash receptacles construction and placement

A preliminary meeting was held to identify different factors regarding the construction of two trash receptacles to place in the community of Barra de Santiago. It was decided to find a local person to develop the structures and strategic sites were proposed for the installation, with good visibility, use and design in mind. The opinions of the Ministry of the Environment and local community organizations were considered. For the elaboration of these receptacles, only one person presented a proposal but he has experience working on other beaches. He built a turtle shaped and a fish shaped receptacle, to have variety and become a better tourist attraction. Strategic placement was chosen in areas with a high influx of tourists, which can also be monitored and managed by AMBAS. A sign has been placed on these structures specifying what is allowed. The plastic trash that is collected in these containers is delivered to a plastic buyer or delivered to the garbage collection service for final disposal in a landfill.



Trash receptacles planning meeting, September 9, 2020



Placement of plastic trash receptacles in the community of Barra de Santiago

Olive ridley sea turtle egg incubation

As of September 30, 2020, we have incubated 76,524 olive ridley sea turtle eggs. We have reached 94% of our goal with a total of 71,908 eggs collected from olive ridley sea turtles.

DETALLE DE AVANCE					
	TOTAL	DONADOS	PAGADOS	MONTO PAGADO	MONTO DONADO
barra de santiago	36929	5267	31602	\$ 6,583.75	\$ 1,097.29
playa el tamarindo	32935	4705	28230	\$ 5,881.25	\$ 980.21
acotombas	2044	292	1752	\$ 365.00	\$ 60.83
SUB TOTAL	71908	10264	61584	\$ 12,830.00	\$ 2,138.33
prespuestados	76524	12648	63876	\$ 13,307.50	\$ 2,635.00
AVANCE %	94%	81%	96%	96%	81%



Incubation of olive ridley eggs

Implementation of “veda” nights of closure as a contribution by the area's tortugueros to the conservation effort in coordination with the National Civil Police

Six closed “veda” nights have been implemented as a contribution by the area's tortugueros to the conservation effort in coordination with the National Civil Police, three in El Tamarindo and three in Barra de Santiago. On those nights, 3,120 eggs have been donated free of charge by the tortugueros, equivalent to 260 dozen, exceeding the established goal.



Egg collection on closed “veda” nights at Barra de Santiago beach and El Tamarindo beach

Hatchery management best practices training

A training on hatchery management and identification of sea turtles was held in Barra de Santiago and again in El Tamarindo, making known the importance of managing the hatchery in the best possible way and the support that can be received from the community. This training was oriented on the basis of the sea turtle egg incubation manual that MARN publishes. There was an attendance of 19 men and six women with whom there was an exchange of basic knowledge from their experience of the field work. Despite being at the time of a pandemic, the meetings were held in person, and all the necessary measures were taken such as a mask wearing, social distancing, etc.



Hatchery management trainings, September 14-16, 2020

Tagging and monitoring nesting sea turtles

This activity has been pending since 2019, when we began the purchase of tags and equipment for tracking nesting sea turtles. Unfortunately, the process was quite complicated and the purchase could not be finalized until this season, when the tags were finally delivered. The training workshop on tagging sea turtles was held in Barra de Santiago, raising awareness of the importance of tagging and tracking sea turtles. This initiative seeks to understand the migratory patterns these species carry out so the community can learn even more regarding the monitoring and conservation of these species.





Trainings and tagging of nesting sea turtles, September 24, 2020

First aid training

To carry out this activity, support was requested from the Civil Protection department of Barra de Santiago, and together with rescue workers they provided this training. We had a group from the El Tamarindo community hatchery participate in the training. It is essential that the

turtle hatcher knows a little about prevention and treatment measures for any mishap that may happen when he is patrolling the beach, such as cuts by branches or tree trunks, etc. The day was quite productive. They were not only given theory but also practice. With the use of test apparatus, CPR, forms of treatment were taught to affected people, immobilizations with tourniquets, tables, etc. We worked with the basic first aid manual.



Sea turtle egg collectors from El Tamarindo participate in a first aid training course

Incubation of olive ridley sea turtle eggs

In the previous period, 71,908 eggs were recorded, reaching 96% of our goal, therefore in this period our goal was to collect 4,616 olive ridley eggs. There was some reallocation of funds designated for other activities that could not be carried out due to difficulties. These funds were made available instead for additional collection of eggs. This way we were able to exceed the previously established goal. The table reflects the quantities of eggs collected, reaching a total of 95,628 eggs collected with payment. Added to this are 15,998 eggs collected as a counterpart donation from both communities (Barra de Santiago, Tamarindo).

DETALLE DE AVANCE					
	TOTAL	DONADOS	PAGADOS	MONTO PAGADO	MONTO DONADO
barra de santiago	67214	9602	57612	\$ 12,002.50	\$ 2,000.42
playa el tamarindo	42308	8461	36264	\$ 7,555.00	\$ 1,762.71
acotombas	2044	292	1752	\$ 365.00	\$ 60.83
SUB TOTAL	111566	18355	95628	\$ 19,922.50	\$ 3,823.96
prespuestados	111566	15938	95628	\$ 19,922.50	\$ 3,320.42
AVANCE %	100%	115%	100%	100%	115%

Table of the quantities of sea turtle eggs collected, December 31, 2020

Home gardens in the El Zapote neighborhood of Barra de Santiago

This initiative helped establish agroecological gardens in the homes of local students. 15 gardens were constructed and various vegetable seeds, wire mesh, and other supplies were provided. To educate the beneficiaries on how to manage agroecological gardens they participated in a series of workshops about the elaboration of homemade agroecological inputs such as organic compost and natural pesticides. Participants were taught how to mix a diversity of substrates in order to prepare the optimal organic soil in which the crop can produce maximum yield. A mixture of soil, cow manure, coffee grounds, mangrove leaf litter, and soil microorganisms was made. At the end, each participant was given some of the substrate to add to their garden. Participants learned how to prepare Bordeaux mixtures that help nourish plants and prevent damage and disease. Hot and cold mixtures were prepared using lime, ash, soap, sulfur, and magnesium. Soil microorganisms were collected from the mangroves and participants were taught how to prepare both solid and liquid mixtures. At the end of the training each participant was given a little of the liquid product. The solid microorganism mixture was left to cure for 30 days and later distributed to beneficiaries.



Workshop on the elaboration of organic inputs

La Prensa Gráfica @prensagrafica · 4 oct.
#Ahuachapán | Las familias del Cantón El Zapote, del municipio de San Francisco Menéndez, fueron capacitadas para elaborar huertos caseros.



Aprendieron a elaborar huertos en Ahuachapán
El Fondo de Inversión Ambiental de El Salvador (FIAES) donó semillas y capacitó a familias para elaborar sus huertos caseros.
laprensagrafica.com

Ambas Barra de Santiago
24 de septiembre a las 17:39
Apoyando en la creación de huertos caseros, por medio de la agricultura organica, gracias al financiamiento de FIAES y otros cooperantes.



CAPACITACION SOBRE HUERTOS



Article in La Prensa Grafica and local news report



Substrate preparation training, October 16, 2020



Bordeaux mixtures training, November 10, 2020



Training in soil microorganisms preparation and delivery of supplies to beneficiaries, November 27, 2020

Public sea turtle hatchling release events

Public sea turtle hatchling release events were held to raise awareness of the importance of these species and an influx of people from different places could be observed. There was community participation between sea turtle egg collectors and visitors. There was participation of several groups from tour operators who carry out responsible eco-tourism trips. Preventive measures were taken against the threat of COVID-19 by applying security protocols such as taking temperature, wearing masks, etc.



Public hatchling release, November 20, 2020



Public hatchling release, November 5, 2020



Public hatchling release and mangrove planting day with Red Mundo Vida, November 24, 2020



Public hatchling release with tour group, November 25, 2020



Public hatchling release with tour group, December 2, 2020



Public hatchling release with tour group, December 27, 2020

Spreading environmental conservation awareness through the news and social media

A series of news articles and stories highlighted the importance of environmental conservation throughout the region.

Ambas Barra de Santiago 9 ene. • 🌐

Otro día de éxito, una nidada de tortuga prieta (Chelonia mydas) ingreso en esta madrugada a nuestro vivero. Siendo una especie en peligro de extinción. Proyecto AMBAS - FIAES.



Ambas Barra de Santiago está con **Silvia Margarita Flores Flores y 3 personas más.** 15 de noviembre de 2020 • 🌐

Es un enorme gusto el poder publicar una anidación de la especie de tortuga marina Dermochelys coriacea (baule), para la playa Barra de Santiago, desde hace ya unos años no se habia tenido arribo de estos individuos, ahora los huevos son llevados al vivero de incubación del proyecto AMBAS - FIAES. gracias a la colaboracion de la comunidad, viverist... Ver más



FIAES 3 d • 🌐

#FIAES | #AccionesEnTerritorio Superamos la meta de incubación de huevos de tortugas marinas y establecimos prácticas de monitoreo en el área de conse... Ver más



Ambas Barra de Santiago 6 ene. • 🌐

Una vez mas nos complace anunciar que tenemos un segundo nido de huevos de tortuga baule, este se encontro en playa San Juan. Bajo el financiamiento del FIAES y el apoyo del MARN.



Photos from various activities were shared on social networks



News coverage of event where raincoats and flashlights were delivered to tortueros, October 20, 2020



News coverage of sea turtle conservation activities

Sea turtle conservation mural

The community helped design and paint a mural focused on the conservation of coastal marine resources. A variable mosaic was designed focused on the conservation of the main resources that Barra de Santiago has.



Mural about marine conservation, December 23, 2020

2020/2021 sea turtle nesting season closing event

A small closing event was held due to the pandemic restrictions. Visitors learned about the different activities that were carried out, the different processes and goals met during the execution of the project, and the projections for next year and beyond.



Sea turtle nesting season closing event