

# HAWKSBILL MAMMAS

## PROPOSAL TO PROTECT:

Critically endangered HAWKSBILL TURTLES  
Endangered GREEN TURTLES  
Vulnerable OLIVE-RIDLEY PACIFIC SEA TURTLES

HATCHERY, TURTLE RESCUE, & COMMUNITY  
CONSERVATION INITIATIVE



FUNDACIÓN  
**OSA**

[www.4BIODIVERSITY.org](http://www.4BIODIVERSITY.org)

Jonathon Miller W., Inge Smith & Keith Hinman



Be As One  
Foundation

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# Marine Turtle Conservation Fundación OSA



OSA



Living Bridges

## 2013 Funding Proposal

Written by: Jonathon Miller W. & Inge Smith Layout: Keith Hinman

### SUMMARY OF PROJECT

Costa Rica's Pacific Coast is very important for the life cycle of a number of turtles. Particularly the critically endangered Green Turtle also called the Pacific Black sea turtle (*Chelonia mydas*), the (on the verge of extinction) Pacific Leatherback (*Dermochelys coriacea*), and the critically endangered Hawksbill or Carey sea turtle (*Eretmochelys imbricata*) and also the endangered Olive Ridley turtle (*Lepidochelys olivacea*). These species, on the verge of biological extinction, protected through international conventions, on our beach need our help. We believe that we have a real opportunity to aid the survival of these sentient creatures, and it is for this reason we have been sustaining this project, despite the many challenges it presents for the past 7 years.

Since 2007 Fundación Osa (Council for Cultural and Biological Diversity - CCBD) has successfully released over 33,600 critically endangered baby Green Turtle (*Chelonia mydas*), Hawksbill turtle (*Eretmochelys imbricata*) and endangered Olive Ridley (*Lepidochelys olivacea*). Most of these being the Olive Ridley sea turtle that is the most prevalent species. In 2007 only two Leatherbacks and one Hawksbill Turtle were registered in the southern part of the Osa Peninsula says, Didiher Chacón from WIDECAST Costa Rica, one of our project advisors who is a marine turtle conservation specialist working in the region.



Recently Born Olive Ridley Hatchlings



Right on our beach, Playa Rincón de San Josecito, Hawksbill sea turtles were again recorded in 2010, but not recorded in 2011 and 2012. Individual females of this species nest every two to three years so we are eagerly looking forward to this season in anticipation of returning Hawksbill sea turtles arriving to nest. Unfortunately Leatherback turtles (*Dermochelys coriacea*) have not been recorded on these beaches for over ten years.



*Local Youth Liberating Newborn Turtles*

### This project aims to achieve:

1. Protection of critically endangered and endangered turtles through the relocation of those nests at risk from inundation by the sea, predation by local villagers, predation by Racoons, Coatis and other birds and animals, and crushing by horses, and the increasing use of motorcycles and quad bikes on the beach.
2. Raise awareness within the local community as to the threats facing these

endangered animals through workshops, seeking local volunteer involvement in the project and visiting schools.

3. Building local capacity by providing local employment to a qualified marine biologist to manage the project and two qualified assistants.

4. Train local staff and volunteers in turtle husbandry procedures, (Chacón, D.; Sánchez, J.; Calvo, J. y J. Ash. 2007)

5. Collect valuable data regarding turtle nesting habits to present to the international turtle database.

<http://www.iucnredlist.org/>

6. To present a legal petition to the Costa Rican park service requesting nesting sanctuary status to this beach, in particular given the presence of Pacific Hawksbill and Pacific Green sea turtles, of course as well as an important population of Olive Ridley's.



*This sign shows our all inclusive friendly approach to encourage locals to participate*

7. To show the culture of conservation in action among the local community, especially this year that the electricity and the new road has just come onto our beach. This year more than any other is the time to enact these critical activities that inspire the locals to help protect these vanishing species.



Given that the majority of people work in ecotourism the possibility exists for this to be successful venture, the problem is the people still need a lot of environmental education. This project gives the locals and opportunity to participate in our conservation efforts.

Based on 2012 data the project expects to be able to release over 3000 Olive Ridley hatchlings, 300 Green turtle hatchlings and over 400 Hawksbill hatchlings should they return to the beach as we anticipate (based on data collected each year between 2007 to the 2012).

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## SECTION 1 CONTEXT

### 1.1 Project History:

Following an invitation from Gabriel Palacios, a local community leader and park ranger, we initiated our Marine Turtle Conservation efforts to protect the plummeting resident turtle population on the Osa Peninsula, specifically on the beach where we live. The turtles migrate throughout the ocean and come to the beaches only during their nesting season. Playa Rincón de San Josecito is a vital turtle-nesting seashore in the region with the only registered sighting of both the critically endangered Hawksbill Turtle and Green Sea Turtles.



*Newly Born Olive Ridley Hatchlings*

This project hopes to increase the opportunity for the Marine Turtles to hatch their nests in a protected hatchery or nursery. Once in the ocean the baby turtles still face great odds. This project at least reduces the odds of losing each valuable nest and prevents them from being taken by poachers and dogs and wild animals. We also eliminate the odds of nests being

crushed accidentally by horses that frequently walk the beach and the increasing traffic of motorcycles and quad bikes due to the new road.

Our Marine Turtle Conservation efforts began in 2004 by organizing volunteers to hide turtle tracks to prevent poaching as well as environmental education in our local school. Within three years we had organised our approach with a hatchery and a more concerted and methodological procedure.



*Our First Turtle Hatchery 2007*



In 2009, thanks to a small grant from the Threshold Foundation and funds generated from Guaria de Osa's visiting guests, we were able to protect a total of 64 nests. Of these 55 in our hatchery and 9 were successfully protected in situ. 2010 saw 62 nests with 5,203 eggs being collected and placed into the nursery. This year saw the return of critically endangered Hawksbill turtles and Green turtles, with 3 and 1 nest respectively. Over 2,700 hatchlings were released representing a survival success rate of 53.14%. During 2011, 6,311 turtle eggs were collected from 63 nests, and of these 4,901 hatchlings were released. This represents an overall recruitment success rate of 78.6%. 2010 and 2011 were made possible through private donations.



*Each Turtle Lays 60 to 160 Eggs.  
1 Of 1,000 Will Reach Sexual Maturity*

Although 2012 showed a reduction in total number of nests with 44 recorded, we were very pleased to see six Green turtle nests. Of these nests 36 were removed to the hatchery and the remaining eight were left in-situ on the beach. Of the 3,424 eggs recorded 3,118 hatchlings were released with a truly remarkable success rate of 92%. It is interesting to note that the success rate of Olive Ridley nests left in-situ was 86%, which highlights the increased success of the hatchery and the true importance of this facility to the overall survival of the turtles.



*Our 2010 Hatchery*

In addition to being supported by the local beach community, the project has the authorization of MINAET – the ministry of the Environment through which we, with legal assistance, will submit a proposal for Protected Sanctuary Status.

The staff at Fundación Osa have undergone substantial training not only in turtle husbandry but also in turtle rehabilitation which has proven to be invaluable when dealing with injured turtles that have been washed up on the beach with collision damage or those that have been trapped in nets. In 2011 two such injured turtles were successfully treated and released back to the sea. Each year injured turtles are washed up on shore that we help rehabilitate and release.



## 1.2 Background to Fundación Osa:

This Marine Turtle Conservation effort is a project of Fundación OSA (Organización Social y Ambiental); in English, we are the Council for Cultural and Biological Diversity (CCBD). CCBD is a non-profit organization legally established in Costa Rica and Ecuador, involving a committed group of volunteers, scientists, activists, indigenous and country folk who are dedicated to rainforest conservation and cultural heritage revalidation. Since 1990 we worked extensively in Ecuador on projects among indigenous ethnic minorities. We helped to create biological reserves, decolonize and demarcate indigenous territories, and supported the revival of cultural values that



*The Fundación OSA Operates Reforestation Projects In Ecuador*

strengthen community participation in rainforest conservation and sustainable resource management. Since 1990 we worked extensively in Ecuador on projects among indigenous ethnic minorities. We helped to create biological reserves, decolonize and demarcate indigenous territories, and supported the revival of cultural values that strengthen community participation in rainforest conservation and sustainable resource management. An archive of past projects can be found by visiting [www.rainforestconservationprojects.org](http://www.rainforestconservationprojects.org) and [www.4biodiversity.org](http://www.4biodiversity.org). In the year 2000, ethnobotanist Jonathon Miller Weisberger, the foundation's director, moved to Costa Rica where he founded Guaria de Osa Eco Lodge - Rainforest Ocean Discovery Centre and Ethnobotanical Gardens - located on Playa Rincón de San Josecito. It is on this 2-kilometer long beach that the turtle Conservation efforts are being upheld.

### **Accomplishments of Fundación OSA:**

The creation of the Napo-Galeras National Park in the Ecuadorian Amazon, and the decolonization and relocation of 9 settler families living within the park limits.

Creation of the 3000 acre "Eternal Rainforest of the Children" a biological reserve in the Llushin River valley, with the Amazanga community, in the Ecuadorian Amazon.

The building of a water tank that benefits 52 families in the highland province of Chimborazo province and support this communities initiative called "Dressing the Mountains in Green," a reforestation project in the high Andes, that, has since 1995 planted over 100,000 native trees.



## SECTION 2 - OBJECTIVES OF FUNDACIÓN OSA:

We want to continue this challenging and significant mission this upcoming 2013 season and for at least two further years due to the triennial nature of the turtle breeding cycle, for which we are seeking annual funds over the next three years.

*Detailed budget information is given upon request., contact us for details.*

This small project allows us to make a significant difference towards the conservation of critically endangered Marine Turtles as our beach is an important nesting beach for these species. To the south in Corcovado National Park almost all the turtle eggs are eaten by pizotes (Coati mundis) and there the jaguars also eat the turtles. To the North in Drake Bay's, Playa Colorada, the Corcovado Foundation is doing a good job to protect the Olive Ridleys that nest there. They have not had any registered sightings of Hawksbills or Green Sea Turtles, thus this proposal to fund our project on our beach is of critical importance! Since our beach is a proven nesting site for the critically endangered Hawksbill and endangered Green Sea Turtles, our project aims to place special emphasis on these species. This involves mainly night patrols specifically geared towards locating these species. Each turtle returns to lay eggs between three and six times per season, depending on the species, and we strive to locate, observe and record each turtle as she comes to the beach. Where this is not achieved we use turtle tracks to locate nests and relocate them to the nursery where it is felt necessary.



*A Critically Endangered Hawksbill Turtle  
Laying Her Eggs On Our Beach, August 2012*

Our initial aim entails the building of nursery/hatching-grounds, using locally sourced materials and relocating the nests to the nursery where it is deemed necessary to secure the survival of the turtles. Constant dedication up until the eggs are hatched is imperative by monitoring the nursery. To release and return the baby turtles to the ocean is also an involved process. The nests can hatch at any given hour of the night and when this happens they must be released immediately, requiring constant nocturnal supervision of the nursery. A standard scientific methodology is followed and all data collected is included into the national archive of information on sea turtles.



Within the objectives we inspire local youth to become involved in the project. Last year the school kids helped release many turtles and each year we see the beach community taking more interest in the efforts.

Because, after the last two seasons, we gained so much experience, this year we aim to not lose one nest of any species! In particular we will put a special focus on the two critically endangered species. This entails monitoring more of San Josecito's northern parts of the beach every afternoon from sunset to 10 pm. Followed by a second shift from 3 am to sunrise for Hawksbill turtles, whilst the Green Sea Turtles, on the other hand, require monitoring in the extreme southern beaches. That area is closest to where the newly completed road comes down by the school and is more under risk from poachers and the increased traffic from motorcycles and quad bikes that has occurred following the opening of the new road this year. For this season we will make posters illustrating the Green Sea Turtle and Hawksbill tracks and how to identify their nests. These posters will educate local residents to help us protect these critically endangered species.



*Newborn Endangered Pacific Green Turtles*

In order to have a successful Marine Turtle Conservation Project, we hope to carry out this project every year during the nesting season months of May to January, with the "Peak" months being September and October, and at times up to November. This project needs to be active for at least 12 years because the Turtles do not reach their sexual maturity until they are 12 to 15 years of age. This is the only way to see effective results.

It is our ultimate aim to secure protected status for our beach to provide long-term security and protection for the turtles that nest

here. Our hopes are to start a legal process requesting the Park service, MINAET, give marine turtle nesting sanctuary status to this beach.



## SECTION 3 - ENVISIONED PROCESS:

### 3.1 Overview

The procedures and methods by which we will carry out our project follow those laid down in "Manual para el manejo y la conservación de las tortugas marinas en Costa Rica" (Chacón, D.; Sánchez, J.; Calvo, J. y J. Ash. 2007) *Conservation and Management Manual for Costa Rican Marine Turtles* appendix 2. These procedures are recognised and accepted within the turtle conservancy community as providing the highest recruitment success rate whilst providing an adequate level of data for monitoring purposes.

### 3.2 Project Goals

Broadly this includes:

- To identify the species and number of the turtles that arrive and/or nest on the 2-kilometer long beach, Rincón de San Josecito and neighbouring San Josecito cove.
- To uphold efforts that protect the turtles and their eggs from hueveros (human turtle egg poachers) and other predators, such as stray dogs and pizotes (coatimundis).
- To build and to take care of a breeding ground or hatchery.
- To transfer the eggs to the breeding ground for their protection and provide constant care by monitoring the hatchery to assure that the nests hatch and prevent unforeseen accidents.
- To ensure the safe return to the sea of all of the juveniles that emerge.
- To protect the nesting areas, clean the beach every 15 days and recycle the garbage materials found on the beach, for example: plastics, tin cans, etc. These materials are hazardous for the turtles and other sea life.
- To coordinate and train teams of volunteers to carry out the different activities of the Marine Turtle Conservation Project.



*Critically Endangered Hawksbill Eggs*



- To work as a group with MINAET officials, locals and volunteers towards enhancing conservation on the Osa Peninsula.
- To patrol San Josecito Beach at night during the nesting season; identify the turtles that use the beach for their nests; and protect those turtles that are found nesting. Often times by warning people passing by, and asking them politely to turn off their lights, and use red lights to show them what is happening.
- To offer an opportunity for volunteers to gain a deeper awareness of ecological phenomena and to experience the tropical nocturnal rainy season climate (thunder, rainstorms and lightning). We take all safety precautions possible.
- To create and maintain a database to keep a record of the population of turtles and the prevailing conditions during nesting, and facilitate the continuous monitoring of the nests from their transfer to the breeding ground, up till the time of hatching.
- To educate the local community and visitors that arrive in the zone about the population of turtles who have chosen our beaches to nest, and other themes related to the environment, and thereby help foster co-operation in the project and understanding of why this project is necessary. Employ various methods including dialogues, workshops, distribution of written information, and a bulletin board, to inform and educate.



*Working With MINAET National Park Officials*



*Local Volunteers Collect Data and Monitor Nests*

- To educate the neighbours of San Josecito Beach, including hotel personnel and their visitors, regarding the practice of turtle conservation actions. For example: turning off the lights which can distract and confuse nesting turtles, controlling pets, and maintaining the beach to be a safe home for nesting.



- To inspire and heighten the level of environmental education and appreciation of local youth via workshops, and to allow the locals to participate in the culture of conservation and care of the environment.
- To collaborate with the teachers of nearby schools to incorporate such activities related to the conservation of turtles and environmental education in general into their educational programs. To encourage the children of the nearby schools to be proactively involved with the Marine Turtle Project on the beach and wherever applicable.



*Involving Local Students In Our Conservation Efforts*

- To advise groups or individuals that would like to develop a commercial and/or tourist product related to the Turtles so that the project is in a sustainable form and still maintains protection for the nesting turtles.
- To distribute pamphlets to local community and neighboring villages related to sea turtle conservation status and the laws regarding their protection.

- To invite volunteers from around the world to visit the project and participate, learning new skills and acquiring a deeper understanding and appreciation for these rapidly declining turtle species.

## SECTION 4 - CONCLUSION:

Due to the alarming decrease of sea turtles worldwide, specifically in Costa Rica, the Community of San Josecito Beach on Costa Rica's Osa Peninsula has seen the urgent need to protect the turtles that travel our waters, arriving annually to nest on our beach. Since we have the opportunity to help preserve these distinguished sentient beings that nest on our beach, we are taking action with your help.



*A Vulnerable Olive Ridley Turtle On Our Beach*



Only a small and dedicated group is necessary. With a skilled local team that has already been trained for the work, the task will be much easier, and it would be an important ecological endeavour to continue this upcoming season 2013. We also seek volunteers from around the world to partake in this project, and are currently contacting volunteering organizations to include us on their volunteer circuits.

We are currently working with voluntary organizations such as Planet Conservation here in Costa Rica, to include us in their volunteer circuits and who have already been sending us volunteers. Volunteers have the opportunity to be an active part of protecting endangered sea turtles.



*Above: Local Volunteers Moving An Injured Turtle To The Rescue Tank For Treatment.*



*Our Volunteers Attending A Local Training Program*



*Relocating Precious Nests*



*Tracks left by a nesting Olive Ridley turtle on our beach*



## **SECTION 5 - BUDGET SUMMARY**

May 2013 – January 2014

Marine Turtle Conservation Project  
at Guaria de Osa on the Osa Peninsula of Costa Rica

For interested donors, a detailed budget summary can be easily obtained by contacting us at:

[info@4biodiversity.org](mailto:info@4biodiversity.org)

## **APPENDIX 1 KEY STAFF MEMBERS**

Project Leaders, Coordinators and Volunteers

David Donate, Marine Biologist, supervisor of fieldwork, night patrols, local team and volunteers.

Gabriel Palacios, MINAET Official, local community leader and park official

Jonathon Miller Weisberger, OSA / CCBD Foundation Director, project supervisor

Andrey Bolaños: Certified public accountant, accounting

Eliezer Valdez, Community Member, beach patrol

Jose Rojas, Community Member, beach patrol

Miriam Perez, Nursery supervisor

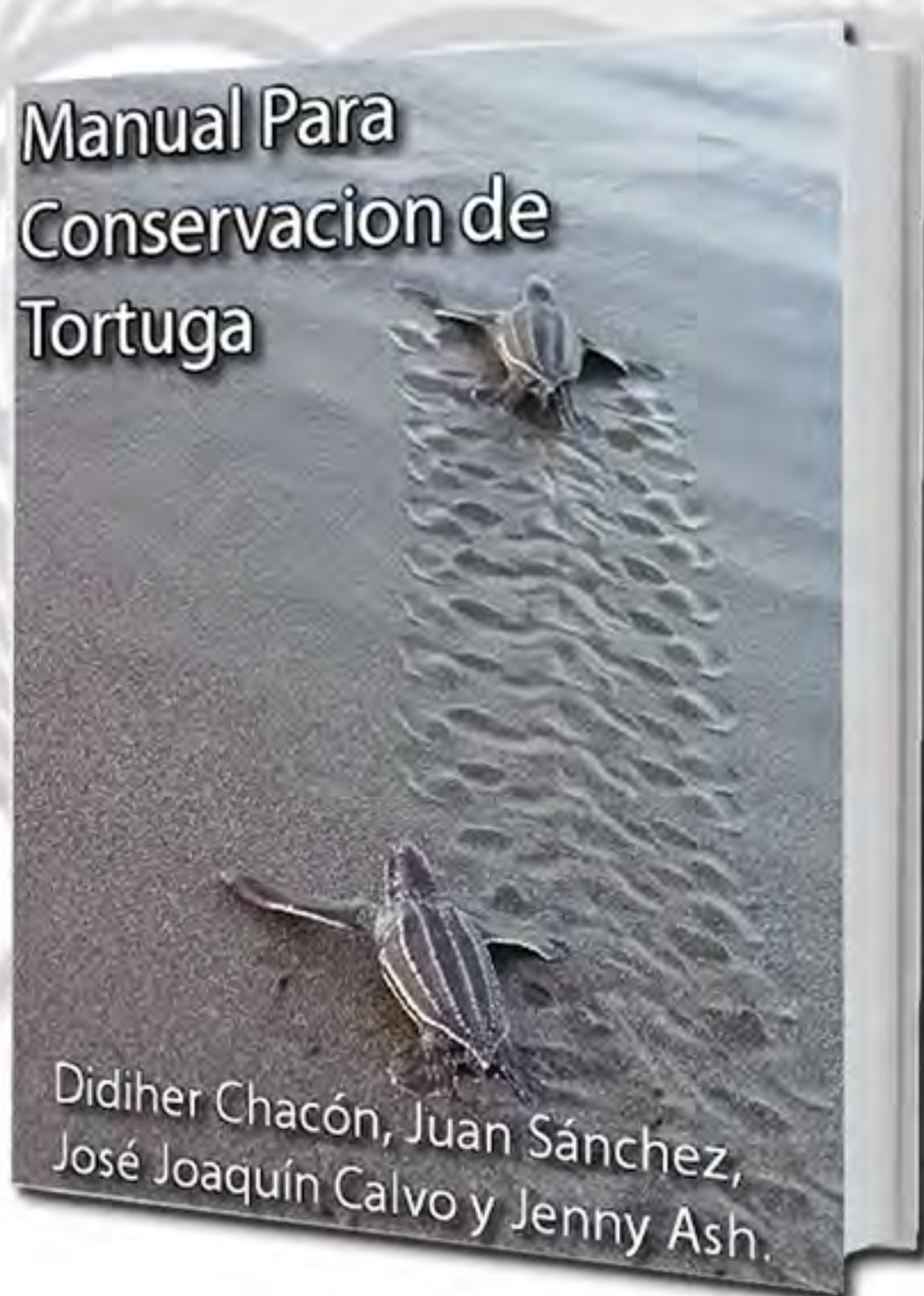
Keith Hinman, Project volunteer, webmaster, graphic design and blog upkeep



## APPENDIX 2 DETAILED METHODOLOGY.

The procedures and methods by which we will carry out our project follow those laid down in “Manual para el manejo y la conservación de las tortugas marinas en Costa Rica” (Chacón, D.; Sánchez, J.; Calvo, J. y J. Ash. 2007) see appendix 2. These procedures are recognised and accepted within the turtle conservancy community as providing the highest recruitment success rate whilst providing an adequate level of data for monitoring purposes.

***“Conservation and Management Manual for Costa Rican Marine Turtles”***



<http://www.asvocr.org/pdfs/manualparaconservaciondetortuga.pdf>



## APPENDIX 3

### About the Turtles

Marine Turtles have inhabited the Earth for over 100 million years and survived in great numbers until the recent past. They have evolved from large, land living tortoise-like animals. Their body consists of a head, short neck, and pair of long fore flippers, pair of short and rounded hind flippers, and a tail. Upper carapace and lower plastron make a protective structure (box) for internal organs. Unlike tortoises and freshwater terrapins they are unable to withdraw their head and limbs into their shell. Marine turtles do not have teeth. What they do have are sharp, beak-like jaws that can crush, tear or bite depending on their diet, which varies according to species.

Turtles are reptiles (Class: Reptilia, Order: Chelonia) - hence cold-blooded animals. Therefore the environment determines their body temperature. In the morning, marine turtles "sunbathe" on the surface of the sea to increase their body temperature. They have lungs to breathe air. Turtles rise to the surface to breathe every 5 - 30 minutes.

Over millions of years they have become very well adapted to living in a marine environment. With their long and muscular oar-like fore flippers, rudder-like hind flippers and their flattened, streamlined shells, marine turtles are fast and agile swimmers. The only time marine turtles leave the ocean is when the females come ashore to nest. In some areas they can be seen having their "sunbath" on beaches or rocks. The males spend all their time at sea and little is known about their habits. Most species are highly migratory, moving between nesting and feeding grounds, which can be thousands of kilometres apart.



*A Critically Endangered Hawksbill Turtle  
Resting In A Local Tide Pool*



Although we do not know exactly how long turtles live, they are generally assumed to have a life span greater than 80 years. It is thought that marine turtles reach sexual maturity between 12 - 50 years of age depending on the species. Until they reach maturity it is difficult to distinguish between male and female turtles. At maturity male turtles develop a long claw on each fore flipper and a long tail.



*Newborn Olive Ridley Turtles  
Making Their Way To The Water*

### A Mystery

The way an egg-bearing female finds her way to her nesting beach, after traveling in open sea for thousands of miles, is still a mystery! Some scientists believe that marine turtles are sensitive to Earth's magnetic field and use it for navigation. They are often found coming to the same sandy beach and even to the very same stretch of beach they used in previous years. The distinct species nest only

every two to three years so it is quite likely that the baby turtles we released from 2007 efforts were a totally different population than the baby turtles released last year.

### Major Threats

In the last decade the Marine Turtle population has decreased dramatically. In some species, such as the Hawksbill and the Leatherback, this loss has been up to 90% - thus, driving them to the brink of extinction.

This fact is alarming scientists and concerned individuals. Urgent action is needed from state departments and international conventions in order to allow these species to survive. The direct causes of their extinction are the plunder of nests for the consumption of eggs and the hunting of the adults for their meat and their shells. Other causes are:

plastics floating in the ocean, confusing the turtles as food to eat, causing suffocation; other forms of unknown contamination; the loss of beaches for



photo credit: [www.destination-scuba.com](http://www.destination-scuba.com)

*Devastating Effects Of Long Line Fishing*



nesting due to the construction of hotels and towns; light pollution on the beach which confuses their orientation during nesting; industrial fishing with dragging fishing lines, accidentally killing thousands of turtles per year.

Their complex cycle of life makes them even more vulnerable since they need to survive so many dangers before they become adults and are able to reproduce. These dangers snare them in all their stages of life: as eggs they are consumed by a large quantity of birds and mammals, including human beings; the few that manage to hatch are eaten by practically all the carnivorous vertebrates; including a large quantity of invertebrates such as sea crabs. For these reasons, approximately one turtle survives to reach maturity from each one to ten nests. In other words for every one hundred to one thousand baby turtles, one will reach mature adulthood.



*Above: A Local Volunteer Releasing Newborn Turtles*



photo credit: [www.irfanisy17.edublogs.org](http://www.irfanisy17.edublogs.org)

*Above: Pollutants Can Be Mistaken For Food*

*Below: Aerial View Of Our Beach and Project Areas*





## APPENDIX 6

## TAX DEDUCTABLE DONATIONS

Note: For fiscal accounting, please add an additional 5% for tax-deductible donations via our non-profit umbrella, Be As One Foundation.

To donate by post send a cheque (no cash) payable to: Be As One Foundation  
In the Memo write: The Osa Foundation: 2013 Marine Turtle Rescue Project

Be As One Foundation  
Suite 19601  
Lower Ground Floor  
145-157 St John Street  
London  
EC1V 4PW  
UNITED KINGDOM

### Bank Details:

Account Name	Be As One Foundation
Account No	43207293
Sort Code	20-78-58
IBAN NO	GB75 2078 5843 2072 93
SWIFTBIC	BARCGB22

Also please send an e-mail to notify a cheque is in the mail.  
E-mail: [turtles@4biodiversity.org](mailto:turtles@4biodiversity.org) c/c to [nori@beasonefoundation.org](mailto:nori@beasonefoundation.org)

Our U.K. Based Fiscal Sponsors website:  
[www.beasonefoundation.org](http://www.beasonefoundation.org)

Our Foundation Website  
[www.4biodiversity.org](http://www.4biodiversity.org)

For Donations Not Needing Tax Deduction:

Please write your kind check payable to: Sentient Experientials  
In the Memo write: The Osa Foundation: 2013 Marine Turtle Rescue Project

Mail to:  
Guaria de Osa Ecolodge  
PO Box 1004  
El Cerrito, CA 94530



Phone: (1-510) 235 – 4313 (California)

For More Information: [turtles@4biodiversity.org](mailto:turtles@4biodiversity.org)

Skype In: (1-908) 998 - 1020

Skype: Guaria de Osa

Fundacion Osa Headquarters at Guaria de Osa +506 - 8735 - 3083



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## APPENDIX 5

### BIBLIOGRAPHY

Chacón, D.; Sánchez, J.; Calvo, J. y J. Ash. 2007. Manual para el manejo y la conservación de las tortugas marinas en Costa Rica; con énfasis en la operación de proyectos en playa y viveros. Sistema Nacional de Áreas de Conservación (SINAC). Ministerio de Ambiente y Energía (MINAET). Gobierno de Costa Rica. San José. 103p. (<http://www.asvocr.org/pdfs/manualparaconservaciondetortuga.pdf>)

Eckert, K. L., K. A. Bjorndal, F. A. Abreu-grobois y M. Donnelly (Editores). 2000(Traducción al español). Técnicas de Investigación y Manejo para la Conservación de las Tortugas Marinas. Grupo Especialista en Tortugas Marinas UICN/CSE Publicación No. 4.

## APPENDIX 6

### More Project Photos

We felt it necessary to include the following photos, to share the successes of our conservation efforts in past years as well as provide a greater understanding of what we really do.



*Treating A Critically Endangered Hawksbill Turtle  
Our current Solution is Confined Space in this Canoe*



*When funds are obtained we plan to build a large  
fiberglass rehabilitation tank.*



*Our 2011 Hatchery*



*Our 2012 Hatchery*

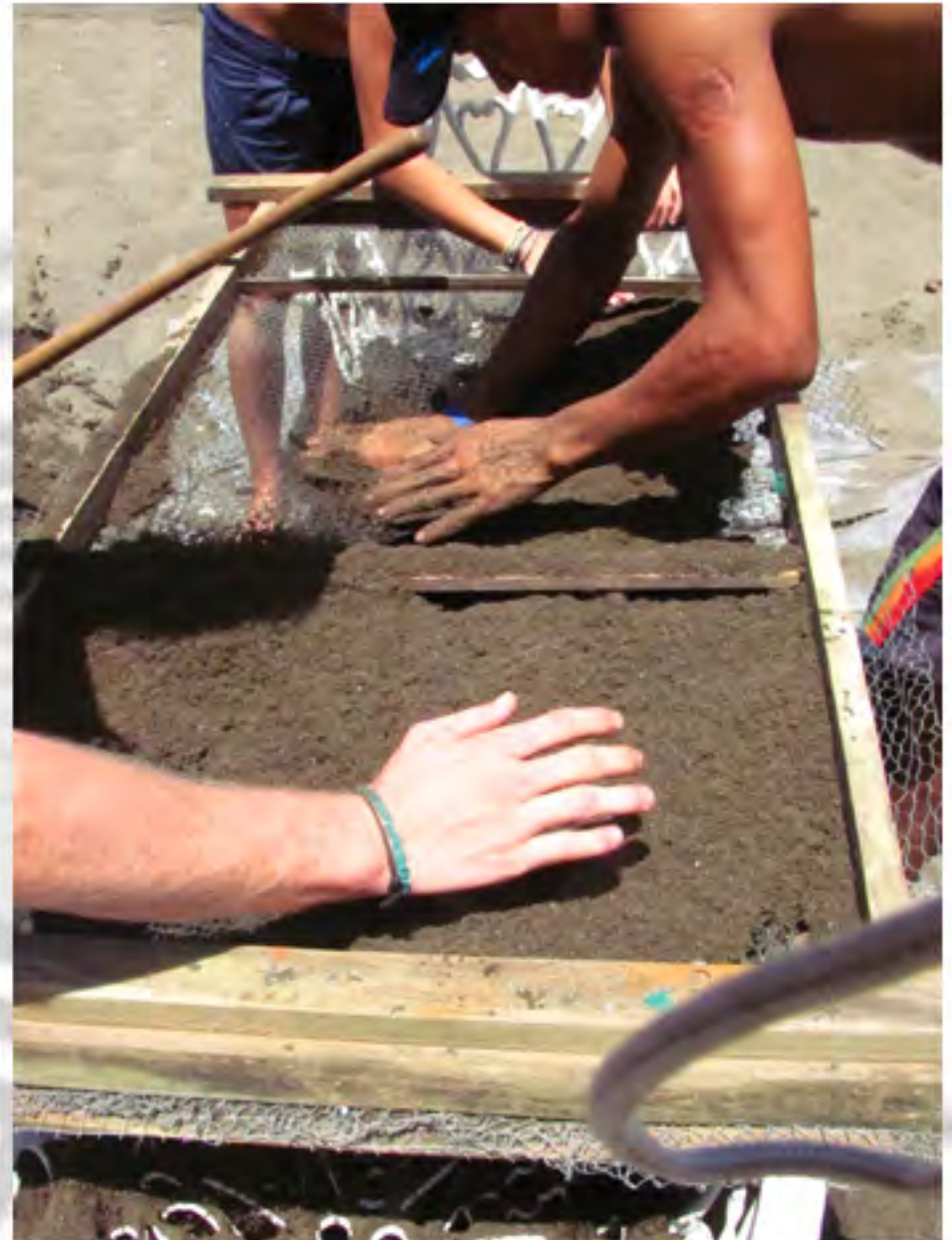




*Making the hatchery requires cleaning the sand*



*The course went from theory to practice when this battered Olive Ridley was washed up onshore during our marine turtle rescue study with WIDECAST*



*The sand is sifted of organic debris that can cause rotting in the nest*



*Training local youth in data collection with marine biologist Mauricio Solís, who at the time worked for MINAETT park service.*





*Working with MINAET National Park Service*



*We clean our beach, surrounding areas, and within the Corcovado National Park*



*David Donate, Marine Biologist, Providing Much Needed Care To An Injured Critically Endangered Hawksbill*



*Getting The Community and Tourists Involved*



*Help us protect more endangered species like this critically endangered hawksbill turtle*



*Critically Endangered Hawksbill Hatchlings*