

Marine Turtle Conservation Act

Activities Report for the Wildlife Without Borders - Species Programs
Six Year Report FY 2005-FY 2010



In Memoriam

Sam D. Hamilton, Former U.S. Fish and Wildlife Service Director

Right: Former USFWS Director Sam Hamilton and a nesting leatherback turtle at St. Croix NWR, USVI.

Credit: USFWS

Sam D. Hamilton worked for the U.S. Fish and Wildlife Service (USFWS) for more than 30 years, beginning when he was 15 years old working as a Youth Conservation Corps member on the Noxubee National Wildlife Refuge in Mississippi.

In 1998, when Sam was serving as regional director of the Southeast Region, responsibility for USFWS international marine turtle activities was transferred from the Southwest Region to the Southeast Region. At the time, the program involved three projects in Mexico with limited



funding, and Sam was eager to visit the Mexican Pacific Coast firsthand to learn about critical leatherback and black turtle nesting populations and the conservation issues facing these charismatic species. Within the first year of assuming this new responsibility, he was on the ground in Mexico where he quickly came to appreciate the difficult logistical and practical challenges faced when carrying out conservation work in remote areas with impoverished local communities living on the land.

Sam saw how much could be accomplished to conserve globally important marine turtle populations with very little funding, and immediately got behind an effort to promote an international marine turtle funding initiative in subsequent years. When that failed to get support through the budget process, he supported efforts to create a dedicated fund for international marine turtle conservation.

Thanks to his unfailing support, and that of many others, the Marine Turtle Conservation Act (MTCA) of 2004 was signed into law in July 2004. Nurturing the development of an international marine turtle program that began in one country with just three projects and has today grown to 40 MTCA projects for critical nesting populations in more than 30 countries is testimony to Sam's broad vision and concern for the planet.

Working with People to Conserve Nature

The USFWS **Wildlife Without Borders** programs promote, facilitate, and support vital conservation efforts across the globe in order to preserve the planet's rich diversity of wildlife for all the citizens of the Earth and for generations to come. In recognition of the unprecedented threats to wildlife of global significance, our species programs save some of the world's fastest disappearing and most treasured animals in their natural habitats.

On behalf of the American people, the U.S. Congress passed the Marine Turtle Conservation Act (MTCA) in 2004. The legislation was enacted to ensure the long-term survival of these endangered species by assisting in the conservation of marine turtles and their nesting habitats in other countries.

The USFWS has the privilege of administering and implementing the MTCA to support on-the-ground conservation initiatives on behalf of the world's imperiled marine turtles. This report highlights the Wildlife Without Borders Marine Turtle Conservation Fund, emphasizing fiscal years 2005-2010.

The following pages provide an overview of the many successes of the MTCA as well as the remaining challenges to marine turtle conservation. The report includes project highlights to demonstrate how USFWS and its partners are making a lasting impact on marine turtle conservation. By protecting nesting beaches and nesting populations, building capacity and working closely with local communities and governments, USFWS is implementing conservation initiatives on behalf of the world's endangered marine turtles. It is a responsibility that USFWS and its many conservation partners take very seriously to help save these ancient mariners of the sea.

Herb Raffaele



Chief, Division of International
Conservation
U.S. Fish & Wildlife Service



Below: Soldiers are trained to patrol and monitor beaches in Cape Verde to prevent poaching.

Credit: Turtle Foundation-USA

Table of Contents

In Memoriam	2
Working with People to Conserve Nature	
Foreword	3
Status of Marine Turtle Conservation	5
How It Works: Marine Turtle Conservation Act	7
Global Status and Threats to Marine Turtles	8
Marine Turtle Conservation Projects by Species	9
Status and Conservation Challenges by Species	10
Marine Turtle Conservation Act (MTCA) Success Stories	16
Central America	16
West Africa	19
Capacity Building	23
Training and Exchanges	23
Networks	26
Governments, NGOs, Community Based Organizations, Universities	27
Civil Society, Communities	29
Policy, Frameworks, Processes	30
Appendix I: Program Partners 2005-2010	32
Appendix II: List of Projects 2005-2010	35
Acknowledgements	50

Cover Photos (Left to Right): Loggerhead returns to the Arabian sea by USFWS, Hawksbill turtle on Chiriquí beach, Panama, by Sea Turtle Conservancy, Olive ridley nesting on beach by Marinelife Alliance, Green turtle nesting on at Ras al Hadd in Oman by USFWS and Leatherback turtle nesting on a beach by Gabon Sea Turtle Partnership.

Status of Marine Turtle Conservation

For more than 120 million years, marine turtles roamed the seas fulfilling their ecological roles and evolutionary destinies unimpeded by any serious threats to their existence. They survived and flourished even when the great dinosaurs were vanishing from the earth about 65 million years ago.

As recently as 3 million years ago, marine turtles were still diverging into the seven species we now recognize during our relatively short human history. Archaeological evidence demonstrates that our earliest interactions with and use of these marine species for food was in Kwazulu, South Africa, in the Middle Stone Age, between 49,000 and 50,000 BP. We were one of many predator species during most of human history posing little overall threat to marine turtle populations.

This began to change in the 1400s, when European exploration brought large fleets of ships and their crews to the Western Hemisphere. Nesting turtles in the Caribbean were easy sources of fresh meat and, even better, the turtles could be kept alive on deck for months to ensure the availability of fresh meat for the fleets while they traveled the seas in search of new lands and treasures. The first evidence of overexploitation was the decimation of green turtle nesting populations in the Cayman Islands, the largest known nesting site in the Caribbean at that time.

In the 21st century, the threats to marine turtle survival are even greater because of the harvesting of nesting populations by coastal inhabitants around the world. Six of the seven marine turtles species are listed in threatened categories by the World Conservation Union: the green turtle (*Chelonia mydas*), the leatherback (*Dermochelys coriacea*), the loggerhead (*Caretta caretta*), the hawksbill (*Eret*

mochelys imbricata), the Kemp's ridley (*Lepidochelys kempii*) and the olive ridley (*Lepidochelys olivacea*).

Marine turtles today face a variety of conservation challenges, including over-exploitation for meat and eggs, targeted fisheries, global demand for exquisite jewelry made from the shells of species such as the hawksbill, and an ever-increasing trawl, long-line and gill-net (stationary entanglement nets) fisheries that accidentally capture and kill tens of thousands of marine turtles each year. The Kemp's ridley was nearly driven to extinction in the past century, and now the leatherback is in imminent danger of being eliminated from the Pacific. Recognizing the severe threats to marine turtle species, six of the seven species were listed as either Endangered or Threatened in 1978 under the authority of the U.S. Endangered Species Act by USFWS and National Marine Fisheries Service (NMFS), who share responsibility for the conservation of marine turtles. USFWS is responsible for conservation actions on nesting beaches while NMFS is responsible for conservation in the marine environment (i.e. fisheries by-catch).

USFWS has demonstrated that with international collaboration and long-term commitment to address threats both on the nesting beaches and in the marine environment, species and nesting populations at the brink of extinction can be recovered.



Credit: Sea Turtle Conservancy

The three largest global green turtle nesting colonies occur at Tortuguero, Costa Rica, Raine Island, Australia and Ras al Hadd, Oman.

For example, USFWS established a partnership with the Government of Mexico in the late 1970s at a time when the Kemp's ridley had only a few hundred nesting females. After nearly three decades of sustained effort between both countries to protect nesting females and eggs from poaching as well as the implementation of Turtle Excluder Devices in shrimp trawl fisheries, this species has made a remarkable comeback, with more than 21,000 nests documented in Mexico in 2009.

In recognition of the growing threats to marine turtles, their migratory nature (which requires multinational conservation efforts) and the need for a dedicated funding source for international marine turtle conservation efforts, Congress passed the Marine Turtle Conservation Act in 2004. Prior to then, a lack of long-term dedicated marine turtle conservation funding constrained USFWS' international efforts to Mexico. As part of Wildlife Without Borders, the MTCA has enabled USFWS to take an international leadership role and support more than 40 projects in over 30 countries.

Marine turtles know no political boundaries and do not consider the nuances of international politics. However, their cause brings countries together to address issues like marine fisheries exploitation, oceanic pollution and coastal development. These issues directly affect not only marine turtle populations but also the well-being of human populations.

USFWS is deeply committed to long-term international marine turtle conservation efforts where it provides leadership and facilitation to the public, governmental, non-governmental organizations (NGOs) and private partnerships to recover marine turtle populations for their own intrinsic value, as well as for their important contributions to healthy, functioning marine ecosystems.

This report highlights the range and significance of these projects since the inception of the program in 2005 and demonstrates the many successes and future possibilities to save these truly magnificent creatures.

Right: Green marine turtle swims along seagrass bed, its primary foraging habitat.

Credit: Chelonee



How It Works: Marine Turtle Conservation Act

Congressional Mandate and Program Mission

Assist in the conservation of marine turtles and the nesting habitats of marine turtles in foreign countries.

Goal

Provide leadership and support for conservation efforts to ensure existence of all marine turtle species, viability of major nesting populations and genetic diversity of nesting populations in the Pacific, Atlantic and Indian Oceans.

Objectives

We will accomplish the overall goal through support of the following objectives:

1. Develop regional capacity building programs to train a cadre of regional, national and local conservationists and community members to carry out nesting beach monitoring and nest protection programs.
2. Provide technical support for MTCA-funded on-the-ground conservation projects to ensure local implementers conduct the most scientifically sound and effective nesting beach programs.
3. Support development and implementation of standardized surveys of nesting populations to monitor long-term population trends of index populations for each species within each ocean basin.



Credit: Gabon Sea Turtle Partnership

Six of the seven species of marine turtles are listed as **Critically Endangered, Endangered or Threatened** by the World Conservation Union for the Conservation of Nature. Only the flatback turtle is listed as data deficient.

4. Provide support for scientific studies including genetics, telemetry and tagging to examine distinct nesting populations for each species within each ocean basin as well as their relationship to mixed populations on foraging grounds.
5. Support long-term studies to assess potential effects of climate change on nesting habitats, hatchling sex ratios, hatching success, and hatchling and juvenile dispersal to developmental habitats.
6. Support cooperation and capacity building of regional and international bodies such as the Inter-American Convention for the Protection and Conservation of Sea Turtles, the Indian Ocean South East Asia Marine Turtle Memorandum of Understanding (MOU) and the International Sea Turtle Society.
7. Partner with governmental marine resource institutions to develop their capacity and motivation to engage with and create marine turtle conservation programs within their respective countries, as well as develop and implement policies addressing threats to marine turtle populations within their country.

8. Support national and regional outreach programs to increase awareness and support for marine turtle conservation tailored to specific local, national and regional issues.

9. Support nascent marine turtle projects and programs in developing countries, with special attention paid to community development dimensions and requirements for successful on-the-ground conservation.

10. Identify and nurture potential conservation leaders within countries and regions through training opportunities and project support.

11. Continually assess and prioritize funding support to focus on the most important global and regional important nesting populations and those nesting populations most at risk.

12. Support development and expansion of community-based nesting beach projects linking conservation programs with near-shore fisheries bycatch issues that affect local and regional nesting populations.

Global Status and Threats:

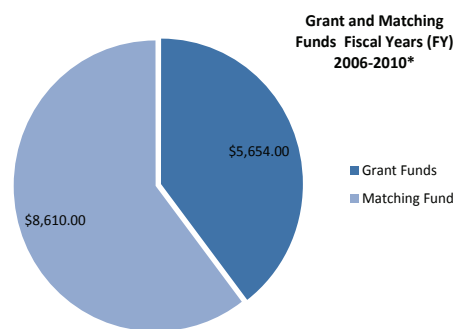
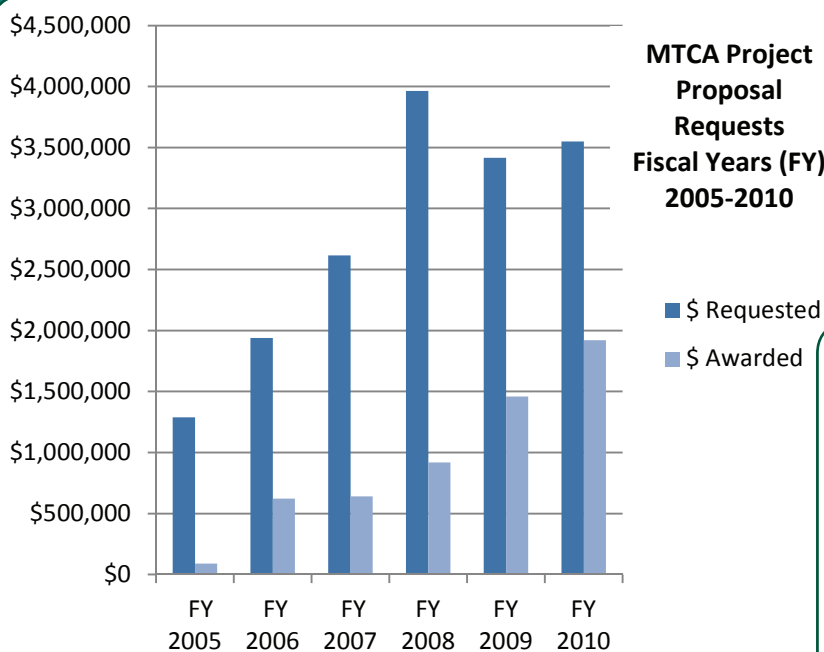
How is the MTCA used to strategically address and maximize conservation impact?

Fisheries bycatch from long-line, gill-net and trawl fisheries is the number one threat to marine turtle populations in the world's oceans and seas. It is the most complex and difficult threat to address because of the vast numbers of artisanal fishermen and the proliferation of industrial fisheries fleets in the past several decades.

In addition, poaching of nesting turtles and their eggs is an ubiquitous threat on undeveloped nesting beaches. In many countries, 100 percent egg harvest often occurs on beaches if conservation projects are not in place with local communities.

Furthermore, coastal development and the associated light pollution, sea walls and other structures to protect property degrade or destroy marine turtle nesting habitat. Predation from native and feral predators can cause high levels of nest loss on many nesting beaches. Marine debris can also cause accidental injuries and mortality with turtles in the marine environment.

MTCA Project Proposal Requests Fiscal Years (FY) 2005-2010



**Please note that FY 2005 grant and matching funds data was unavailable.*

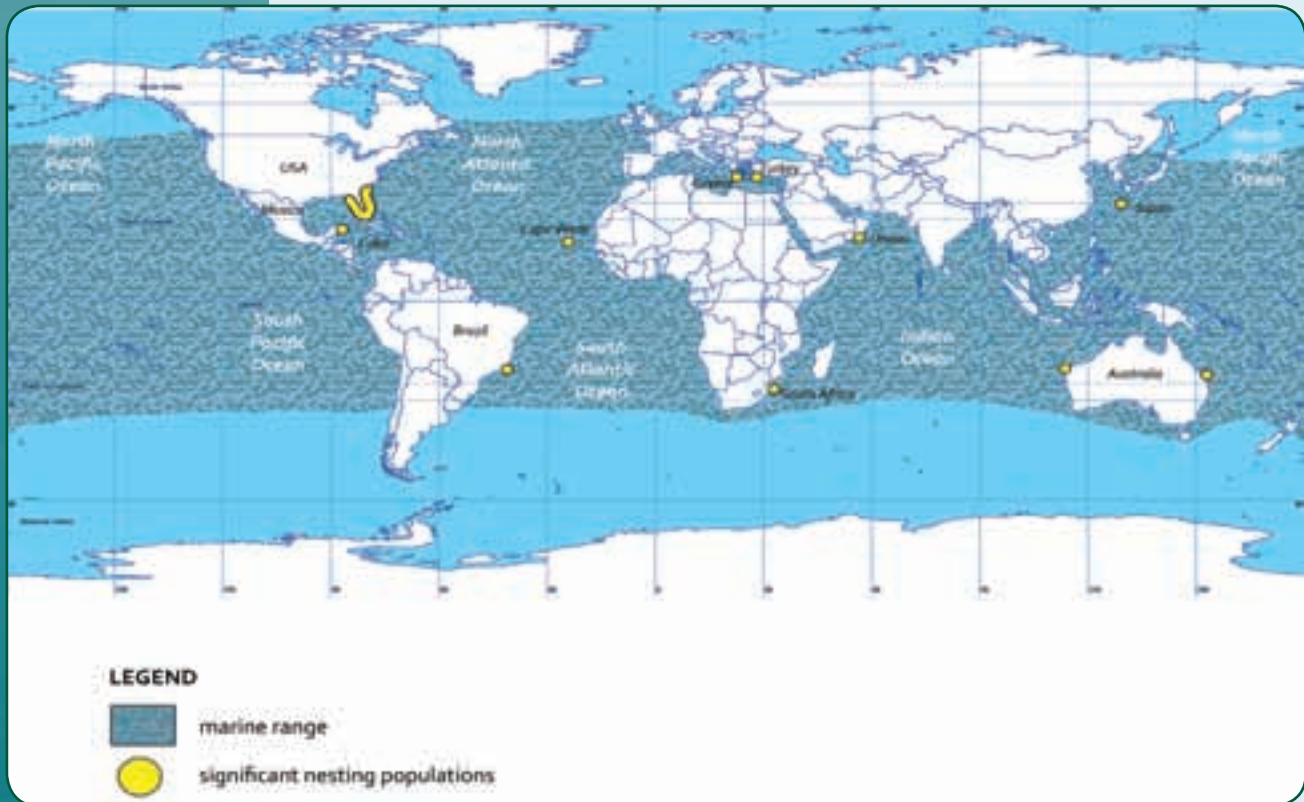
All marine turtle species are under threat, but because each species has its own unique life history, adaptations to particular habitats and value for human use, the degree of threat and population status vary among species and even among populations of the same species in different ocean basins. Given the limited funding, USFWS weighs these factors to ensure conservation efforts are focused on the most globally significant and threatened populations such as those important to breeding and migration

as well as those populations facing the greatest threats from poaching, overharvesting of eggs, beach degradation, light pollution and fisheries bycatch. Other important elements of the MTCA program include: education; outreach; integration of conservation efforts to address coastal bycatch off and near nesting beaches; identification and support of emerging conservation leaders and cross-fertilization between regions and projects.

Marine Turtle Conservation Projects by Species FY 2005-FY 2010



Loggerhead Marine Turtle Range and Globally Significant Nesting Populations



Below: Loggerhead marine turtle nesting in Oman.

Credit: USFWS

Loggerhead Turtles

Nine discrete nesting populations of loggerheads occur globally in temperate and subtropical latitudes of all three ocean basins. The two largest populations in the world nest in the southeastern United States and in Oman.

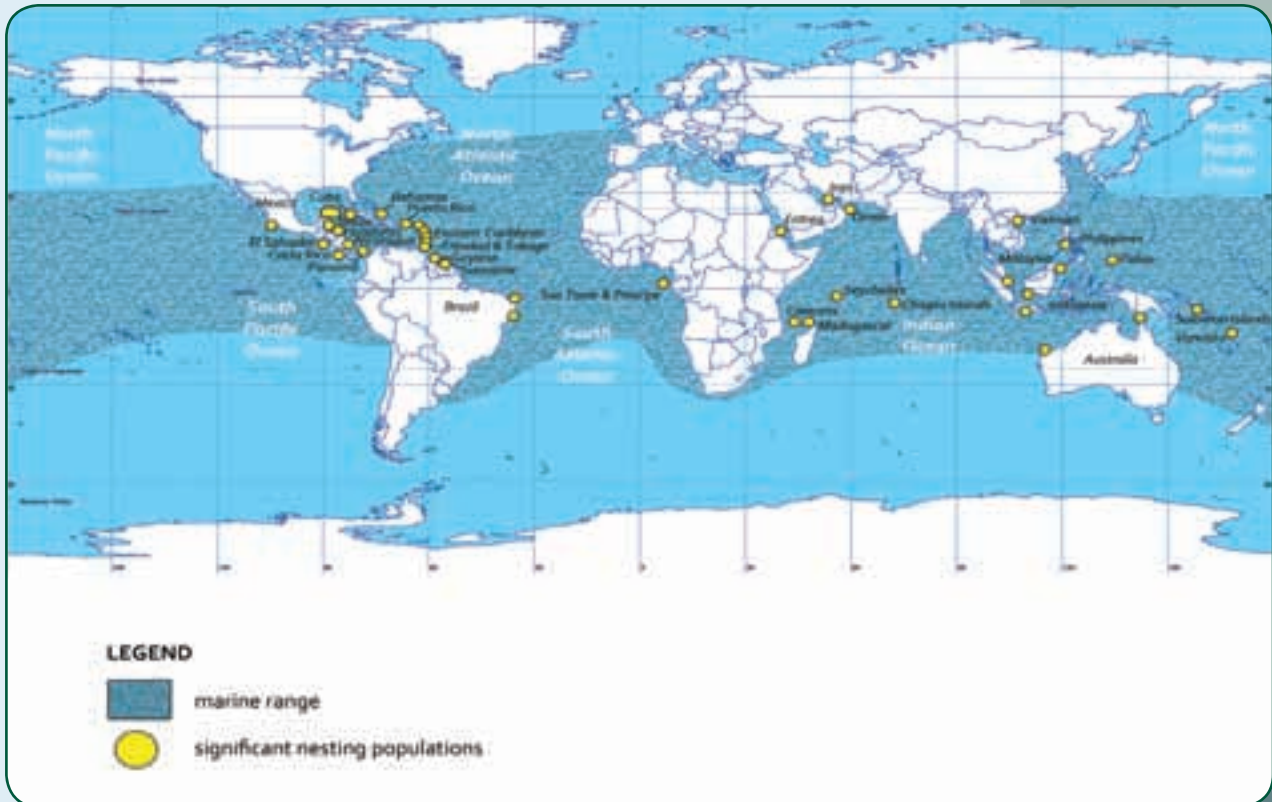


Together, these populations make up 80 to 90 percent of the global population. Both are in decline and face major threats from fisheries bycatch and development on nesting beaches.

The loggerhead may be the most globally endangered marine turtle species because of its natural behavior, which places every life stage of the turtle in direct contact with commercial fisheries in the open ocean and in the coastal habitats.

Five of the remaining seven populations, while much smaller, are also in decline and face severe threats to its nesting beaches from the direct slaughter of nesting females on the beaches of Cape Verde to the beach armoring and degradation of the most important nesting beaches in Japan.

Hawksbill Marine Turtle Range and Globally Significant Nesting Populations



Hawksbill Turtles

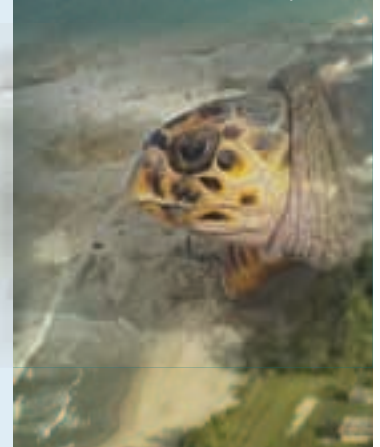
Hawksbill turtles are distributed throughout tropical waters in all ocean basins, nesting on island pocket beaches or longer mainland beaches, generally high on the beach and often under scrub vegetation. Foraging on sponges and other invertebrates on hard bottoms or coral reefs, hawksbills are most noted for their beautiful shells, which are used to craft exquisite jewelry. Demand for these products resulted in the depletion and collapse of many nesting populations throughout Asia and the Caribbean in the 19th century, and it wasn't until 1993 that a ban on international trade was finally honored by all members of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES). While legal international trade has been curtailed, illegal trade

continues on a smaller scale and most populations in the Pacific and Caribbean are greatly depleted from historic levels. Climate change poses a particularly difficult and large-scale threat to coral reefs, which are hawksbills' primary foraging grounds, and to island nesting beaches as a result of sea level rise. Long-term sustained conservation programs on key nesting beaches in the Caribbean, along with the ban on international trade, are paying off and a slow but steady recovery of some nesting populations is evident.

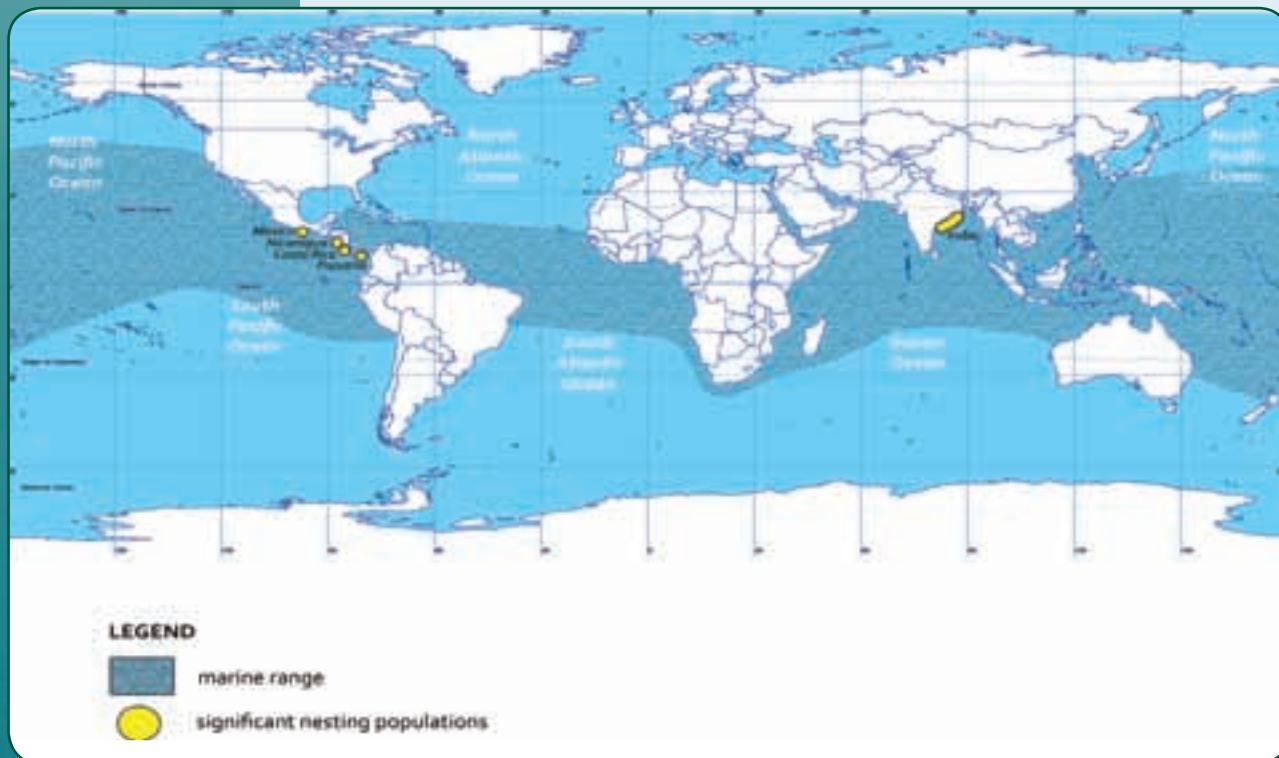
Until recently, hawksbills were thought to be wiped out as a nesting population in the East Pacific, but small nesting populations have been discovered in Mexico, El Salvador, Nicaragua and Costa Rica, resulting in an urgent need for focused conservation.

Below: Hawksbill turtle nesting on Chiriqui Beach in Panama.

Credit: Sea Turtle Conservancy



Olive Ridley Marine Turtle Range and Globally Significant Nesting Populations



Below: Olive ridley nests on beach in Bangladesh.

Credit: Marinelife Alliance

Olive Ridley Turtles

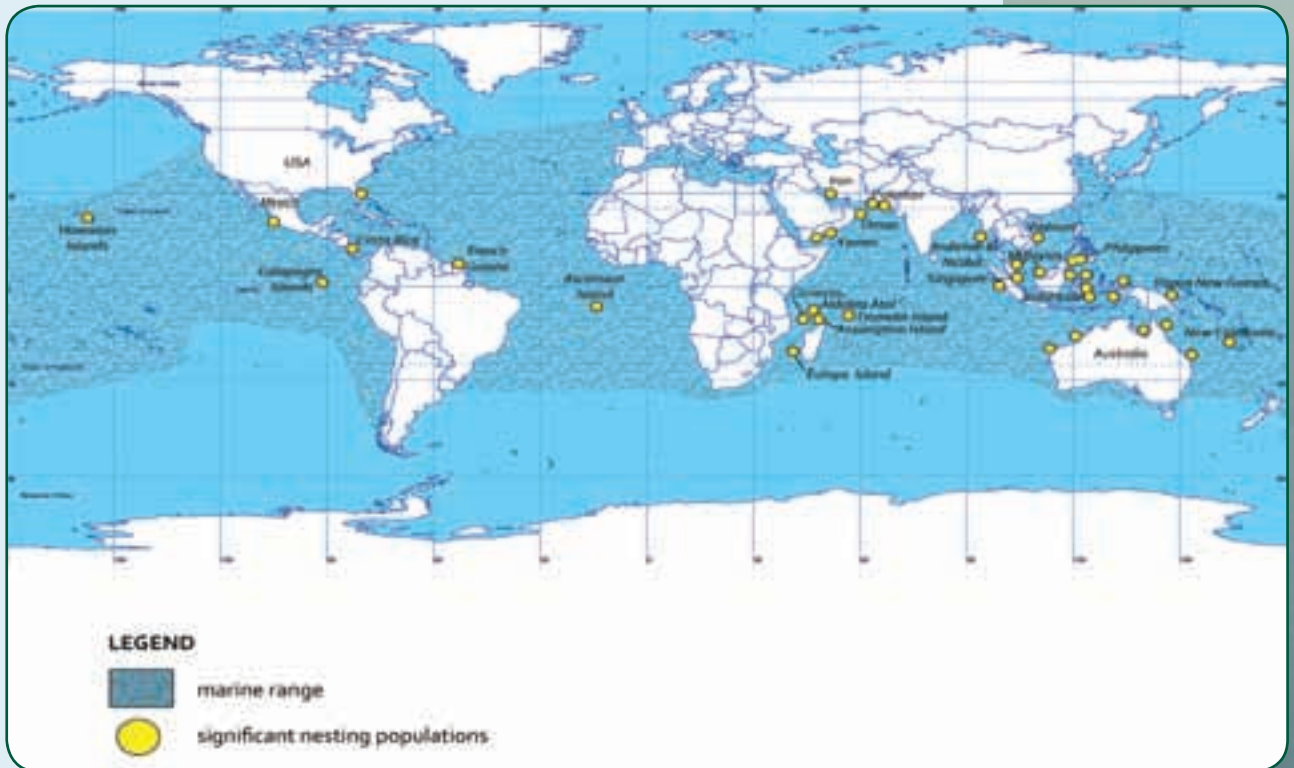
Olive ridley marine turtles are the smallest marine turtle species with the shortest known age to sexual maturity (11-12 years). They nest around the world in low densities on mostly mainland nesting beaches within tropical latitudes. However, several nesting beaches in India, Panama, Nicaragua, Pacific Mexico and Costa Rica have synchronous nesting events called arribadas (arrivals), where tens of thousands of females can nest on several kilometers of beach over

the course of a few days. These arribada beaches account for over 90 percent of the olive ridley nesting population globally. The largest known arribadas are in the Mexican Pacific and are estimated to include up to 500,000 nesting females in a single event.

While the olive ridley may be the most abundant marine turtle in the world, it faces widespread threats of bycatch deaths from gill-net and trawl fisheries throughout much of its range. It was only as recently as the 1990s that large arribadas from the Mexican Pacific crashed or were extirpated because of their unsustainable harvest for leather and meat. Fortunately, Mexico now fully protects turtles, but only one of the arribada nesting beaches is showing any signs of recovery.



Green Marine Turtle Range and Globally Significant Nesting Populations



Green Turtles

Green turtles nest extensively throughout tropical and subtropical regions. As herbivores, they are dependent on sea grass beds and algae, a diet that also makes them the most favored marine turtle for eating. Consequently, they have been heavily exploited historically for meat and eggs, and they continue to be hunted for meat in the South Pacific, Asia, Africa and Nicaragua. The East Pacific green turtle, also known as the black turtle because of its darker shell color, was once considered a separate species but is now considered to be simply a distinct nesting population of green turtle. Due to the large number of green turtle nesting populations relative to other marine turtle species, the USFWS determined that it would dedicate the limited resources of the MTCA to support the recovery of the East Pacific green turtle, specifically the nesting population in Mexico.

This population historically numbered in the tens of thousands on two main nesting beaches of Colola and Maruata, but it was reduced to 2,000-3,000 nests annually in the 1980s from overexploitation of eggs and nesting turtles as well as the harvesting of immature and adult turtles on their foraging grounds.



Below Green turtle nesting at Ras al Hadd in Oman.

Credit: USFWS

Leatherback Marine Turtle Range and Globally Significant Nesting Populations



Below: A leatherback turtle nesting on a beach.

Credit: Gabon Sea Turtle Partnership

Leatherback Turtles

Leatherbacks are primarily tropical beach nesters that require beaches with deep-water approaches because of their massive size (nesting females can weigh over 500 lbs). They feed almost exclusively on jellyfish and embark on long-distance migrations between nesting beaches and foraging grounds where they feed on jellyfish concentrations in colder-water latitudes. The largest nesting population in the world once occurred on Mexico's Pacific coast, with an estimated 150,000 nests laid annually in the early 1980s.

Unfortunately, a combination of killing nesting females, harvesting of eggs, and bycatch in drift-net and long-line fisheries decimated the population. Now fewer than 1,000 nests remain in Mexico.

There are three remaining large nesting assemblages in the world. One occurs in the Wider Caribbean predominantly in French Guiana, Trinidad, Panama and Costa Rica with an estimated 55,000 to 110,000 nests annually.

The second population in the Western Pacific has also been greatly reduced due to exploitation of eggs and commercial fisheries bycatch. Fewer than 10,000 to 12,000 nests are laid annually on their main nesting beaches in Indonesia, Papua New Guinea and the Solomon Islands. The other large nesting assemblage occurs in West Africa, centered in Mayumba National Park, Gabon (see Success Stories on Page 19). This nesting population ranges from Sierra Leone south to Angola, with an estimated 36,000 to 126,000 nests annually in Gabon alone based on aerial surveys between 2002 and 2007.

Project Partners

Forging multi-faceted projects with committed and competent partners is the underpinning for the success of MTCA conservation projects. The MTCA has enabled USFWS to link up with and expand the global network of governmental, non-governmental and community partners engaged in marine turtle conservation at the local, national, regional and international scales. MTCA partners range from locally based marine turtle conservation organizations to global wildlife conservation organizations working in multiple countries.

Appendix I lists the many partners we work with on specific country conservation efforts and regional programs.



Above: Taking measurements of nesting leatherbacks on Gabon nesting beach.

Credit: Gabon Sea Turtle Partnership



Left: Community members at work at a turtle hatchery in Gabon.

Credit: Gabon Sea Turtle Partnership

Success Stories

The following section highlights some of the successes achieved in marine turtle conservation under the MTCA from FY 2005- FY2010. This section serves as a mere sampling of some of the success stories achieved at a variety of geographic locations.

Recovering the Caribbean's Largest Historic Hawksbill Nesting Population Chiriquí Beach, Panama

Background and Problem

The tropical beaches and coral reefs of the Caribbean provide habitat for about 20 percent of the global hawksbill population. The current Caribbean population is estimated to include 5,000 nesting females annually. However, hawksbills in the Caribbean are greatly depleted from decades of overexploitation for meat and especially for shells, which are used to craft jewelry and many other ornamental products. Hawksbills typically nest in low densities on small, scattered island pocket beaches – often under shrub vegetation at the beach forest edge. Hawksbills also nest along long stretches of beaches on the mainland Yucatan Peninsula, Mexico, and Chiriquí Beach, Panama.

The 18 miles of Chiriquí Beach are recognized as having once hosted the larg-

est historic nesting colony of hawksbills in the Caribbean, with nesting density so high the beach was partitioned by local communities into one-mile sectors where individual veladors (“stayers awake”) were given exclusive rights to harvest the turtles. Former veladors interviewed in the 1980s reported capturing as many as 35 to 50 hawksbills per night per mile in the early 1960s. Aerial and ground surveys in the 1980s revealed a drastic decline in the nesting population of up to 98 percent compared with nesting estimates in the 1950s.

The 1960s through the 1980s were times of especially massive harvests of hawksbills for trade in turtle shells to meet the demand for the Bekko (turtle shell) industry in Japan. An estimated 15 tons of shells per year were imported into Japan from the Caribbean alone during the period of 1970 to 1994. Even though hawksbill trade was forbidden among members of CITES during this period, Japan and Cuba maintained an exception to this ban until 1993. The impact of this sustained harvest on Caribbean hawksbills was so severe that just a couple hundred nests were being laid each year at Chiriquí Beach – compared to more than 10,000 annual nests being laid just three or four decades ago. Poaching of nesting females and eggs by local communities, poaching of adults and juveniles by fishermen, and depredation of nests by dogs continued as threats to the population and further weakened the recovery of this remnant nesting population.

In 2002, marine turtle experts from USFWS, Sea Turtle Conservancy (formerly Caribbean Conservation Corporation), Florida Fish And Wildlife Conservation Commission, Smithsonian Tropical Research Institute (STRI) and

Below: Map of Chiriquí project sites.

Credit: Sea Turtle Conservancy



Eckerd College met to discuss the obstacles to recovery of the Caribbean's premier hawksbill nesting colony and to develop a coordinated plan to reverse the decline of this globally important hawksbill colony.

This proposal was presented to the National Authority of Panama (ANAM) and the Association for the Conservation of the Ngöbe-Buglé Natural Resources (APRORENANB) to gain their approval and support for a long-term conservation program. A central problem was developing a dependable, long-term source of funding to support a sustained conservation effort. It was recognized that on-again, off-again conservation effort would undermine any hope of building support and involvement of the local Ngöbe-Buglé Indian communities, which is essential for a sustained recovery of this remote nesting colony. The project was spearheaded by the Sea Turtle Conservancy, and initial funding was pulled together by the USFWS and National Marine Fisheries Service.

On-the-Ground Impact

With passage of the MTCA, the project gained hope for long-term funding, upon which the coalition of NGOs, government agencies and local community partners could build their shared vision for marine turtle recovery. Chiriquí Beach and an associated group of keys and pocket nesting beaches in Bocas del Toro Province are remote and nesting is spread over a wide area. These geographic realities pose various logistical challenges to conducting important, standardized nesting surveys that allow the project to accurately determine nesting population trends and assess nesting and hatching success. These monitoring activities are also critical to identifying threats on the nesting beach and determining the success of management interventions. Near-shore waters can be rough, and project personnel take measured risks to carry out field operations and maintain the vital working partnership with local Ngöbe-Buglé Indian communities.

Below: Local Ngöbe children line up to watch a satellite-tagged hawksbill as she returns to the sea.

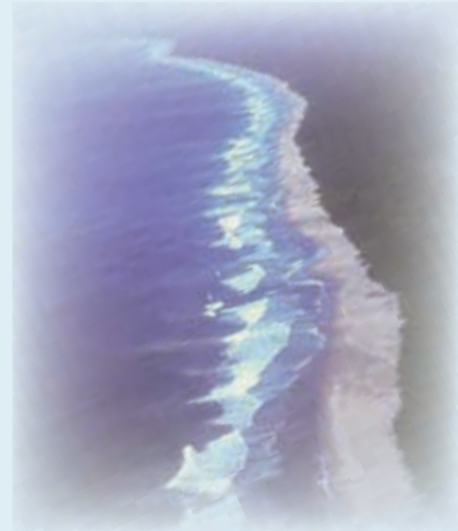
Credit: Sea Turtle Conservancy



Right: Chiquirí Beach, Panama looking south.
Credit: Sea Turtle Conservancy

Below: Predation by village dogs is significant and is an important problem being addressed through working with communities.
Credit: Sea Turtle Conservancy

As a result of these monitoring activities, the project has documented an immediate and impressive increase in the number of hawksbill nests laid over the past seven years. This extremely encouraging trend is most likely because fewer adult turtles are being poached as a result of the project. Public outreach and engagement with the local Ngöbe-Buglé Indian communities has been measurably successful in reducing the poaching of nests and turtles on the beaches, as well as reducing the capture of juvenile and adult turtles at sea by local fishermen. The project has worked to address the depredation of nests by dogs. However, dogs raiding turtle nests continues to be a problem with up to 25 percent of hawksbill clutches destroyed. This is not an easy issue to resolve, since dogs are important to community members for hunting and there are also free-roaming dogs within the community. The first step has been building awareness among the communities of the problem, and progress is being made on that front.



Results

The Chiriquí hawksbill recovery project exemplifies virtually all the components of a sustainable and successful conservation effort. This includes: collecting the best scientific information upon which to base management decisions; engaging a broad coalition of partners from governments, communities and NGOs; involving local stakeholders to build community support; using proven techniques to monitor the target population in order to measure progress and evaluate management interventions; and implementing educational awareness programs targeting local schools as well as interested members of the public at a national and international level. For these reasons, the project is not only making considerable headway toward its goals, it has also become a model marine turtle conservation effort that can be used to help build capacity and inspire other conservationists.

Hawksbill turtle nests on Chiriquí beach have more than doubled since 2004 with over 900 nests recorded in 2010. This substantial increase is due to the in-situ conservation efforts and community outreach made possible by the MTCA.



Establishing a Conservation Program for the Largest Global Leatherback Population, West Africa

Background and Problem

Four large leatherback populations existed in the Pacific and the Atlantic until the last quarter of the 20th century. Unfortunately, in the past three decades, the Pacific nesting populations have been decimated by poaching on nesting beaches and fisheries bycatch deaths in the marine environment.

A population that once boasted tens of thousands of nesting females is now reduced to a few hundred in the Eastern Pacific and a few thousand in the Western Pacific with limited data on their current conservation status.

Fortunately, the large leatherback population in the Caribbean and Western Atlantic is robust after decades of conservation on the nesting beaches and marine environment.

The status of the leatherback nesting population in West Africa is less certain, and before MTCA assistance there was mostly speculation about its size and status with no real population estimates or conservation programs in place.



Credit: Gabon Sea Turtle Partnership

Leatherbacks are the deepest diving sea turtles and have been recorded going as deep as 1.3 km in the Atlantic Ocean.

Below: Children participate in a parade to raise awareness of turtles and the necessity of protecting local species in Gabon.

Credit: Gabon Sea Turtle Partnership



Right: A youngster participates in marine turtle conservation outreach activity.

Below: Illegal fishing vessel off the coast of West Africa.

Credit both photos: Gabon Sea Turtle Partnership

Leatherbacks have nested along much of the West Africa coast from Sierra Leone south to Angola, with highest nesting rates occurring in Gabon. However, the total nesting population and the impact of poaching and beach development on the turtles was not known. A few groups independently carried out limited conservation projects with sparse and unreliable funding, but there was little or no collaboration and no comprehensive effort to measure and document the size of the West Africa leatherback population, evaluate threats and its status, or develop a comprehensive on-the-ground effort to protect the species throughout its nesting range.

On the Ground Impact

Recognizing the need to conserve marine turtles in the critical West Africa leatherback habitat, the first year of MTCA funding devoted \$30,000 of a \$100,000 total budget to a West Africa leatherback initiative. The funding brought together NGOs and governmental institutions in Gabon to determine current on-the-ground initiatives, identify gaps in conservation and priorities, and develop a coordinated and comprehensive conservation program for leatherbacks in Gabon. The two-day meeting included: Wildlife Conservation Society (WCS); World Wildlife Fund (WWF); Gabon Environment; Adventures



Sans Frontieres; Ibonga; IUCN; Gabon Agency for National Parks (ANPN); park managers from Mayumba; Pongara and Loango National Parks and Gamba Complex; and the Gabon National Centre for Oceanographic Data and Information (CNDIO).

The meeting established the Gabon Sea Turtle Partnership and a steering committee with responsibilities for assessing priorities, increasing communication and coordination, evaluating project outcomes, standardizing survey protocols and data collection, data sharing and data management. Additionally, working groups were established to focus on specific issues of concern such as health/pathologies/strandings, industrial fisheries and bycatch, aerial monitoring surveys, oil exploitation, pollution and logs, awareness-raising and environmental education, database management, genetics and satellite tracking studies.





Above: Gabonese children show their work aimed at raising marine turtle awareness.

Results

The Gabon Sea Turtle Partnership is part of a broader effort to conserve West Africa leatherbacks. As a result of MTCA support, aerial surveys of the entire Gabon coast are now flown annually and have documented the fact that Gabon hosts the largest nesting leatherback population in the world, with more than 126,000 clutches being recorded in peak nesting years. Many years of data will be required to establish population trends, but the partnership has put a program in place to monitor the population, assess nesting and hatching success on key nesting beaches, analyze threats, provide data for government action for log removal and expand education and outreach.

Using MTCA funding, the USFWS has been able to support a regionally focused leatherback conservation initiative that also includes projects in Sierra Leone, Liberia, Cote d'Ivoire, Equatorial Guinea, Republic of Congo and Angola. As a result of substantial MTCA support in West Africa, the long-term fate of the West Africa leatherback population is more promising and a generation of

new African conservationists is being trained and prepared to lead marine turtle conservation efforts within their own countries.

Below: Public outreach poster on leatherback turtle conservation.

Credit both photos: Gabon Sea Turtle Partnership





Stopping the Slaughter of the Third Largest Global Loggerhead Nesting Population, Cape Verde

Loggerhead marine turtles have faced significant conservation challenges in Cape Verde with an estimated 1,100 nesting turtles killed in 2007 alone. These clearly unsustainable losses account for nearly 35% of the total nesting population and required an urgent conservation response.

Conservation efforts were mounted to help protect the loggerhead nesting population in Boa Vista, Cape Verde where 90 percent of the world's third largest loggerhead population nests. In 2007, three NGOs and a university were each conducting nesting beach surveys and protection on the islands of Boa Vista, Sal and Santiago. However, the funds were limited and there were several challenges limiting the effort's effectiveness, including: little coordination among the four groups; coverage of only a small portion of the nesting beaches; and little or no government support or involvement.

The illegal slaughter of marine turtles was brought to the attention of the international conservation community at the Annual Sea Turtle Symposium in Loreto, Mexico in 2008.

Following the 2008 Sea Turtle Symposium in Mexico, USFWS coordinated a meeting to expand efforts to prevent the killing of nesting turtles. A grant for \$40,000 was provided to the Turtle Foundation on behalf of the working coalition, with about \$12,000 dedicated to support the coordination meeting and the remaining funds to support the highest priority activities agreed to by the working group and to be implemented by three of the NGOs. These expanded efforts resulted in a significant decrease in poaching during the 2009 nesting season.

For the 2010 nesting season, the MTCA provided grants totaling \$195,000 to Turtle Foundation, SOS Tartarugas and Cape Verde Natura 2000 to further expand nesting beach protection and help train field staff. The end goal of this program is to eliminate the killing of nesting females. As such the program incorporates outreach and community engagement to encourage marine turtle conservation.

The efforts fostered by the MTCA have been a huge success in rapidly diminishing the killing threat and galvanizing NGOs, municipalities and the national government to become engaged in developing a more robust and long-term conservation program.

Unfortunately, while the dramatic wholesale slaughter of nesting females is decreasing, increased development on nesting beaches on Sal and Boa Vista in Cape Verde poses a growing threat, by worsening already serious light pollution problems. Beach driving, litter on beaches and in the marine environment, and turtle bycatch issues with local and industrial fisheries are cumulative threats yet to be addressed. A sustained partnership between Cape Verdian municipalities, communities, NGOs and USFWS is needed to ensure that program successes are transformed into a long-term recovery effort.

Above: A hatchling begins its journey into the world.

Credit: Gabon Sea Turtle Partnership

Capacity Building

The USFWS Division of International Conservation (DIC) defines capacity building as “strengthening the ability of individuals and organizations to conserve biodiversity.” DIC programs such as the MTCA provide capacity building through training, facilitating dialogue, program development and provision of resources.

- **ability** refers to enhancing knowledge, skills, attitudes, empowerment, and enabling environments

- **organizations** include government agencies, non-governmental organizations, community-based organizations, universities, and other entities

- **conserve** refers to use and non-use, with the purpose of maintaining or increasing the resource base over time

- **training** is the process of planned learning, both formal and informal, to improve human and institutional abilities

- **resources** refers to funds, appropriate equipment, technologies, and other support

Capacity building elements develop local, national and regional capabilities to conduct a variety of essential conservation activities. Capacity building initiatives under the MTCA have also worked to create robust scientific databases from monitoring populations. These results are used to guide management, strengthen and guide policies and regulations, support international and intergovernmental collaboration and meetings, and engage communities as conservation partners.

The following examples illustrate ways in which the MTCA facilitates capacity building to improve marine turtle conservation efforts.



Credit: USFWS/Earl Possardt

Hatchling sea turtles find the ocean by moving towards the brightest horizon. This worked well for millions of years before human beachfront development brought lights behind nesting beaches.

Training and Exchanges

Caribbean Conservation Corporation (CCC) Tortuguero, Costa Rica

The 22-mile, black-sand beach of Tortuguero, Costa Rica, hosts the largest green turtle rookery in the Western Hemisphere and supports one of the two largest green turtle nesting populations in the world. In the mid-1950s, CCC launched the world's first continuous turtle monitoring and protection initiative at this beach. During the past five decades, CCC has worked successfully with community leaders, government enforcement agencies, local business leaders and international marine turtle conservationists toward the common goal of protecting and restoring Tortuguero's marine turtle populations.

Below: The Sea Turtle Conservancy conducts an outreach activity in Tortuguero, Costa Rica.

Credit: Sea Turtle Conservancy



Right: Community member training session on turtle conservation in Costa Rica.

Credit: Sea Turtle Conservancy



The Costa Rican legislature, with CCC's strong urging, established Tortuguero National Park in 1975. The national parks' primary objective is to protect nesting turtles, the beach and adjacent terrestrial and freshwater habitats. In 1999, largely because of data collected and presented by CCC, the Costa Rican court system banned the harvest of turtles at Tortuguero and throughout the country.

CCC's sustained efforts at Tortuguero can be seen in the increasing numbers of green turtles returning each year to nest at this famed beach, where CCC has documented a 493 percent increase in annual nesting since the 1970s. In addition, the robust marine turtle population now fuels a productive ecotourism industry that provides financial stability to the local community. Strategies developed by CCC at Tortuguero are now being applied to ambitious turtle conservation programs throughout the world.

For 50 years now, many of the world's leading marine turtle biologists and regulators have gained their first marine turtle experience as participants in the Tortuguero program. This important aspect continues today, producing future leaders in the fields of marine turtle research and natural resource management. Tortuguero's marine turtles migrate to the waters of countries throughout the Caribbean, Gulf of Mexico and the North Atlantic. Capacity building through the training of professionals from many of these countries is vitally important.

Each year, CCC receives applications from qualified young scientists eager to gain the quality, hands-on field experience offered at Tortuguero. Because of financial limitations, CCC is able to accommodate only a small portion of qualified applicants in the program. Fortunately, with funding provided by the MTCA, CCC has continued and been able to expand its research assistantship program to incorporate more local participants.

This expansion directly benefits other conservation efforts throughout Latin America and the Caribbean, as trained biologists apply their skills at other important nesting sites in the region.

While hunting and egg collection have been reduced at Tortuguero and key sections of the nesting beach are incorporated into the national park, the illegal capture of marine turtles and eggs persists in Tortuguero and includes capturing adults in near-shore waters during the mating period at the start of the season.

In addition, large numbers of marine turtles from Tortuguero populations are killed each year in nearby countries. Individual marine turtle conservation capacity in these countries must be strengthened through training workshops and information exchanges.

A successful turtle conservation program at Tortuguero requires the support and involvement of the local community. New generations of local residents and immigrants to the region need to be made aware of the vital role they play in the recovery and continued existence of Tortuguero's marine turtle populations.

As part of this project, CCC implements an extensive environmental education and outreach program for members of the community of Tortuguero and visitors to the area. Central to this endeavor will be the further development of the successful Junior Research Assistant Program for students at the local high school. Through this program, students learn the importance of conservation and research.

Students have direct participation in CCC's monitoring protocol, assist in education events at the local schools and conduct independent study. The hope is to foster a greater appreciation for nature and conservation among the younger generation, while inspiring them to pursue careers in conservation biology.

Below: Course participants at youth focused marine turtle outreach event in Costa Rica.

Credit: Sea Turtle Conservancy



Credit: USFWS/Earl Possardt

Loggerhead hatchlings from U.S. nesting beaches drift passively along the Gulf Stream to the Eastern Atlantic and Mediterranean where they grow as juveniles for up to 15 years before returning to the Western Atlantic.

Right: Local woman participates in marine turtle community outreach event.

Credit: Gabon Sea Turtle Partnership

Below: East Pacific Green turtle nests along the coast of Mexico.

Credit: University of Michoacan

Networks

International Sea Turtle Society (ISTS) and Marine Turtle Newsletter

The primary purpose and mission of the ISTS is to organize the Annual Symposium on Sea Turtle Biology and Conservation, which brings together people from more than 80 countries annually to share information and build the technical and scientific capacity of the international marine turtle conservation effort. The Annual Sea Turtle Symposium brings together the latest science, updated practices and efforts in the fields of marine turtle management and conservation. Between 2006 and 2010 the MTCA supported more than 140 travel grants for marine turtle conservationists outside the United States who otherwise would not have benefited from attendance or enriched the international marine turtle conservation community with the knowledge and information they have gained in their respective countries.

It is through these MTCA grants to the ISTS that MTCA plays an important role in substantially expanding the scope and rate of capacity building in every region of the world.



The Symposium began in Florida in 1981 and brought together the early marine turtle conservationists, who numbered fewer than 40 and were mostly from the U.S. The event grew each year in numbers and international participants, and in 1996 the organizing committee and attendees voted to establish and incorporate the Sea Turtle Symposium in 1996 and voted to change the name to the ISTS in 2003.

The first international meeting was in Mexico in 1998, and subsequent international meetings have been held in Malaysia, Costa Rica, Greece, Australia, and India. The International Sea Turtle Symposium provides excellent opportunities for sharing, learning and forging partnerships that have resulted in effective conservation practices worldwide.

Participation at these meetings has grown by tremendous proportions, reaching 1,000 people at recent annual gatherings. The demographic distribution of participants has also widened to include government officials, students, teachers, the general public, NGOs, biologists, researchers, oceanographers, geo-morphologists, veterinarians, policy-makers, community leaders, indigenous stakeholders and others to form an ever-increasing



diversity of people with a matching variety of ideas, with the common goal of studying and protecting these endangered animals.

Translation and audiovisual services help transmit research and conservation ideas in the most effective manner at the Symposium and help to overcome language and cultural barriers. The ISTS is coordinated by an Executive Committee, Board of Directors and Nominating Committee and provides travel grants to students and those engaged in marine turtle conservation around the world that would otherwise not be able to attend.

It is through international travel grants and the Marine Turtle Newsletter (MTN) that the MTCA supports the ISTS and its capacity-building goals.

The ISTS supports the publication and distribution of the MTN, which publishes peer-reviewed research papers and provides timely news items and field reports that are relevant to marine turtle conservation. The MTCA plays a vital role building capacity in publishing by individuals or groups that would not normally have an opportunity to do so. This process helps young professionals gain valuable writing and publishing experience to share the results of marine turtle research projects with colleagues from across the globe.

The MTN website provides quarterly information on the biology, conservation, management, legal status and survival prospects of all species of endangered and threatened sea turtles. The MTN website has been accessed more than 6 million times from 179 countries since its inception in 1998. However, print subscriptions remain in demand, with more than half sent at no charge to subscribers in developing countries. Distribution of the MTN has increased over time. About 1,700 print copies are distributed four times a year.



© K. Eckert

Sea jellies are the primary dietary source for leatherback turtles. Leatherbacks migrate thousands of miles each year in search of prime feeding grounds.

Governments, NGOs, Community Based Organizations (CBOs), Universities

Oman Sea Turtle Project – Environment Society of Oman

Nowhere in the world is there a better example of the vital role that NGOs can play in partnering with the government to facilitate marine turtle conservation than in the Sultanate of Oman. Oman hosts the single largest nesting loggerhead population in the world and along with the United States shares more than 80 percent of all loggerhead nesting on the planet.

Below: Combining loggerhead research and community outreach activities on Masirah Island, Oman.

Credit: Environment Society of Oman



*Right: Olive ridley
arribada nesting.*

Credit: Southeastern Louisiana
University



Oman's unique responsibility for the global well-being of this species led to a special collaboration between USFWS and the government of Oman beginning in 2003 and expanding with the inception of the MTCA in 2005. The Environment Society of Oman (ESO) was established in 2004 and is the only environmental NGO operating in Oman. It has a unique and close working relationship with the Ministry of Environment in Oman (MECA) and broad responsibilities for implementing marine turtle conservation activities supported by the MTCA.

MECA manages two protected areas of global significance for green turtles and hawksbills and is developing a proposal for a protected area for the loggerhead turtles nesting on Masirah Island. Royal decrees established protected areas and environmental laws to protect natural resources, but ultimately understanding, respect, compliance and community support require environmental education and outreach. Trained professional resource personnel are needed to conduct the population monitoring surveys, assess nesting and bycatch data to determine required management interventions, conduct law enforcement

patrols and perform community outreach. With support from MTCA, the ESO has been able to develop its expertise and capacity in the area of marine turtle conservation and work more closely and effectively with MECA, USFWS and the Florida Fish and Wildlife Commission to develop and implement standardized nest surveys at Masirah Island. These surveys are vital to assess population trends of the world's largest loggerhead nesting population.

Similarly, ESO has been able to take on a larger role in monitoring the hawksbill population on the Damaniyat Islands and is taking the lead to establish a central electronic database for the many decades of nesting and tagging data for loggerheads at Masirah Island and green turtles at Ras al Hadd and Ras al Jinz. MTCA funds have also provided support for equipment, assistant ranger salaries, technical support, annual ranger training workshops and environmental outreach.

This infusion of MTCA support for Oman's marine turtle program is needed as Oman seeks to diversify its economy by expanding tourism without compromising its environment and turtles.

Civil Society, Communities

Junquillal, Costa Rica Community Based Leatherback Project

Most MTCA projects engage or involve local communities in conservation. The World Wildlife Fund (WWF) Junquillal project in Costa Rica is a shining example demonstrating the conservation benefits to be derived from full engagement with local communities.

Junquillal beach is one of the top-five leatherback nesting sites in Costa Rica. Although the focus of this project is the conservation of nesting Pacific leatherbacks, the Junquillal beach in Costa Rica supports nesting olive ridley and eastern pacific green turtles. Capacity building and community engagement activities are implemented throughout the year. The general objective of this project is for local communities in the area of Junquillal to maintain their beaches in adequate conditions (including climate change adaptation measures) for nesting and hatching of leatherbacks, olive ridley and eastern pacific green turtles.

Before this project was initiated by WWF in 2005, poaching of eggs was widespread. In this zone of Costa Rica, consumption of eggs by families or in bars as bocas (appetizers that are eaten with a beverage) is a common tradition that has been around for at least two generations. Many people collected turtle eggs during the 2001-2002 season in Junquillal. According to interviews carried out in 2001-2003, the eggs were collected for (illegal) personal consumption and sale to individuals and bars, bringing 12 to 15 dollars per clutch.

Through MTCA funding, the project has trained community-based field teams to conduct nightly beach patrols to reduce poaching and improve data on nesting

turtle populations. The project has also undertaken extensive outreach and education campaigns to the local community, schools and the media. In addition, the project has supported habitat restoration of deforested sections of nesting beaches.

Within a year of initiating this project, plundering of leatherback, eastern pacific green turtle and olive ridley nests at Junquillal was virtually eliminated. Zero egg collection is a historic achievement for nest survivorship of these species. Hatching has gone from almost none to 9,000-12,000 leatherbacks, eastern pacific green and olive ridleys per year.

Initially, the local community regarded the project with distrust. Heads of families and teachers were invited to an environmental education workshop to stimulate their curiosity and critical thinking about natural resources of the schoolyards and beaches. The positive response to this activity led to the establishment of the environmental education program, which has involved schools from Junquillal and the nearby communities of Pargos and Paraíso.

Most recently, this program included the design and implementation of a recycling scheme for beach logs and garbage in Junquillal and Paraíso. After visits to community ecotourism experiences in Monteverde and Tortuguero, two world-class tourism destinations, several youth from Junquillal began working on beach monitoring. These became the Baula Boys ("Leatherback Boys"), the core patrol team.



*Below:
Environmental
education at local
schools is an important
component of marine
turtle conservation.*

Credit: WWF

Below: Parties to the Inter-American Convention for the Protection and Conservation of Sea turtles.

©IAC

The Baula Boys are trained in all aspects of project management, research and outreach. Four years later, the commitment and “project ownership” of these young men is remarkable. Recently, the Ministry of the Environment proposed the creation of a protected area under co-management with the Junquillal community, as a result of this project’s success.

Policy, Frameworks, Processes

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

The Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) attends to the need for implementation of harmonious measures between nations, multilateral coordination of conservation and protection actions, and oversight of the implementation of a regional agenda that will enable the recovery of these species.

The IAC entered into force in May 2001 and currently has fifteen Contracting Parties. (See map below).

The Convention promotes the protection, conservation and recovery of marine turtles and those habitats on which they depend. Decisions are made on the basis of the best available scientific information as well as taking into consideration the environmental, socioeconomic and cultural characteristics of the Parties. These actions cover both nesting beaches and the Parties’ territorial waters.

The U.S. ratified the Convention on September 20, 2000. The convention held its first Conference of the Parties (COP) in San Jose, Costa Rica, in 2002 and has held five subsequent COP meetings and several Scientific and Consultative Committee meetings. Initial COP meetings worked on important administrative issues such as terms of reference, party funding contributions and the establishment of a permanent secretariat. These essential issues will help build the foundation upon which member countries can effectively engage in the important conservation issues in the region, such as hawksbill conservation in the Caribbean, long-line fisheries turtle bycatch in the Eastern Pacific and Turtle Excluder Device (TED) compliance, to name a few.

One of the recent initiatives of the IAC Secretariat, with support from Specially Protected Areas and Wildlife (SPAW) and CITES, was to convene and chair a regional Caribbean workshop in Puerto Morelos, Mexico, to review threats to hawksbills in the region and to identify priority actions for recovery of Caribbean populations.

The MTCA is now supporting a grant to the IAC that will enable it to conduct more outreach in the region to boost compliance with laws, regulations and policy affecting hawksbill status as well as to increase membership of countries in the Western Hemisphere and in particular the Caribbean. The Interim-Secretariat’s office is temporarily



hosted by USFWS in Arlington, Virginia, until a permanent home is located more centrally within the Americas. The IAC can provide a crucial role in engaging governments on policy and management issues that affect marine turtles. It can also foster a synergy among the Parties to address critical conservation issues, and be a central distribution point for the latest and best information on marine turtle conservation issues in the region.

Indian Ocean Southeast Asia Marine Turtle Agreement (IOSEA)

The Memorandum of Understanding (MOU) on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and Southeast Asia is a specialized intergovernmental agreement concluded under the auspices of the Convention on Migratory Species. It puts in place a framework through which nations of the Indian Ocean and Southeast Asia region, as well as other concerned nations, can work together to conserve and replenish depleted marine turtle populations. This objective will be achieved through the collective implementation of an associated Conservation and Management Plan.

The MOU applies to the waters and coastal nations of the Indian Ocean and Southeast Asia and adjacent seas, extending eastward to the Torres Strait. For implementation purposes, the area is divided into four sub-regions: Southeast Asia and Australia, Northern Indian Ocean, Northwestern Indian Ocean and Western Indian Ocean. All species of marine turtles are covered by the MOU.

The MOU and its associated Conservation and Management Plan were developed during a series of intergovernmental negotiations between October 1999 and June 2001. The MOU came into effect in September 2001 at which time the United States officially signed the MOU. The signatory



countries held their first meeting in Bangkok in January 2003.

A small regional secretariat was established in April 2003, initially through voluntary funding, to coordinate activities under the MOU. The IOSEA Marine Turtle MOU Secretariat is co-located with the United Nations Environment Program (UNEP) Regional Office for Asia and the Pacific (UNEP/ROAP) in Bangkok, Thailand. The MTCA has provided three grants to the IOSEA to support Conference of the Parties meetings and for the Secretariat's Office to provide targeted capacity-building workshops and special training missions to member countries for priority conservation actions within the region.



IOSEA Signatory Nations as of December 2010:

Australia
Bahrain
Bangladesh
Cambodia
Comores
Eritrea
France
India
Indonesia
Islamic Republic of Iran
Jordan
Kenya
Madagascar
Mauritius
Mozambique
Myanmar
Oman
Pakistan
Philippines
Saudi Arabia
Seychelles
South Africa
Sri Lanka
Thailand
United Arab Emirates
United Kingdom
United Rep. of Tanzania
United States of America
Vietnam
Yemen

Above and left: Community turtle conservation in India.

©Tree Foundation

Appendix I: Program Partners 2005-2010

Right: Mayor of Gabonese town congratulates school children involved in marine turtle conservation.

Credit: Gabon Sea Turtle Partnership

The following list includes all organizations, individuals and institutions that have received conservation funding support from the Marine Turtle Conservation Act during fiscal years 2005-2010. For more information on how to become a grantee, please check the website, <http://www.fws.gov/international>.

Agostinho Neto University, Sea Turtle Research Program
www.uan-angola.org

Ashoka Trust for Research in Ecology and the Environment (ATREE)
www.atree.org

Association Pour la Protection des Tortues Marines au Maroc (ATOMM)
www.atomm.org

Cabo Verde Natura 2000
www.turtle-foundation.org

Centro de Investigación para el Manejo Ambiental y el Desarrollo (Investigative Center for Environment Management and Development Fundacion CIMAD)

Chelonee

College of Ocean, Shandong University-Weihai
www.sdu.edu.cn



Conservation International
www.conservation.org

Conservation Society of Sierra Leone
www.conservationssl.org

Dr. Jeanne A. Mortimer
mortimer@ufl.edu

Environment Society of Oman
www.environment.org.om

Fauna and Flora International
www.fauna-flora.org

Fundacao Pro-Tamar
www.tamar.org.br

Fundación para el Equilibrio entre la Conservación y el Desarrollo (FUNDECODES)

Instituto Nacional Desarrollo Forestal y Manejo del Sistema de Áreas Protegidas

Below: Turtle patrol staff pose for the camera.

Credit: Gabon Sea Turtle Partnership



(National Institute for Forest Development and Protected Area Systems INDEFOR)

Inter-American Sea Turtle Convention Secretariat

www.iacseaturtle.org

International Sea Turtle Society

www.seaturtlesociety.org

Indian Ocean Southeast Asian (IOSEA) Marine Turtle Memorandum of Understanding Secretariat

www.ioseaturtles.org

Institute of Marine Resources, University of the South Pacific

www.uspac.fj

Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas, A.C. (Marine Turtle Research and Conservation Association)

Loma Linda University

www.llu.edu

Marinelife Alliance

www.marine.org

Ocean Ecology Network

www.oceanecology.org



Ocean Spirits

www.oceanspirits.org

Pronatura Peninsula de Yucatan, A.C. (Pro-nature in the Yucatan Peninsula)

www.pronatura-ppy.org.mx

Programa Restauración de Tortugas Marinas (PRETOMA)

www.pretoma.org

Pro Peninsula

www.propeninsula.org

Registered Trustees of the Marine Research Foundation

www.mrf-asia.org

Renatura

Save My Future Foundation

www.samfu.org

Sea Sense

www.seasense.org

Sea Turtle Conservancy

www.conserveturtles.org

Smithsonian Institution

www.si.edu

SOS Forests

Above: A Loggerhead turtle returns to the sea after nesting on Boa Vista Island.

Credit: Turtle Foundation - USA

Left: Beach clean-up not only helps the beach aesthetically, but is essential to preserve marine turtle nests.

Credit: Turtle Foundation - USA



Above: Nesting olive ridley turtle in Bangladesh.

Credit: Marinelife Alliance

TRAFFIC

<http://www.traffic.org>

Tree Foundation

www.treefoundation.org

Turtle Conservation Project Sri Lanka

www.tcpsrilanka.org

Turtle Foundation-USA

www.turtle-foundation.org

University of Algarve

www.ualg.pt

University of Canberra

www.canberra.edu.au

Universidad Michoacana de San Nicolas de Hidalgo

www.umich.mx

University of the West Indies

www.uwi.edu

Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

www.widecast.org

Wildlife Conservation Society

www.wcs.org

World Wildlife Fund

www.worldwildlife.org

SOS Tartarugas

www.sostartarugas.org

Southeastern Louisiana University

www.selu.edu

State University of Papua

www.unipa.ac.id

The Leatherback Trust

www.leatherback.org

The Nature Conservancy

www.nature.org

The Ocean Foundation

www.oceanfdn.org

The World Conservation Union (IUCN)

www.iucn.org

Below: Olive ridley arribada event at Ostinal, Costa Rica.

Credit: Southeastern Louisiana University



Appendix II: Projects by Region

2005-2010

Western Atlantic and Caribbean

1. Barbados

Monitoring and Conservation Program for Hawksbill Turtles in Barbados University of the West Indies, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010
Amount Awarded: \$166,700, Leveraged Funds: \$335,400

Conduct an extensive marine turtle outreach and education program at local schools and institutions; involve international tourists in the observation of hatchlings and nests; set up a call center and website to report marine turtle nesting, poaching and hatchling disorientation. Carry out patrols on main nesting beaches to document nesting hawksbills and provide overall protection from poaching and other threats.

2. Brazil

Conservation and Management of Hawksbill Turtles in Northeast Bahia, Brazil
Fundacao Pro-Tamar, FY 2006
Amount Awarded: \$17,946, Leveraged Funds: \$26,434

Support community-based survey teams to monitor and protect nests on important hawksbill nesting beaches, train interns and local trainees in nest monitoring, and conduct environmental educational programs at local elementary schools.

3. Caribbean Wide

Assessing Long-Term Trends in Depleted Sea Turtle Populations: Creating a Framework for a Caribbean Network of Index Sites, Wider Caribbean Sea

Turtle Conservation Network (WIDE-CAST), FY 2006
Amount Awarded: \$38,900, Leveraged Funds: \$60,274

Assemble all available data on the distribution and abundance of annual nesting for 43 Western Atlantic countries and create a spatially comprehensive database on the annual nesting and distribution of the hawksbill turtle. Produce comprehensive national-level maps of annual nesting efforts for each of the Wider Caribbean marine turtles.

Capacity building for the Inter-American Sea Turtle Convention (IAC) with a focus on hawksbill conservation, Secretariat, Inter-American Convention for the Conservation and Protection of Sea Turtles, FY 2010
Amount Awarded: \$52,635, Leveraged Funds: \$13,000



Support capacity building of the IAC – Secretariat and support Secretariat efforts to conduct outreach visits in the Western Hemisphere to expand membership of Parties, as well as provide leadership to harmonize regulations, laws, and management policies among Caribbean nations affecting hawksbill conservation efforts.

4. Costa Rica

Sea Turtle Research, Conservation and Capacity Building at Tortuguero, Costa Rica

Sea Turtle Conservancy, FY 2009 & FY 2010 Amount Awarded: \$80,000, Leveraged Funds: \$718,808

Support capacity building throughout Latin America and the Caribbean through the Tortuguero training program. Train biologists, resource managers and community leaders in marine turtle biology, management techniques and ecotourism programs.

5. Dominican Republic

Hawksbill Turtle Trade Mitigation in the Dominican Republic

World Wildlife Fund-TRAFFIC North America, FY 2010

Amount Awarded: \$25,000, Leveraged Funds: \$8,316

Support market surveys in the Dominican public to understand supply chain and market dynamics for the illegal trade in turtle parts, build capacity and motivation of local and national law enforcement officials, and promote a tourism awareness campaign to address demand.

6. Grenada

Hawksbill and Leatherback Index Site Monitoring, Grenada Eastern Caribbean

Ocean Spirits, Inc., FY 2006 & FY 2009

Amount Awarded: \$27,977, Leveraged Funds: \$31,925

Expand survey work to offshore island nesting sites to monitor remote hawksbill nesting beaches. Conduct nest surveys and protection activities on the primary leatherback nesting beach in Grenada. Conduct summer environmental camps for students and develop local capacity through direct employment, internships and voluntary work.

7. Honduras

Hawksbill Nesting Beach Reconnaissance Project on Roatan, Honduras Loma Linda University, FY 2007

Amount Awarded: \$5,700, Leveraged Funds: \$53,316

Survey hawksbill nesting sites in the Bay Islands and conduct nesting surveys on several beaches on Roatan Island. Conduct aerial surveys and work with local communities, dive shops, volunteer groups and other local stakeholders to implement more expansive nesting beach and foraging ground conservation efforts in subsequent seasons.

Below: Green turtle hatchlings emerging from nests.

© Sebastian Troëng /Conservation International



8. Mexico

Sea Turtle Conservation Program on the North Coast of the Yucatan Peninsula, Mexico

Pronatura Peninsula de Yucatan, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010 Amount Awarded: \$102,633, Leveraged Funds: \$214,032

Conduct daily surveys of the three most important hawksbill nesting beaches along the north coast of the Yucatan Peninsula and collect geospatial nesting beach data for a GIS database.

9. Nicaragua

Conservation of the Pearl Cays Hawksbill Rookery and Community Ecotourism Project, Nicaragua

Wildlife Conservation Society, FY 2005, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$282,504, Leveraged Funds: \$329,059

Train field teams composed of local community residents and Wildlife Conservation Society biologists; survey 12 of the 18 Pearl Keys, Pearl Lagoon, Nicaragua throughout the hawksbill nesting season. Conduct day and night patrols to protect nests from poaching and predation. Conduct extensive outreach activities with Nicaraguan authorities, communities and local radio stations. Assist local communities to develop and expand conservation of hawksbill turtles through ecotourism-based turtle watching including a workshop on sustainable ecotourism with leaders from 12 communities.

10. Panama

Leatherback and Hawksbill Turtle Research and Population Recovery Project, Panama

Sea Turtle Conservancy, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

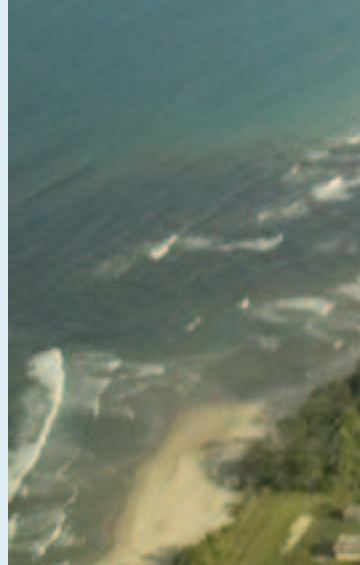
Amount Awarded: \$245,628, Leveraged Funds: \$494,541



Restore the Chiriquí Beach nesting population of hawksbills which was historically the largest in the Wider Caribbean. Conduct daily nest surveys throughout hawksbill and leatherback nesting seasons to record trends and threats from poaching, predation and erosion events to inform management decisions. Implement appropriate management interventions to enhance nesting and hatching success. Form partnerships with the local community and Nögbé-Bugle indigenous communities, and secure their participation and involvement in marine turtle conservation efforts.

Above: Community education tour in India.

©Tree Foundation



Indian Ocean



11. Bangladesh

Community-Based Sea Turtle Conservation Project in Cox's Bazar, Bangladesh
Marinelife Alliance, FY 2008 & FY 2009
Amount Awarded: \$29,640, Leveraged Funds: \$38,180

Conduct community-based conservation programs to protect olive ridleys' nesting habitat. Train community members to survey and relocate nests to five hatcheries; conduct extensive public outreach and education program to sensitize people living in and around turtle nesting sites.

12. Chagos Islands, British Indian Ocean Territory

Status and Conservation of Nesting in the Chagos Islands, British Indian Ocean Territory in a Regional Context, Dr. Jeanne A. Mortimer, FY 2006
Amount Awarded: \$10,000, Leveraged Funds: \$35,200

Conduct a rapid assessment of marine turtle nesting sites on the outer islands

of the remote Chagos Archipelago and Chagos Island. Train an island resident to conduct year-round surveys on two index beaches of 2-3 km each to enable long-term monitoring of nesting population trends on the island of Diego Garcia.

13. India

Developing a Conservation and Monitoring Network for Sea Turtles in India
Ashoka Trust for Research in Ecology and the Environment (ATREE), FY 2006, FY 2008 & FY 2009 & Madras Crocodile Bank Trust FY 2010
Amount Awarded: \$78,030, Leveraged Funds: \$124,350

Organize workshops to establish and maintain a network of NGOs and groups working toward marine turtle conservation in India, to facilitate information-sharing and greater collaboration between and among groups and with state governmental agencies. The Turtle Action group (TAG) was formed as a result of this workshop and includes more than 20 NGOs working to develop standardized monitoring protocols and monitor nesting turtles at key sites.

Community Engagement for Sea Turtle Conservation Program, Tree Foundation, FY 2010
Amount Awarded: \$19,460, Leveraged Funds: \$27,560

Work with local fishermen and community members to protect olive ridley sea turtle nests along 100 km of nesting beach and to reduce sea turtle bycatch from local fisheries that impacts migrating olive ridleys from the large Orissa arribada nesting populations.

14. Regional – Indian Ocean

Population Genetic Studies in Support of Conservation and Management of Hawksbill Turtles in the Indian Ocean
University of Canberra, Australia, FY 2007
Amount Awarded: \$18,270, Leveraged Funds: \$25,115

Research to identify hawksbill nesting management units within the Indian

Ocean region and the composition of the mixed stocks on important foraging grounds, critical information that will foster the collaboration of countries with shared stocks in the Indian Ocean region.

15. Sri Lanka

Community-Based In-Situ Marine Turtle Nest Protection, Research and Community Education Program, Turtle Conservation Project of Sri Lanka, FY 2005 & FY 2010 Amount Awarded: \$29,965, Leveraged Funds: \$52,525

Organize 16 educational workshops in schools and coastal villages regarding marine turtles, coral reefs and mangroves to protect several hundred marine turtle nests on Rekawa Beach in Sri Lanka. Train community members to conduct patrols, monitoring and nest protection.

16. Sultanate of Oman

Training and Capacity Building for Turtle Conservation, Oman Marine Research Foundation, FY 2005 & FY 2006 Amount Awarded: \$29,000, Leveraged Funds: \$24,900

Conduct a training workshop for 18 park rangers from the Oman Ministry of Environment working at Masirah Island, Ra Al-Hadd, Halaniyat Islands, and the Damaniyat Islands. The workshop covers biology of marine turtles, management and field techniques, data collection and analysis, and also introduces a standardized nesting survey methodology to be implemented for long-term population monitoring. Purchase two ATV motorcycles and trailers to enhance data collection and turtle rescue efforts, and provide technical support to improve population-monitoring methodology at Masirah Island.

Strategic Development of Initiatives for Marine Turtle Conservation, Oman Environment Society of Oman, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010 Amount Awarded: \$309,662, Leveraged Funds: \$293,910



Conduct comprehensive and standardized nest surveys of the world's largest loggerhead nesting assemblage on Masirah Island. Provide material, personnel and logistical support and training for the Ministry of Environment rangers to conduct standardized and more comprehensive loggerhead nesting surveys at Masirah Island, as well as hawksbill nesting surveys at Damaniyat Islands. Deploy ten satellite transmitters on nesting loggerheads to determine post-nesting movements in order to identify potential areas of interaction or conflict with fisheries or other anthropogenic activities. Conduct public outreach for marine turtle conservation issues in Oman.

17. Tanzania

Community-Based Marine Turtle Conservation Program, Tanzania World Wildlife Fund FY 2005 and Sea Sense FY 2006 Amount Awarded: \$29,586, Leveraged Funds: \$72,737

Train community turtle officers to conduct daily nest surveys and protection on key green sea turtle nesting sites and report illegal fishing activity in eight coastal districts. Conduct public awareness and outreach efforts about the status and threats to sea turtles in Tanzania.

Above: Community education project in Cape Verde.

Credit: Turtle Foundation - USA



Eastern Atlantic



18. Angola

The Marine Turtles of Rio Longa: A Community Conservation and Ecology Project, Angola

*Conservation International, FY 2006
Amount Awarded: \$24,960, Leveraged Funds: \$40,000*

Establish a sustainable marine turtle conservation program at Rio Longa, Angola, launch community awareness and education programs, recruit and train conservation guards from local communities, and establish a small conservation base at Rio Longa. Develop a conservation and management plan for Rio Longa; a nesting site for at least four species of marine turtles.

Development of a Conservation Program for Leatherbacks Nesting, Agostinho Neto University Sea Turtle Research Program, FY 2010

Amount Awarded: \$56,308, Leveraged Funds: \$59,651

Support efforts to determine the status of leatherback sea turtle nesting in Angola and to conduct nesting beach conservation efforts for leatherback and olive ridley sea turtles along 150 km of beach that includes Quicama National Park and Rio Longa Beach.

19. Cape Verde

A Coalition Task Force to effectively protect loggerhead nesting females on the Archipelago of Cape Verde Turtle Foundation, Cabo Verde Natura 2000 and SOS Tartarugas, FY 2009 & FY 2010

Amount Awarded: \$240,180, Leveraged Funds: \$618,249

Support field staff and provide material support for two field camps that effectively protect about 75 percent of the sea turtle nesting on the island of Boa Vista accounting for 90 percent of the Cape Verde loggerhead nesting. Conduct pre-nesting season meetings to coordinate efforts of NGOs and government institutions to protect nesting loggerhead females from rampant illegal slaughter throughout the Cape Verde Island. Support night time patrols on beaches and conduct public awareness campaigns in schools and communities throughout the island.

20. Republic of Congo

Leatherback Conservation Program, Republic of Congo, Wildlife Conservation Society, FY 2009 & FY 2010 Amount Awarded: \$113,532, Leveraged Funds: \$30,939

Support a leatherback conservation program along 30 km of high-density leatherback nesting beach within Conkouati-Douli National Park. Nest poaching is 100 % without continuous patrolling. Conkouati-Douli National Park borders Mayumba National Park in Gabon which is the epicenter of the second largest leatherback nesting assemblage in the world.

Marine Turtle Monitoring and Protection in Congo,

Renatura, FY 2010 Amount Awarded: \$30,026, Leveraged Funds: \$10,041

Support efforts to protect nesting leatherback and olive ridley sea turtles along 20 km of nesting beach adjacent to Conkouati-Douli National Park and continue a turtle bycatch release program with local

fisherman and an environmental outreach program with local communities.

21. Equatorial Guinea

Research and Conservation of Major Sea Turtle Nesting Populations in West Africa, Equatorial Guinea

Instituto Nacional Desarrollo Forestal y Manejo del Sistema de Áreas Protegidas (INDEFOR)

FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$109,640, Leveraged Funds: \$90,075

Support nest monitoring and protection programs with local communities to conserve the major leatherback nesting population on the island of Bioko and leatherback and olive ridley nesting beaches at Rio Campo on the mainland. Promote outreach and environmental education nationwide and strengthen the marine turtle conservation network.

22. Gabon

The Gabon Sea Turtle Partnership for Leatherback research and Conservation, Gabon

Wildlife Conservation Society, FY2005, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$679,764, Leveraged Funds: \$408,121

Gabon is the epicenter for the world's largest leatherback nesting assemblage. The grant supports the formation and operation of the Gabon Sea Turtle Partnership, coordinates meetings of all NGOs and government entities that conduct marine turtle conservation in Gabon, expands nest survey and protection on leatherback beaches, conducts aerial surveys to monitor population trends, carries out training workshops for individuals involved in surveys and data collection, and conducts a nationwide public outreach campaign to the general public, school children and coastal communities.



Above: Community based turtle conservation project in Sierra Leone.

Credit: Conservation Society of Sierra Leone

23. Guinea Bissau

Conservation of Hawksbills on the Bijagos Archipelago islands in the Guineas West Africa, Chelonee, FY 2010

Amount Awarded: \$23,890, Leveraged Funds: \$61,940

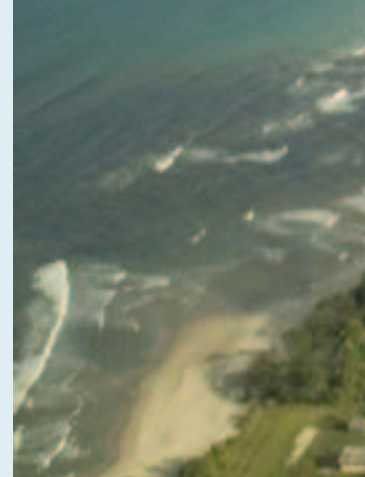
In partnership with the Institute for Biodiversity and Protected Areas in Guinea Bissau to conduct field surveys of hawksbill marine turtle nesting beaches, carry out a workshop to train 20 local people to conduct these surveys, and support environmental outreach activities with local communities.

24. Ivory Coast

Conservation of Marine Turtles at Mani Beach Nesting Site, SOS Forests, FY 2010

Amount Awarded: \$28,371, Leveraged Funds: \$38,000

Involve local communities and university students to monitor and protect nests from poaching along an 18 km stretch of beach with an estimated 700 sea turtle nests annually, and conduct an environmental education outreach with local communities.





Above: Satellite tracking leatherbacks in West Africa.
Credit: Gabon Sea Turtle Partnership

25. Liberia

Borgor Point Sea Turtle Monitoring and Conservation Program, Liberia Save My Future Foundation, FY 2005, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$136,516, Leveraged Funds: \$31,620

Train village members on marine turtle nest monitoring to conduct daily beach patrols along a 13 km nesting beach for leatherbacks, hawksbills and olive ridley sea turtles. Conduct education outreach and workshops with Borgor Point communities and assist communities to develop alternative livelihood sources to traditional consumption of turtles and eggs.

26. Mauritania

Knowledge and Conservation of Loggerheads and Green Turtles on the Coast of Mauritania Chelonee, FY 2009 Amount Awarded: \$15,266, Leveraged Funds: \$55,383

Support surveys of the Mauritanian coast to verify reports of nesting loggerheads and green turtles, conduct awareness campaigns in coastal villages, and involve local communities in the development of subsequent community-based conservation programs in accordance with survey findings.

27. Morocco

Building Capacity for an Effective Marine Turtle Research and Conservation Program in the Kingdom of Morocco Association Pour la Protection des Tortues Marines au Maroc (ATOMM) FY 2010
Amount Awarded: \$35,000, Leveraged Funds: \$5,700

Conduct interviews and ground surveys to determine the status of sea turtle nesting in Morocco, conduct training workshops to assist with data collection of sea turtle bycatch, and develop educational outreach materials for coastal communities and the general public.

28. Sao Tome and Principe

Last Call to Save the Principe Island Hawksbill Rookery, University of Algarve, FY 2010
Amount Awarded: \$25,289, Leveraged Funds: \$29,400

Provide support for local community members to conduct monitoring of hawksbill sea turtle populations on nesting beaches and foraging grounds at Principe, as well as providing material support for environmental education improvements at the local visitors' reception center.

29. Regional – West Africa

Scientific and Technical Support for Capacity Building in West Africa – Sierra Leone, Liberia, Angola, Morocco, Principe and Cape Verde, Ocean Ecology Network FY 2009 & FY 2010 Amount Awarded: \$96,054, Leveraged Funds: \$27,600

Provide critical technical and scientific support for community-based marine turtle conservation projects in Liberia, Sierra Leone, Principe, Morocco and Cape Verde being implemented by national and international NGOs, as well as provide support to develop and coordinate a country wide aerial survey plan

for leatherback and other marine turtle nesting with Agostinho Neto University Angola on the extensive and unchartered beaches in Angola.

Technical Assistance for Sea Turtle Research and Conservation in the Gulf of Guinea, Wildlife Conservation Society, FY 2007, FY 2008, FY 2009 & FY 2010
Amount Awarded: \$138,779, Leveraged Funds: \$87,640

Provide technical training and support for high-priority marine turtle projects in Republic of Congo, Gabon, Sao Tome and Equatorial Guinea, as well as facilitate and coordinate activities within the Gabon Sea Turtle Partnership, including its annual meeting. Carry out training workshops for individuals conducting surveys, and conduct nest protection activities on high-priority leatherback nesting beaches in all countries. Conduct research on the human/turtle conflict in the Corisco Bay area between Gabon and Equatorial Guinea.



30. Sierra Leone

Development of a Marine Turtle Conservation Program for Sierra Leone and Leatherback Conservation Programs at Hamilton, the Turtle and Sherbro Islands, Conservation Society of Sierra Leone, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$195,988, Leveraged Funds: \$42,076

Conduct community-based marine turtle conservation projects to gather nesting data and protect nests with a special focus on Sherbro and Turtle Islands. Establish turtle task force groups with local fishermen to release accidentally captured turtles. Conduct extensive educational outreach activities and community meetings, and produce brochures, calendars and billboards at strategic sites for community viewing.

Center: Outreach and education project on marine turtle conservation in West Africa.

Credit: Gabon Sea Turtle Partnership

Below: A leatherback hatchling makes its way to the ocean.

Credit: Gabon Sea Turtle Partnership



Eastern Pacific



31. Costa Rica

Initiative to Create the Southern Nicoya Peninsula Sea Turtle Network, of Costa Rica

Programa Restauración de Tortugas Marinas (PRETOMA), FY 2006

Amount Awarded: \$25,000, Leveraged Funds: \$57,050

Monitor and protect olive ridley, leatherback and east pacific green turtle nesting at seven beaches; organize a volunteer program to conduct beach surveys and nest protection; and assist local authorities to create a national wildlife refuge to protect 313 terrestrial acres of nesting beaches and almost 20,000 hectares of marine habitat.

Research and Protection of Leatherback Turtle Nesting at Playa Langosta, Las Baulas National Marine Park, Costa Rica,

The Leatherback Trust, FY 2007

Amount Awarded: \$28,800, Leveraged Funds: \$17,960

Conduct nightly surveys of Langosta Beach to assess leatherback nesting and protect leatherback nests from poach-

ing. Hold a leatherback festival in which 92 children from five schools participate, and conduct a training workshop for eight national park rangers and managers at Las Baulas National Park and Caletas National Park.

Conservation and Research Project for Black Turtle Nesting at Playas Nombre de Jesus and Zapotillal, and Leatherback Turtle Nesting at Playa Langosta, Las Baulas National Park, Costa Rica

Fundación para el Equilibrio entre la Conservación y el Desarrollo (FUNDECODES) FY 2008 & FY 2009

Amount Awarded: \$67,464, Leveraged Funds: \$17,200

Support nesting beach conservation programs for Playa Langosta, one of the two key East Pacific leatherback nesting beaches in Costa Rica. Also provide support to Playas Nombre de Jesus and Zapotillal, two key black turtle nesting beaches in Costa Rica.

Conservation of Pacific Leatherbacks and Other Marine Turtles in Junquillal Beach, Costa Rica – Adapting to Climate Change and Strengthening Community Livelihoods, World Wildlife Fund, Inc., FY 2007 & FY 2010 Amount Awarded: \$47,001, Leveraged Funds: \$78,608

Conduct nightly beach patrols with community-based and trained field teams during the leatherback nesting season. Undertake extensive environmental outreach to the community, local schools and media. Support nesting habitat restoration through reforestation of deforested sections of nesting beach. The community will initiate steps for legal declaration of the Junquillal leatherback nesting beach as a wildlife refuge.

32. Colombia

Development of a Conservation Program for Pacific Hawksbill Populations with Special Focus on Establishing Index Sites, Colombia, Fundación Centro de Investigación

para el Manejo Ambiental y el Desarrollo, Fundación CIMAD, FY 2009
Amount Awarded: \$29,000, Leveraged Funds: \$35,000

Identify index sites in Pacific Colombia to monitor the hawksbill population and build capacity within communities and National Parks for marine turtle conservation. Launch a public education campaign on the status and conservation needs of East Pacific hawksbill in Colombian National Parks and adjacent communities.

33. Mexico

Population Recovery of the Black Turtle of Michoacán, Mexico
Universidad Michoacana de San Nicolás de Hidalgo, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$75,000, Leveraged Funds: \$60,000

Work with local Colola and Mauta communities to survey and protect black turtles (East Pacific green turtles) along the two major nesting beaches of the East Pacific. Protect turtles and nests from natural predators, dogs and poachers.

Conservation of Pacific Leatherbacks on Secondary Beaches, Mexico
World Wildlife Fund, FY 2005
Amount Awarded: \$15,000, Leveraged Funds: \$11,993

Protect 67 percent of the estimated leatherback clutches on Playa Ventura, Mexico, and train local community members in marine turtle protection and management techniques.

Conservation of the Leatherback Turtle in the Mexican Pacific
Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas, FY 2006, 2007 FY 2008, FY 2009 & FY 2010

Amount Awarded: \$224,934, Leveraged Funds: \$1,158,402

Support nesting beach conservation in Mexico for the East Pacific leatherback, survey beaches and release hatchlings.



Above: Hawksbill turtle in Panama.

Credit: Sea Turtle Conservancy

Field teams of NGO, government and community members survey and protect leatherback nests deposited on the four most important nesting beaches in Pacific Mexico which account for over 40 % of leatherback nesting.

34. Nicaragua

Leatherback Conservation on the Pacific Coast of Nicaragua
Fauna and Flora International, FY 2009

Amount Awarded: \$41,109, Leveraged Funds: \$84,005

Support community conservation efforts at the three most important leatherback nesting beaches in Nicaragua for the critically endangered East Pacific leatherback nesting population. Conduct outreach to local stakeholders to improve awareness of status and conservation needs for sea turtles.

35. Regional – East Pacific

The Eastern Pacific Hawksbill Initiative Phases I-III

Pro Peninsula, FY 2008 & FY 2009 and The Ocean Foundation FY 2010

Amount Awarded: \$80,737, Leveraged Funds: \$131,150

Support the assessment of current and historic hawksbill nesting and foraging populations in the Gulf of California, Mexico. Evaluate the current status and abundance of hawksbills through nest surveys, water sampling and fisherman interviews, and conduct local outreach and participation to raise awareness of local communities. Organize a workshop in El Salvador bringing together marine turtle biologists in the region to share information about the status and distribution of the hawksbill in the Eastern Pacific and to develop a network for regional conservation of the species. Support a partnership of NGOs in East Pacific Mexico and Central America to protect nests from poaching and maximize hatchling production at key hawksbill sea turtle rookeries in Pacific Mexico, Costa Rica and Nicaragua, as well as conduct local and international outreach programs about the critical conservation status of the hawksbill in the East Pacific region.

Western Pacific



36. Cambodia

Rapid assessment to determine the status of marine turtle nesting in Cambodia,

Fauna and Flora International, FY 2010

Amount Awarded: \$19,070, Leveraged Funds: \$26,040

Carry out the collection of information on the status and distribution of marine turtles along the 440 km coast and 60 islands of Cambodia. Support academic and technical capacity building of Cambodian researchers at the Royal University of Phnom Penh.

37. China

Sea Turtle Monitoring and Local Community Awareness Project, China College of Ocean, Shandong University Weihai, FY 2008

Amount Awarded: \$29,410, Leveraged Funds: \$21,775

Conduct daily surveys at Huidong Gangkou Sea Turtle Reserve, which hosts the only remaining marine turtle nesting population on the 180 km coast of mainland China. Conduct an extensive public awareness campaign targeting tourists and fishermen in major markets for illegal trade in marine turtle products.

38. Indonesia

Monitoring and Management of Leatherbacks Nesting at Jamursba Medi and Warmon Beaches in the Bird's Head Region, Papua, Indonesia State University of Papua (UNIPA), Indonesia FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$232,146, Leveraged Funds: \$401,680

Survey high-density leatherback nesting beaches with field teams composed of UNIPA students and village members. Conduct daily nest counts, tag nesting females, implement nest protection measures and determine hatching success in collaboration with local communities. Train monitoring teams from local villages, build and set out pig traps, capture

feral dogs to reduce predation of nests, and conduct a public outreach and education campaign.

39. Japan

Implementation of an Integrated Conservation Strategy for the Japanese Nesting Population of the Loggerhead Turtle, Japan/Mexico

Pro Peninsula, FY 2008 & FY 2009

Amount Awarded: \$158,000, Leveraged Funds: \$195,950

Support loggerhead conservation activities on Japanese nesting beaches and Japanese/Mexican foraging grounds, build capacity of nesting beach conservation programs on main nesting beaches in Japan, and work with fishermen to reduce bycatch mortality.

Implementation of an Integrated Conservation Strategy for the Japanese Nesting Population of Loggerhead Turtles

The Ocean Foundation FY 2010

Amount Awarded: \$47,300, Leveraged Funds: \$50,900

Work with Sea Turtle Association of Japan to support supports efforts to protect and manage sea turtle nesting populations on key nesting beaches in Japan, and strengthen capacity for conservation of loggerhead nesting populations in Japan and foraging populations in Mexico and Japan.

40. New Caledonia

Determine the Distribution and Population Sizes of Nesting Marine Turtles in New Caledonia and Enhance Capacity of Local Governments to Protect and Manage These Species
World Wildlife Fund-France, FY 2006
Amount Awarded: \$24,700, Leveraged Funds: \$86,650

Identify all marine turtle nesting sites in New Caledonia, assess nesting population sizes for hawksbills, loggerheads and green turtles, and provide nest survey training to provincial marine technical representatives.



41. Papua New Guinea

Community Based Capacity Building to Conserve Leatherback Sea Turtles, Papua New Guinea Marine Research Foundation, FY 2006, FY 2009 & FY 2010
Amount Awarded: \$49,363, Leveraged Funds: \$296,127

Conduct community based nesting beach conservation of the most important leatherback nesting populations in Papua New Guinea and the second most important in the West Pacific. Work with local communities to protect turtle nests, collect nesting data and conduct education and outreach activities.

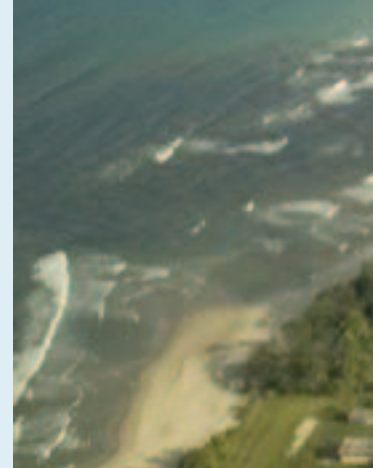
42. Regional West Pacific

Capacity Building and Technical Support for an MTCA funded projects in Japan and Vietnam to Augment Sea Turtle Nesting Protection and Conservation,
The Ocean Foundation, FY 2010
Amount Awarded: \$16,060, Leveraged Funds: \$22,193

Provide technical support to the Sea Turtle Association of Japan to assist them with their loggerhead sea turtle nesting beach conservation activities, and to develop solutions for loggerhead bycatch mortality with pound net fishermen.

Above: Marine Turtle Expert Earl Possardt visits a project in Vietnam.

Credit: USFWS



Research to Support Community Marine Turtle Conservation in Fiji, Solomon Islands and Vanuatu
Institute of Marine Resources
University of the South Pacific, FY 2006

Amount Awarded: \$11,424, Leveraged Funds: \$33,000

Monitor marine turtle populations to assess abundance and trends, and implement conservation activities to reduce the impact of exploitation and coastal development.

43. Solomon Islands

Sasakolo and Litoghahira community based leatherback turtle monitoring and conservation, Solomon Islands, The Nature Conservancy, FY 2006 & FY 2009

Amount Awarded: \$36,483, Leveraged Funds: \$62,039

Support community based nesting beach conservation programs for the two most important leatherback nesting beaches in the Solomon Islands which are part of the critically endangered West Pacific leatherback nesting population.

44. Vietnam

Community-Based Marine Turtle Nesting Beach Conservation, Vietnam
The World Conservation Union (IUCN), FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$179,222, Leveraged Funds: \$111,200

Survey and protect nesting beach populations, with a special focus on leatherback and hawksbill nesting populations in Quang Tri Province, Quang Ninh and Bai Tu Long National Park respectively, collect marine turtle bycatch data from local fishermen, carry out extensive outreach to school children and community members, and conduct training workshops.

Global Scope/ Capacity Building

Global Assessment of Arribada Olive Ridley Sea Turtles, Southeastern Louisiana University, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$219,926 Leveraged Funds: \$138,728

Conduct training workshops for surveyors at major olive ridley arribada nesting beaches to develop capacity of surveyors in Costa Rica, Mexico and India. Conduct a simultaneous global estimate of the olive ridley arribada nesting populations and hatching rates in Mexico, Nicaragua, Costa Rica and India using standardized survey methodology.

Support for Capacity Building and International Instruments for the Conservation of Marine Turtles and Their Habitats, Smithsonian Institution, FY 2006, FY 2007 & FY 2008

Amount Awarded: \$44,116, Leveraged Funds: \$17,500

Below: East Pacific Green turtle completes nesting on Colola beach in Mexico.

Credit: University of Michoacan



Provide technical support to scientific committees of the Inter-American Sea Turtle Convention and the Indian Ocean and Southeast Asia MOU during the Conference of the Parties meetings and inter-sessionally. Build capacity of marine turtle specialists and organizations, and provide scientific support to the Secretariat-Indian Ocean Southeast Asian Marine Turtle Agreement.

International Collaboration through Information Exchange: The 26th-30th Annual Symposia on Sea Turtle Biology and Conservation and Marine Turtle Newsletter; International Sea Turtle Society, FY 2006, FY 2007, FY 2008, FY 2009 & FY 2010

Amount Awarded: \$220,000, Leveraged Funds: \$574,588

Strengthen international cooperation and collaboration on marine turtle research, management practices and conservation efforts by bringing together specialists, emerging sea turtle conservators, and students working on marine turtles from around the world for the 26th through 30th Annual Symposia. Support to develop and disseminate the marine turtle newsletter.

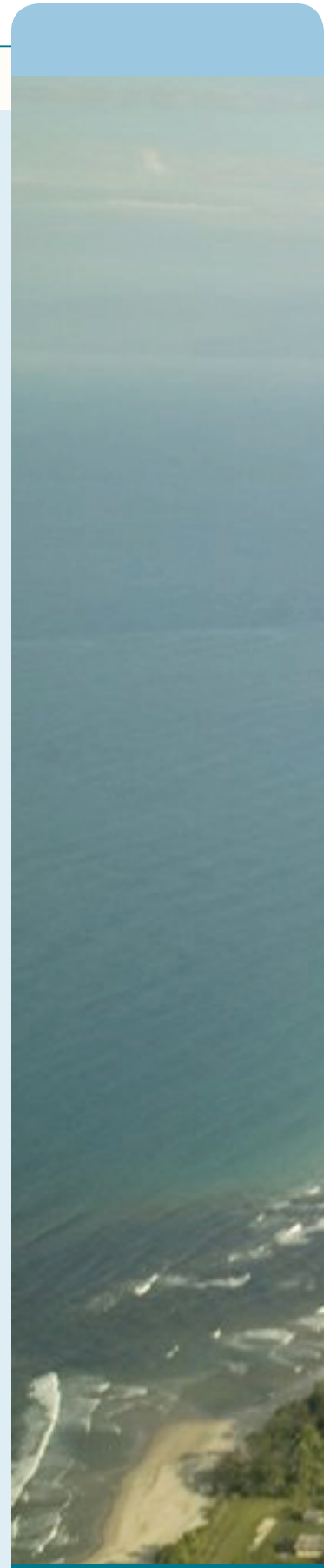
Promoting Economic Alternatives for Sea Turtle Conservation, The Ocean Foundation, FY 2009

Amount Awarded: \$25,000, Leveraged Funds: \$125,000

Assist in the development of alternatives to unsustainable use of marine turtles and develop partnerships with local tour operators, promote partner sites to key tourist audiences, organize initial tours to partner sites, support efforts to build local capacity in Baja Mexico, Trinidad, and Costa Rica, and expand to new partner sites.

Support of the Indian Ocean-South East Asian (IOSEA) Marine Turtle Memorandum of Understanding Meeting and Technical Capacity Building Program IOSEA Marine Turtle MOU Secretariat, United Nations Environment Programme, FY 2006, FY 2008, FY 2009 & FY 2010
Amount Awarded: \$158,500, Leveraged Funds: \$179,093

Support capacity building in the IOSEA region by supporting members of the Scientific Advisory Committee to conduct short IOSEA sponsored missions for training workshops and on the ground technical support for parties and projects of member countries based on critical needs and regional priorities. Provide travel support for focal points and advisory committee members from member countries to participate in the Fourth and Sixth Conference of the Parties. Support the organization and implementation of a meeting of signatory states to the IOSEA MOU. Review the implementation of the MOU, address the previous year's work program, and prioritize national level activities.





Acknowledgements

We would like to express our deep appreciation to our many grantees and partners in conservation who so willingly shared their insights, images, and expertise. Without their dedication and on-the-ground conservation successes, this report would not have been possible. A special thank you to Earl Possardt for his dedication to the Marine Turtle Conservation Fund and his insights into the many accomplishments of the MTCA during the first six years of the program.

This report was developed by Earl Possardt and Tracy O'Toole of the U.S. Fish and Wildlife Service, with assistance from Joshua Toboga who worked extensively on the selection of images and assisted with the layout and design. Graphic design and map creation was provided by the U.S. Fish and Wildlife Service and editing services were provided by ThisAble. For invaluable review, thanks to Herb Raffaele, Richard Ruggiero, Cyndi Perry, Megan Hill, Rachel Penrod and Derek Litchfield.

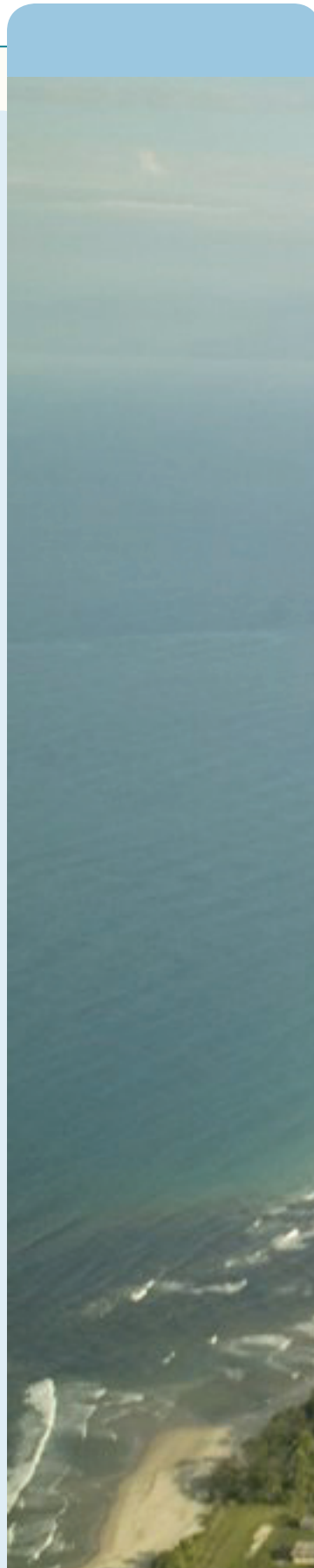
For more information, please visit us at:

www.fws.gov/international

Facebook@USFWSInternational Affairs

Twitter@USFWSInternatl

Large Back Cover Photo: Nesting green turtle returning to Arabian Sea from Ras al Jinz nesting beach, Oman by USFWS.





U.S. Fish & Wildlife Service

International Affairs

Division of International Conservation

4401 N. Fairfax Drive, Suite 100

Arlington, VA 22203

(703) 358-1754

(703) 358-2115/fax

www.fws.gov/international

Facebook@USFWSInternationalAffairs

[Twitter.com/USFWSInternatl](https://twitter.com/USFWSInternatl)

December 2011



Printed on recycled paper with vegetable based inks.