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

November, 16th – 18th, 2004 – Isla de Margarita, Venezuela

First Annual Report Form

Directory

Country	**USA**
Agency or institution responsible for preparing this report	**U.S. Fish & Wildlife Service**
Name of the person in charge of this form	**Earl Possardt**
Address	**University of West Georgia Department of Biology Carrollton, GA 30118 USA**
P.O. Box	
Telephone(s)	**Phone 770-214-9293**
Fax	**Fax 678-839-6548**
E-mail	**Earl_Possardt@fws.gov**
Website	

Others who participated in the preparation of this form

Name	Affiliation	Contribution/Topic	Telephone	E-mail
Barbara Schroeder	**National Marine Fisheries Service**	**Marine issues**	**Phone 301-713-1401**	**barbara.schroeder@noaa.gov**
Sandy MacPherson	**U.S. Fish & Wildlife Service**	**Nesting data & information**	**Phone 904-232-2580 (ext. 110)**	**sandy_macpherson@fws.gov**

Focal Point
Dave Hogan, Department of State, hogandf@state.gov
Phone 202-647-2335

1. Biological Information

1.1. Species present

	Pacific	Atlantic	Caribbean	GulfMx
Lepidochelys olivacea	**F, M**			
Lepidochelys kempii		**F, M**		**R, F, M**
Dermochelys coriacea	**F, M**	**R, F, M**	**R, F, M**	**F, M**
Eretmochelys imbricata		**R, F,**	**R, F, M**	**F**
Chelonia mydas	**F, M**	**R, F, M**	**R, F, M**	**R, F, M**
Caretta caretta		**R, F, M**	**F, M**	**R, F, M**

Phases: R = Reproduction; F = Foraging; M = Migration; D = Phase Unknown

1.2. Important sites for sea turtle conservation

	Name of Site	Species (s)	Season	Geographic Location (Lat/Long)	Area (km or hectares, if applicable)	Protection Category	Observations*
Nesting Site	See below						
Foraging Site	See below						
Migratory Routes	See below						

NESTING SITES

2004	Beach (km)	Cc	Cm	Dc	Ei	Lk
Texas	373	1	1			42
Alabama	78	53				
Florida	1,327	47,163	3,577	473	4	4
Georgia	161	368	1			
South Carolina	303	774	1			
North Carolina	531	332	4	8		
Culebra, PR	4			172	27	
Fajardo, PR	22			222		
Humacao, PR	15				NA	
Mona Island. PR	7				926	
Buck Island, USVI	--				NA	
Sandy Point, USVI	3		6	444	10	

Cc; estado incierto. The unclear annual number of loggerhead nests counted at core index beaches in Florida ranged from 29,547 to 59,918 nests from 1989-2004 and shows no trend in annual loggerhead nesting; however, this is a

change from similar analyses prior to 2000 that had indicated an increase in loggerhead nesting in Florida. For the northern nesting subpopulation (Georgia, South Carolina, North Carolina), there is strong statistical evidence to suggest this subpopulation has sustained a long-term decline.

Cm; major U.S. nesting is in Florida which has been steadily increasing since index nesting beach surveys began in 1989. Annual green turtle nesting at core index nesting beaches in Florida shows high biennial fluctuations in nest numbers. Between 1989 and 2004, the annual number of green turtle nests at core index beaches ranged from 267 to 6,981. Because green turtles commonly take a year off between migrations to Florida nesting beaches, it is useful to combine even and odd years in order to assess annual trends in the total population. A regression of log-transformed nesting in combined two-year cohorts reveals a significant upward nesting trend.

Dc; nest counts at all major nesting beaches in Florida, the U.S. Virgin Islands, and Puerto Rico have been increasing during past decade.

Ei; major U.S. nesting beaches are in Puerto Rico and at Buck Island Reef National Monument in the U.S. Virgin Islands. Nesting has been increasing in Puerto Rico and has been stable at Buck Reef National Monument.

Lk; the only regular nesting in U.S. is at Padre Island National Seashore and other Texas beaches. As nesting in Mexico has increased in the last decade, so has nesting in Texas. Occasional solitary nesting has occurred in Florida, Alabama, South Carolina, and North Carolina in recent years.

Approximately 20% of the nesting beaches of the southeastern U.S. are public lands, including National Wildlife Refuges (NWR), National or State or County Parks, or military installations. Archie Carr National Wildlife Refuge and Hobe Sound National Wildlife Refuge in Florida were established primarily for the protection of high density nesting beaches for Cc and Cm. The two major hawksbill nesting beaches in the U.S. Caribbean, Buck Island Reef National Monument, U.S. Virgin Islands, and Mona Island, Puerto Rico, are protected as a National Park and Commonwealth Protected Area respectively. The two most important leatherback nesting beaches in the U.S. Caribbean, Sandy Point, U.S. Virgin Islands and Brava and Resaca Beaches, Culebra, Puerto Rico, are protected as a National Wildlife Refuge and Commonwealth Protected Area, respectively, primarily to protect the nesting leatherback populations.

FORAGING SITES

Foraging sites in the Atlantic and Gulf of Mexico exist in virtually all inshore and nearshore waters, use of these sites vary seasonally and by species. In the northeast U.S., seasonal migrations to warmer waters occur. Some important inshore areas that have been studied include Cape Cod Bay, Long Island Sound, Chesapeake Bay, Indian River Lagoon, Florida Bay, Ten Thousand Islands, Cedar Keys, St. Joe Bay, and Laguna Madre. Nearshore foraging sites are found offshore virtually all the coastal states from Massachusetts to Texas and throughout Puerto Rico and the U.S. Virgin Islands. Important foraging sites for leatherbacks in the Pacific include Monterey Bay, California and, for green turtles, San Diego Bay, California. Foraging sites for green turtles in Hawaii are found throughout the main Hawaiian Islands. Foraging sites further from shore exist in U.S. federal waters (the Exclusive Economic Zone) and include important sites for leatherbacks and loggerheads offshore the northeast United States and Gulf of Mexico coast.

MIGRATORY SITES

Migratory areas in U.S. waters are widespread throughout the Gulf of Mexico, Atlantic, and Pacific. Important migratory habitat exists along the entire Hawaiian archipelago for breeding green turtles. Migratory habitat for leatherbacks includes areas offshore central and southern California, as well as the Atlantic coast of the U.S. Green turtles make regular breeding migrations from the east coast of Florida along the southeast Florida coast and into, as well as through, the Florida Keys, and offshore SW Florida. Loggerheads and green turtles make breeding migrations to and from the Bahamas. Breeding migrations to Cuba and Mexico from the east and west coasts of Florida are also common. The entire Atlantic Coast and Gulf of Mexico coast serve as migratory areas for both adults and juveniles of the various species as they follow prey or migrate in response to changing water temperatures.

2. Information regarding the use derived from sea turtles

There is no legal consumptive use of turtles or turtle products in the U.S. There is a very insignificant but unknown number of nests poached and a low level of poaching of green turtles occurs in Puerto Rico for meat.

	Types of use	Specie	Products	Ocean Basin	Origin*		Estimated annual quantity	Information source	Actions
					L	I			
Consumptive Use	NONE								
Non-consumptive Use	Educational turtle "walks" on nesting beaches	CC	Education	Atlantic, Gulf of Mexico	L		Approximately 300 walks reaching 10,000 participants annually	FFWCC	

***** L = legal, I = illegal

3. Main threats

3.1 Habitat and other threats

Threats	Specie(s) Affected	Size of Impact	Geographic Region(s) Affected	Information Source	Actions
Construction and infrastructure on the beach (Construction, repair, and maintenance of upland structures and dune crossovers; installation of utility cables; installation	Cc, Cm, Dc, Ei	Coastal development is responsible for the degradation or destruction of many kilometers of nesting habitat. Only about 20% of the nesting beaches of the southeastern U.S. are public lands (e.g., National Wildlife	Florida, Georgia, South Carolina, North Carolina, Alabama, Puerto Rico, U.S. Virgin	Sandy MacPherson pers. comm.	Through permit conditions, most direct construction-related impacts are avoided by requiring that non-emergency activities be performed outside of the nesting and hatching

and repair of public infrastructure (such as coastal highways and emergency evacuation routes); and construction equipment and lighting associated with these activities alter nesting habitat and harm sea turtle nests, adults, and hatchlings.)		Refuges, National or State or County Parks, or military installations). The remaining nesting beaches have already been developed or are vulnerable to development.	Islands		season. However, indirect effects also result from the post-construction presence of structures on the beach, and these impacts can only be minimized to the maximum extent practicable.
Accumulation of sand or presence of contention structures (please indicate) (Armoring is any rigid structure placed parallel to the shoreline on the upper beach to prevent both landward retreat of the shoreline and inundation or loss of upland property by flooding and wave action. Armoring includes bulkheads, seawalls, soil retaining walls, rock revetments, sandbags, and geotextile tubes.)	Cc, Cm, Dc, Ei	Sea walls, bulkheads, sandbags, and other armoring structures occur on about 18% of Florida's nesting beaches; 9% in Georgia; 12% in South Carolina; and 2% in North Carolina. Information not available for other states, Puerto Rico, and the U.S. Virgin Islands.	Florida, Georgia, South Carolina, North Carolina, Alabama, Puerto Rico, U.S. Virgin Islands	Clark 1992; Schroeder and Mosier 2000; Mark Dodd pers. comm.; Sally Murphy pers. comm.; Sean McGuire pers. comm.	While permits are required and attempts are made to minimize further expansion of such structures on nesting beaches there are continual pressures to allow such structures to protect homes, businesses and roads, particularly after major storm events.
Artificial light	Cc, Cm, Dc, Ei	The ephemeral nature of evidence from hatchling disorientation and mortality makes it difficult to accurately assess how many hatchlings are misdirected and killed by artificial lighting. Reports of hatchling disorientation events in Florida describe several hundred nests each year and are likely to involve tens of thousands of hatchlings. However, this number calculated from disorientation reports is likely to be a vast underestimate. Independent of these reports, Witherington *et al*. (1996)	Florida, Georgia, South Carolina, North Carolina, Alabama, Puerto Rico, U.S. Virgin Islands	Nelson et al. 2002; Witherington et al. 1996.	Light management plans have been successfully developed and implemented in most developed coastal counties and communities in Florida, Georgia, and South Carolina to minimize these impacts. Light management plans have also been developed at coastal military installations (e.g., Cape Canaveral Air Force Station and Patrick Air Force Base in Florida. The major nesting beach in South Carolina, Cape Romain NWR is a barrier island without major light

		surveyed hatchling orientation at nests located at 23 representative beaches in six counties around Florida in 1993 and 1994 and found that, by county, approximately 10 to 30% of nests showed evidence of hatchlings disoriented by lighting. From this survey and from measures of hatchling production, the number of hatchlings disoriented by lighting in Florida alone is calculated to be in the range of hundreds of thousands per year.			pollution issues. North Carolina has extensive areas of National Park. Light pollution issues adjacent to the leatherback nesting beach at Sandy Point, USVI, are still problematic but some efforts have been undertaken to resolve them.
Vessel Strikes	Cc, Cm, Dc, Ei, Lk	Small, medium, and large vessels strike turtles in all U.S. waters. Injury and mortality result. Interactions are highest in areas of intense boating activity and in/around major channels. Annually approximately 550 injured or dead turtles are documented as strandings with evidence of vessel strikes. Strandings represent only a portion of total turtles affected by this threat.	U.S. waters of the Atlantic and Gulf of Mexico - inshore, nearshore, and offshore	U.S. National Sea Turtle Stranding and Salvage Network	Federal activities involving permitting of boat races and boating events are examined under Section 7 of the Endangered Species Act and conditions on timing and observers can be implemented. This problem is particularly difficult and has not yet been adequately addressed.
Degradation or destruction of marine habitat	Cc, Cm, Dc, Ei, Lk	No quantification of the extent and effect on sea turtles of degradation or destruction of marine habitats exists. Bottom habitats are impacted by bottom fishing gear, dredging and sand mining, anchoring, prop damage, and human recreational use.	U.S. waters of the Pacific, Atlantic, and Gulf of Mexico	NMFS	Several National Marine Sanctuaries have been established in areas used by sea turtles and efforts to reduce destruction of marine habitats have been implemented at those sites. For most marine habitats, actions have yet to be taken to address this threat.
Depredation of eggs and hatchlings	Cc, Cm, Dc, Ei	Predation of sea turtle eggs and hatchlings by native and introduced species occurs on almost all U.S. nesting beaches. The most common predators in the southeastern	Florida, Georgia, South Carolina, North Carolina, Alabama,	Davis and Whiting. 1977; Hopkins and Murphy 1980; Labisky et al. 1986; Schroeder	Nest protection programs vary but include 100% nest screening at Canaveral National Seashore, raccoon trapping and removal at

		United States are ghost crabs, raccoons, feral hogs, foxes, coyotes, armadillos, and fire ants. Without active nest protection programs, some areas of the southeastern U.S. would experience close to 100% nest depredation, such as Canaveral National Seashore and Merritt Island National Wildlife Refuge. Feral hogs on Georgia's barrier islands, Cape Canaveral Air Force Station, Florida, and Mona Island, Puerto Rico, similarly would depredate a majority of nests without active nest protection programs in place each year. Prior to hog control efforts, up to 45% of all nests deposited at the Cape Canaveral Air Force Station, Florida, were depredated by feral hogs. In 1990, an estimated 70% of loggerhead nests were destroyed by feral hogs on Ossabaw Island, Georgia, prior to the implementation of predator control programs. Coyotes are significant predators in the Florida panhandle.	Puerto Rico, U.S. Virgin Islands	1981; Stancyk et al. 1980.	Merritt Island NWR, Hobe Sound National NWF, and Archie Carr NWR. Hogs are hunted and removed at Canaveral Air Force Station and a fence has been constructed as barrier to hogs at hawksbill nesting beaches at Mona Island, PR. All of these interventions are continual and have been successful. .

3.2. Capture (Intentional/incidental)

Threats	Specie(s) Affected	Size of Impact	Geographic Region(s) Affected	Information Source	Actions
Incidental capture in bottom and mid-water trawls	Cc, Lk, Dc, Cm	High	Atlantic, Gulf of Mexico	NMFS	Bottom and mid-water trawls pose significant threats to sea turtles in U.S. waters. Regulations have been implemented to require TEDs in shrimp and summer flounder

					fishery. Research underway on skimmer trawls. Evaluation of TEDs in non-shrimp bottom and mid-water trawls also underway and implentation of TEDs in these fisheries is under consideration.
Incidental capture in gillnets	Cc, Cm, Ei, Dc, Lk	High	Atlantic, Gulf of Mexico, Caribbean	NMFS	Large and midsize gillnets are a significant threat to sea turtles in U.S. waters wherever overlap ocurs. The states of FL, TX, GA, and SC prohibit gillnetting in state waters. Federal time and area closures have been promulgated to regulate large mesh gillnets along the Atlantic coast. Studies are underway to identify other gillnet fisheries and areas that have interactions with sea turtles.
Incidental capture in longlines	Cc, Dc, Lo	High	Atlantic, Gulf of Mexico, Pacific	NMFS	Longline fisheries throughout U.S. waters pose significant threats to sea turtles. Federal regulations have been implemented requiring circle hooks in certain segments of the fishery, handling requirements, and time/area closures. Additional studies are underway to further reduce bycatch in longline gear.
Incidental capture in pots and traps	Cc, Dc, Cm	Medium to High	Atlantic, Gulf of Mexico	NMFS	Entanglement in pot and trap fisheries is a significant problem for certain species in certain areas. Research is just beginning on how to reduce these interactions and to quantify these interactions more accurately.
Incidental capture in dredge gear	Cc	Medium to High	Atlantic	NMFS	Fisheries using towed bottom dredges to catch target species are a signficant threat to sea turtles. Research is underway to develop modifications to dredge gear to reduce interactions and harm. Further work is needed.

4. Legal Framework

4.1. International instruments

Treaty, Convention, Agreements, Memorandum of Understanding	Year signed and/or ratification
Indian Ocean Southeast Asian Marine Turtle Agreement	September 1, 2001
Inter-American Convention for the Protection & Conservation of Sea Turtles	May 2, 2001
Convention on International Trade in Endangered Species of Wild Flora and Fauna	July 1, 1975

4.2. National legislation

Type and name of legal instrument (No.)	Description (Range of application)	Sanction(s) Imposed
Endangered Species Act of 1973 as amended	Provides for the listing of species as endangered or threatened with extinction. Prohibits all take of listed species, unless authorized as part of a permit, biological opinion, or regulation. Provides for issuance of federal regulations to conserve and recover listed species. Requires preparation of a federal Recovery Plan. Requires all federal agencies to consult with USFWS and NMFS if their actions may affect a listed species.	Criminal charges carry a maximum $100,000 fine and a year in prison. Civil penalties carry a maximum $25,000 fine.
National Environmental Policy Act of 1969	Requires review of federal actions to assess their environmental impact and the development of various alternatives to carrying out the activity to reduce impacts.	
Magnuson-Stevens Fishery Management and Conservation Act	U.S. federal fishery management act. Relevance to sea turtles: requires reduction of bycatch of sea turtles in federally managed fisheries.	
Marine Turtle Conservation Act of 2004	Authorize a dedicated fund to support marine turtle conservation projects in foreign countries and to be administered by U.S. Fish & Wildlife Service. Primary focus is on protecting nesting populations and nesting habitat.	July 2, 2004

4.3. Indicate any legal instruments that are currently in the process of being approved.

None

4.4. Public and private institutions involved in sea turtle conservation

Institution/ Entity	Responsibilities
U.S. National Marine Fisheries Service	Responsible for conservation of marine turtles in their marine habitats including regulation of fisheries
U.S. Fish & Wildlife Service	Responsible for conservation of marine turtles on nesting beaches.
States of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas, and the Commonwealth of Puerto Rico and Territory of U.S. Virgin Islands	Legislative authorities that protect endangered or threatened species such as sea turtles and have authority to regulate activities on nesting beaches and fishing activity in state waters.
Numerous City and County governments (e.g., Broward County, Florida; Martin County, Florida; Volusia County, Florida, and Town of Jupiter Island, Florida)	Manage or fund marine turtle projects on nesting beaches and/or enforce local lighting ordinances for sea turtle protection.
Numerous local sea turtle conservation organizations based in the U.S.	Involved in nesting beach surveys, stranding response, conservation advocacy, and/or public education.
Caribbean Conservation Corporation; The Ocean Conservancy; Earth Island Institute	Involved in public education and advocacy.
University of Texas Marine Science Institute, Aquarium of the Americas, Charleston Aquarium, Clearwater Marine Aquarium, Clinic for the Rehabilitation of Wildlife, Coral World Ocean Park, The Florida Aquarium, Gulf Specimen Marine Laboratory, Gulf World Marine Park, Gulfarium, Key West Aquarium, Marine Science Center at Lighthouse Point Park, Marinelife Center of Juno Beach, Miami Seaquarium, Mote Marine Laboratory, Mystic Aquarium, National Aquarium in Baltimore, New England Aquarium, Riverhead Foundation for Marine Research and Preservation, Sea Turtle Inc., Sea World, The Marine Education, Research & Rehabilitation Institute, Inc., North Carolina Aquarium, The Turtle Hospital, Topsail Turtle Hospital; Virginia Marine Science Museum, Walt Disney World Living Seas, and others.	Involved in public education, advocacy, stranding rescue, and/or sea turtle rehabilitation.
Florida Power & Light Company	Turtle rescue at power plant, funding support of nesting beach surveys, and public education.

5. Exceptions

There are no exceptions provided to Article Article IV, Paragraph 2(a).

6. Conservation Efforts

6.1 General description of the sea turtle protection and conservation program

Federal recovery plans, developed under the U.S. Endangered Species Act serve as the official guiding documents for conservation and recovery. Recovery Plans have been issued for all of the sea turtles occurring in the U.S. Extensive efforts have followed from those recovery plans, at the federal, state, and local level. Efforts at the local and state level have been primarily focused on conservation and recovery activities at nesting beaches, although a number of coastal states have become more engaged in implementing sea turtle conservation actions in the marine and estuarine environment. At the federal level, the U.S. Fish and Wildlife Service's conservation and recovery program is focused on nesting beaches, while the U.S. National Marine Fisheries Service focuses on conservation and recovery in the marine and estuarine environment. A general description of these two respective efforts follows.

In the Southeast United States, major nest protection efforts and beach habitat protection are underway for most of the significant nesting areas, and progress has been made in reducing mortality from human-related impacts on the nesting beach. Many coastal counties and communities in Florida, Georgia, and South Carolina have developed lighting ordinances to reduce the impacts of beachfront lighting on sea turtles. Although compliance with these local ordinances varies widely, adoption and effective enforcement of such ordinances has contributed significantly to sea turtle conservation.

Important U.S. nesting beaches have been and continue to be acquired for long-term protection. The Archie Carr National Wildlife Refuge, located in Brevard and Indian River Counties, Florida, represents the United States' most significant land acquisition effort to protect the loggerhead and green turtles. The acquisition plan for the refuge set a goal for purchase of 9.3 miles of beach within a 20-mile stretch where nesting densities often exceed 1,000 nests per mile. The establishment of the Archie Carr refuge was made possible by a multi-agency land acquisition effort. The U.S. Fish and Wildlife Service has 14 additional refuges in the Southeast where sea turtles regularly nest and are provided protection. Numerous coastal national seashores, military installations, and state parks in the Southeast also provide protection for sea turtles on their lands.

The most longstanding beach management program in the Southeast U.S. has been to reduce the destruction of nests by natural and introduced predators. Most major nesting beaches in the Southeast employ some type of lethal (trapping, hunting) or nonlethal (screen, cage) control of mammalian predators to reduce nest loss. These programs are conducted in an ecologically sound manner, and are primarily aimed at feral animal species and native species, such as raccoons, whose populations have risen exponentially with the extirpation of natural predators and the creation of artificial habitats and coastal development to which they are attracted. In 2002, over 90% of known loggerhead nests in North Carolina and Georgia were protected with a wire or plastic screen or cage. In Florida and South Carolina, screens or cages were employed on 47% and 57% of nests, respectively. Predator removal (trapping, hunting) was used to reduce feral hog, raccoon, and fox depredation on approximately 10% of beaches in North Carolina, South Carolina, and Florida. In Georgia, 42% of nest protection projects used trapping and hunting to reduce feral hog populations. Overall, nest protection activities have substantially reduced sea turtle nest depredations although the magnitude of the reduction has not been quantified.

In Florida, index nesting beaches have been established on 399 kilometers of beach. These beaches have been monitored consistently since 1989 to assess trends in loggerhead, green, and leatherback nesting. In the states of

Georgia, South Carolina, North Carolina, and Alabama, standardized nesting surveys are conducted annually to assess loggerhead nesting trends. Additionally, nearly all nesting beaches in the southeastern U.S. have a nest protection program in place and problems with depredation, light pollution, beach driving, or other threats or conflicts are regularly reported to City, County, State, and Federal agencies for resolution. A large number of coastal communities, counties, and military bases have light management ordinances and/or plans in place and they are enforced to varying degrees.

Leatherback surveys and nest protection activities have been underway on the major nesting beaches in Puerto Rico and U.S. Virgin Islands since at least the mid 1980s. Similarly, surveys and nest protection efforts have been and are conducted at the two major hawksbill nesting beaches in the U.S. Virgin Islands (Buck Island Reef National Monument) and Puerto Rico (Mona Island).

Conservation and recovery activities in the marine environment have focused primarily on the reduction of bycatch in fisheries (including an active gear research program to develop fishing gear and practices to reduce and eliminate sea turtle bycatch), reduction of direct take and minimization of habitat alterations during channel and sand dredging activities, monitoring and evaluation of stranded turtles, implementation of in-water surveys, and research on distribution, movements and migrations.

6.2 Relevant Projects and Activities

Project/Activities	General objective	Results obtained	Duration	
			From	Until
Establish Archie Carr National Wildlife Refuge, Florida.	Acquire and protect 15 km of beach within a 32-km stretch where loggerhead nesting densities often exceed 1,000 nests per mile.	Over 60% of the available beachfront acquisitions for the Refuge have been completed.	1989 to present - continuing	
Establish Sandy Point National Wildlife Refuge, U.S. Virgin Islands.	Protect approximately 3 km of the highest density leatherback nesting beach in the U.S.	The original acquisition plan approved in 1984 and the expansion plan approved in 1999 have both been completed.	1984-2000	
Conduct long-term index/standardized nesting surveys on loggerhead beaches throughout Florida, Georgia, South Carolina, and North Carolina.	Long term monitoring of nesting population trends.	To date, 16 years of high quality and scientifically credible nesting data for Florida, Georgia, South Carolina, and North Carolina have been collected.	1989 - ongoing	
Conduct long-term standardized nesting surveys at the two most important hawksbill	Long term monitoring of nesting population trends.	Mona Island - 2 years of high quality nesting data have been collected. Buck Island - 15 years of high quality nesting data have been collected.	Mona Island = 2003 - ongoing Buck Island = 1990 - ongoing	

nesting beaches in the U.S. (Mona Island, Puerto Rico, and Buck Island Reef National Monument, U.S. Virgin Islands)			
Carry out intensive nest protection activities throughout the Southeast Region.	Reduce the annual rate of mammalian predation to at or below 10% of nests.	Most major nesting beaches in the Southeast now employ some type of control (trapping, hunting, nest screening/caging) of mammalian predators to reduce nest loss. In 2002, over 90% of known loggerhead nests in North Carolina and Georgia were protected with a wire or plastic screen or cage. In Florida and South Carolina, screens or cages were employed on 47% and 57% of nests, respectively. Predator removal was used to reduce feral hog, raccoon, and fox depredation on approximately 10% of beaches in North Carolina, South Carolina, and Florida. In Georgia, 42% of nest protection projects used trapping and hunting to reduce feral hog populations. Overall, nest protection activities have substantially reduced sea turtle nest depredations.	1980s - ongoing
Remove exotic vegetation and fence hawksbill nesting beaches at Mona Island, Puerto Rico.	Improve the quality of the nesting beach and prevent extensive hog nest depredation.	Control of Australian pines through the removal of seedlings and elimination of larger trees through girdling is continuing, as well as the maintenance and repair of pig and goat exclosure fences.	Late 1980s - present
Require beach renourishment projects on high density nesting beaches to occur outside of main part of nesting season.	Minimize manipulation of nests on high density nesting beaches.	Through the section 7 consultation process of Endangered Species Act, the U.S. Fish and Wildlife Service requires that nourishment projects in six counties on the southeast coast of Florida (Brevard through Broward County) not be conducted during the main part of the nesting season (May 1 through October 31), the period of peak sea turtle egg laying and egg hatching, to reduce the possibility of sea turtle nest burial, crushing of eggs, or nest excavation.	1980s - present
Implement and enforce lighting ordinances and light management plans for coastal counties and municipalities, and military installations in	Minimize hatchling mortality from disorientation and misorientation.	Lighting ordinances have been passed and are being enforced to various degrees in 18 counties and over 50 municipalities in Florida, all the developed islands in Georgia, 2 counties and 7 municipalities in South Carolina, 1 municipality in North Carolina, and 1 municipality in	1987 - present

Florida, Georgia, South Carolina, North Carolina, and Alabama.		Alabama. Military installations (e.g., Cape Canaveral Air Force Station, Patrick Air Force Base) have light management plans in place.	
Fisheries Bycatch Reduction and Fisheries Bycatch Research	Reduce incidental capture in fisheries through gear and/or fishing practice modifications and time/area closures. Develop gear modification to reduce and eliminate bycatch.	Federal and state regulatory actions have been taken to reduce bycatch and mortality in some fisheries and in some areas. Most notable and widespread are the development and requirements to use TEDs in shrimp trawls and summer flounder trawls, prohibition of gillnets in state waters of South Carolina, Georgia, Florida, and Texas, development of and requirements to use circle hooks in pelagic longline fisheries, restrictions on the use of large mesh gillnets in U.S. federal waters of the mid-Atlantic and research on modifications to pound net leaders to reduce and eliminate entanglement and impingement of turtles.	1975 - present
Sea Turtle Stranding and Salvage Network	Document strandings (debilitated or dead) throughout U.S. coastal areas. Characterize injuries and anomalies, facilitate transfer of live strandings to rehabilitation centers, collect basic life history data.	Centralized database for the Atlantic and Gulf of Mexico, centralized database for Hawaii. Standardized reporting across large geographic areas resulting in extensive database and information on species composition and distribution, size structure, sex, and anomalies. Rapid response to live strandings and efficient transport to rehabilitation facilities.	1980 - present

7. International Cooperation

Mexico
Funding support to Pronatura de Peninsula de Yucatan for hawksbill nesting surveys and protection covering about 75 km and 15 % of the hawksbill nesting in the Yucatan Peninsula; to Gladys Porter Zoo for Kemp's ridley nest protection in State of Tamaulipas in partnership with SEMARNAT; to the University of Michoacan for nest survey and protection of black turtles at the major nesting beach of Colola, State of Michoacan; to Kutzari for leatherback nest surveys and protection on the primary and some secondary nesting beaches of MX Pacific coast in collaboration with SEMARNAT.

Panama
Funding support for hawksbill and leatherback nesting surveys and protection in collaboration with Caribbean Conservation Corporation, Nogbe Indian communities, and Panamanian National Authority. Effort to restore the historic nesting beach at Chiriqui Beach, Bocas del Toro Province, once the largest in the Caribbean.

Nicaragua
Funding support for the Wildlife Conservation Society to conduct hawksbill nesting surveys and protection in the Pearl Keys the most important remaining hawksbill nesting area in Nicaragua.

Costa Rica
Funding support to MINAE for leatherback nesting surveys and protection at Playa Langosta.

Multiple Countries Throughout the Convention Area
Active bycatch reduction technology transfer program for TEDs in trawl fisheries and fishing practices and circle hooks in pelagic longline fisheries. Funding support for testing of longline gear modification in various fleets throughout the Convention Area.

8. National Directory

National Government contacts only (State, local govt. and NGO, university experts will be added in future)

Name	Institutional affiliation	Line of work / Specialty	Telephone	Fax	E-mail	Website
Earl Possardt	USFWS	International Sea Turtle Specialist	770-214-9293	678-839-6548	Earl_Possardt@fws.gov	http://www.fws.gov/northflorida/SeaTurtles/seaturtle-info.htm
Sandy MacPherson	USFWS	National Sea Turtle Coordinator	904-232-2580	904-232-2404	Sandy_MacPherson@fws.gov	http://www.fws.gov/northflorida/SeaTurtles/seaturtle-info.htm
Barbara Schroeder	NMFS	National Sea Turtle Coordinator	301-713-1401	301-713-0376	Barbara.Schroeder@noaa.gov	http://www.nmfs.noaa.gov/pr/species/turtles/
Peter Dutton	NMFS	Marine Turtle Research Program	858-546-5636	858-546-7003	Peter.Dutton@noaa.gov	http://swfsc.nmfs.noaa.gov/prd/PROGRAMS/turtles/default.htm
Jeffrey Seminoff	NMFS	Marine Turtle Research Program	858-546-7152	858-546-7003	Jeffrey.Seminoff@noaa.gov	http://swfsc.nmfs.noaa.gov/prd/PROGRAMS/turtles/default.htm
Sheryan Epperly	NMFS	Marine Turtle Research Program	305-361-4207	305-361-4478	Sheryan.Epperly@noaa.gov	http://www.sefsc.noaa.gov/seaturtlesprogram.jsp
George Balazs	NMFS	Marine Turtle Research Program	808-983-5733	808-983-2902	George.Balazs@noaa.gov	http://www.nmfs.hawaii.edu/psd/mtrp/

9. Sources of Information

Clark, R.R. 1992. Beach conditions in Florida: a statewide inventory and identification of beach erosion problem areas in Florida. Beaches and Shores Technical Memorandum 89-1, 4th Edition. Florida Department of Environmental Protection, Division of Beaches and Shores, Tallahassee, Florida. 208 pages.

Davis, G.E. and M.C. Whiting. 1977. Loggerhead sea turtle nesting in Everglades National Park, Florida, U.S.A. Herpetologica 33:18-28.

Hopkins, S.R. and T.M. Murphy. 1980. Reproductive ecology of *Caretta caretta* in South Carolina. South Carolina Wildlife Marine Resources Department Completion Report. 97 pages.

Labisky, R.F., M.A. Mercadante, and W.L. Finger. 1986. Factors affecting reproductive success of sea turtles on Cape Canaveral Air Force Station, Florida, 1985. Final report to the United States Air Force. United States Fish and Wildlife Service Cooperative Fish and Wildlife Research Unit, Agreement Number 14-16-0009-1544, Research Work Order Number 25. 18 pages.

Nelson, K., R. Trindell, B. Witherington, and B. Morford. 2002. An analysis of reported disorientation events in the State of Florida. Pages 323-324 *in* Mosier, A., A. Foley, and B. Brost (compilers). Proceedings of the Twentieth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-477.

Schroeder, B.A. 1981. Predation and nest success in two species of marine turtles (*Caretta caretta* and *Chelonia mydas*) at Merritt Island, Florida. Florida Scientist 44(1):35.

Schroeder, B.A. and A.E. Mosier. 2000. Between a rock and a hard place: coastal armoring and marine turtle nesting habitat in Florida. Pages 290-292 *in* Abreu-Grobois, F.A., R. Briseño-Dueñas, R. Márquez, and L. Sarti (compilers). Proceedings of the Eighteenth Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-436.

Stancyk, S.E., O.R. Talbert, and J.M. Dean. 1980. Nesting activity of the loggerhead turtle *Caretta caretta* in South Carolina, II: protection of nests from raccoon predation by transplantation. Biological Conservation 18:289-298.

Witherington, B., C. Crady, and L. Bolen. 1996. A "hatchling orientation index" for assessing orientation disruption from artificial lighting. Pages 344-347 *in* Keinath, J.A., D.E. Barnard, J.A. Musick, and B.A. Bell (compilers). Proceedings of the Fifteenth Annual Symposium on the Biology and Conservation of Sea Turtles. NOAA Technical Memorandum NMFS-SEFSC-387.

Mark Dodd, Georgia Department of Natural Resources, personal communication.

Sandy MacPherson, U.S. Fish and Wildlife Service, personal communication.

Sally Murphy, South Carolina Department of Natural Resources, personal communication.

Sean McGuire, North Carolina Division of Coastal Management, personal communication.

10. Annexes

Witherington, B.E. and R.E. Martin. 2003. Entendiendo, evaluando y solucionando los problemas de contaminacion de luz en playas de anidamiento de tortugas marinas. Florida Marine Research Institute Technical Report TR-2, Second Edition, Revised, Spanish version. 75 pages.

Florida Fish and Wildlife Conservation Commission index nesting beach survey protocols.