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Fourth Meeting of the Scientific and
Technical Advisory Committee (STAC) to
the Protocol Concerning Specially Protected
Areas and Wildlife (SPA) in the Wider
Caribbean Region

Gosier, Guadeloupe, France, 2-5 July 2008

REVISED DRAFT

ANNOTATED FORMAT FOR PRESENTATION REPORTS FOR THE
AREAS PROPOSED FOR INCLUSION IN THE SPAW LIST

OBJECTIVE

The objective of this Annotated Format is to guide the Contracting Parties in producing reports of comparable contents as requested in Article 19 (2) of the Protocol, including the information necessary for the adequate evaluation of the conformity of the proposed site with the criteria set out in the Protocol and in the Guidelines (Guidelines and Criteria for the Evaluation of Protected Areas to be Listed under SPAW).

CONTENTS

The presentation report shall include the following main information on: (i) identification of the proposed protected area (ii) site description (iii) its Caribbean importance (iv) the activities in and around the areas and their impacts (v) legal framework (vi) management measures (vii) human and financial resources available for the management and the protection of the site.

SUBMISSION OF REPORTS

The reports should be submitted to the SPAW/RAC two months before the meeting of STAC for SPAW in English, Spanish or in French.

Dossier should be compiled on A4 paper, with maps and plans annexed on paper with maximum size of an A3 paper. Contracting parties are also encouraged to submit the full text of the proposal in electronic form.

The requested annexes should be submitted on paper and, if possible, also in electronic form. They are following:

- Copies of legal texts
- Copies of planning and management documents
- Maps: administrative boundaries, zoning, land tenure, land use, and distribution of habitats and species, as appropriate
- Existing inventories of plants and fauna species
- Photographs, slides, films/videos, CD-ROM's
- List of publications and copies of the main ones concerning the site

Please see the following link for an electronic version of requested annexes:

<http://floridakeys.noaa.gov/management/welcome.html>

1. AREA IDENTIFICATION

COUNTRY: United States of America

ADMINISTRATIVE PROVINCE OR REGION: Florida

NAME OF THE AREA: Florida Keys National Marine Sanctuary (FKNMS)

DATE OF ESTABLISHMENT: 1990

GEOGRAPHIC LOCATION

Describe its geographical boundaries, e.g. rivers, roads, geographical or administrative boundaries (do not describe the co-ordinates here; please make a separate Annex with a map and a description of geographical co-ordinates as stated in the legal declaration of the area.).

Currently, the boundary encompasses approximately 2,900 square nautical miles (9,800 square kilometers) of coastal and ocean waters and submerged land (Figure 1.2). The boundary extends southward on the Atlantic Ocean side of the Keys, from the northeastern-most point of the Biscayne National Park along the approximate 300-foot isobath for over 220 nautical miles to the Dry Tortugas National Park. The boundary extends more than 10 nautical miles to the west of the Park boundary, where it turns north and east. The northern boundary of the Sanctuary extends to the east where it intersects the boundary of the Everglades National Park. The Sanctuary waters on the north side of the Keys encompass a large area of the Gulf of Mexico and western Florida Bay. The boundary follows the Everglades National Park boundary and continues along the western shore of Manatee Bay, Barnes Sound, and Card Sound. The boundary then follows the southern boundary of Biscayne National Park and up its eastern boundary along the reef tract at a depth of approximately 60 feet until its northeastern-most point. A separate, non-contiguous, 60 square nautical mile area off the westernmost portion of the Sanctuary is called the Tortugas Ecological Reserve South. The area's shallowest feature is Riley's Hump which rises to a depth of only 90 feet of water. The Sanctuary boundary overlaps two previously existing national marine sanctuaries (Key Largo and Looe Key); four U.S. Fish and Wildlife Service (USFWS) refuges; six state parks, including John Pennekamp Coral Reef State Park; three state aquatic preserves; and other jurisdictions. Everglades National Park, Biscayne National Park and Dry Tortugas National Park are excluded from Sanctuary waters, but each shares a contiguous boundary with the Sanctuary. The shoreward boundary of the Sanctuary is the mean high-water mark, except around the Dry Tortugas where it is the boundary of Dry Tortugas National Park. The Sanctuary boundary encompasses nearly the entire reef tract, all of the mangrove islands of the Keys, and a good portion of the region's seagrass meadows.

SURFACE OF THE AREA (total)

(in national unit) 2,900 square nautical miles	(in ha) 994,672.16 hectares
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LENGTH OF THE MAIN COAST (km):

~3000 km

2. EXECUTIVE SUMMARY (maximum 3 pages)

Supply a summary of the information contained in sections 3 to 9

The Florida Keys National Marine Sanctuary extends approximately 220 miles southwest from the southern tip of the Florida peninsula. Located adjacent to the Keys' land mass are spectacular, unique, and nationally significant marine environments, including seagrass meadows, mangrove islands, and extensive living coral reefs. These support rich biological communities possessing extensive conservation, recreational, commercial, ecological, historical, research, educational, and aesthetic values that give this area special national significance. They are the marine equivalent of tropical rain forests, in that they support high levels of biological diversity, are fragile and easily susceptible to damage from human activities, and possess high value to humans if properly conserved. The marine environment of the Florida Keys supports over 6,000 species of plants, fishes, and invertebrates, including the Nation's only coral reef that lies adjacent to the continent, and one of the largest seagrass communities in this hemisphere. Attracted by this natural diversity and tropical climate, approximately four million tourists visit the Keys annually, where they participate primarily in water-related sports such as fishing, diving, boating, and other activities.

3. SITE DESCRIPTION

TYPOLOGY OF THE SITE:

Terrestrial surface, excluding wetlands (ha): 1,700 islands encompassing approximately 266 km² (not part of sanctuary)

Wetland surface (ha): Extensive (adjacent Everglades NP, and mangroves surround the islands of the Keys).

Marine surface (sq. km) under sovereignty, sovereign rights and jurisdiction: 9,946.72 square kilometers

MAIN PHYSICAL FEATURES

Geology /Geomorphology

Give a brief description of: (i) geological aspects (lithologic and tectonics); (ii) processes of sedimentation and erosion observable in the area; (iii) coastal geomorphology, and (iv) island system. Indicate bibliographical sources.

The Florida Keys are located at the southern edge of the Floridan Plateau, a large carbonate platform composed of 7,000 m of marine sediments. The plateau incorporates all of Florida and the adjacent continental shelves of the Gulf of Mexico and Atlantic Ocean. Sediments have been accumulating in the region for 150 million years and have been structurally modified by subsidence and sea level fluctuation. The crystalline and sedimentary basement rocks of the South Florida Basin underlie the plateau. The basin is a block-faulted feature associated with the breakup of North America and Africa during the Mesozoic era. Further block-faulting during this era created the Straits of Florida, the water body separating the plateau from the Bahamas and Cuba. Subsequent sea level transgressions flooded the area, initiating episodic reef building and marine deposition. Between 100,000 and 125,000 years ago, sea level was approximately 6 m higher than it is today. Sediments were deposited in a series of bays and lagoons in South Florida, while a large reef complex flourished to the east. To the south, tidal exchange between the Atlantic Ocean and the Gulf of Mexico formed a large series of cross-bedded, carbonate (oolitic) sand bars. Sea level fluctuations attributed to glaciation are largely responsible for the region's current morphology. During the Wisconsin Glaciation, sea level dropped between 15 and 30 m, exposing the entire platform to marine and subaerial erosion. Sea level rose again approximately 6,000 years ago, flooding the area and forming the current physiographic regions. Lithified remnants of the ancient reef complex formed the Upper Keys, while the Lower Keys were formed from the oolitic sand bars. Florida Bay occupies the southern portion of the old lagoonal structure.

Other interesting physical features: Such as hydrodynamics, volcanic formations, caves, underwater formations, etc.

The Florida Reef Tract: linear zones of living coral reefs and associated habitats paralleling the Keys for 130 km.

Length of beaches (in km), including islands:

- a) Length of sandy beaches: 50 km
- b) Length of pebble or stony beaches: n/a
- c) Length, height and depth of active sand-dunes: n/a

FRESHWATER INPUTS

Mean annual precipitation (in mm) 12,450 mm

Main water courses (permanent and seasonal)

Taylor Slough, Shark Slough, East River Slough. Historically had distinct seasonal surface flow from Central Florida to Florida Bay. South Florida's drainage system was extensively altered by engineering starting in the late 1800s. Levees and canals diverted natural flow away from Everglades and Florida Bay. This drainage system is being redesigned to restore natural water flow to South Florida.

Estuarine areas: Existence and brief description

Florida Bay lies between the extensive freshwater ecosystem of the Everglades and the marine environments of the Florida Keys National Marine Sanctuary. Florida Bay is approximately 1,550 km² and an average depth of 1.5 to 2 m. Its most distinct feature is a patchwork of interconnected mud banks composed of shelly calcareous silt, which forms a series of oval-shaped basins 4.8 to 6.4 km long, 5.1 to 7.7 km wide, and 1.5 to 1.8 m deep. To the west, these banks gradually mix with the more clastic sediments of the southwest continental shelf. The bay has been termed an active lime-mud factory, with silts and muds composed of 90 percent calcium carbonate, with aragonite the primary constituent mineral. Biogenic sediments derived from a variety of marine organisms (primarily the green algae *Penicillus*) continually accumulate. Because of the bay's shallow depth, large seasonal variations in temperature and salinity are common, and abundant sediment contributes to turbidity levels. As winter storms pass through the area, large amounts of sediment-rich cool water are transported through the channels between the Keys to the Florida Reef Tract. During periods of warm, stable weather, tidal currents can transport high-temperature water in the same direction. This influx directly affects reef production by changing water temperature, salinity, and turbidity levels

Freshwater springs: Existence and brief description, including marine offsprings

The porous limestone foundation of the Florida Keys provides for localized discharge of groundwater around the islands of the Keys.

BIOLOGICAL FEATURES (Point B of the Guidelines; ecological criteria)

Habitats: a brief description of dominant marine and terrestrial habitats

The biological diversity that the region supports makes the Keys' ecosystem ecologically, economically, aesthetically, and biogeographically unique within the United States.

The freshwater, estuarine, and saltwater wetlands of the Lower Everglades/South Peninsular Florida region provide a variety of habitat features that encourage a complex mixture of invertebrates, fishes, amphibians, reptiles, birds, and mammals. In addition, the area's diverse wetland and successional communities provide food, shelter, and nesting sites for many resident and migratory organisms.

Florida Bay's mangrove islands and seagrass beds are highly productive, faunally rich ecosystems that provide food, protection, and nesting sites for many species of fishes, amphibians, reptiles, birds, and mammals. These areas are critically important to commercial and recreational fish species, as 70 to 90 percent of the harvested species in the Gulf depend on coastal wetlands and seagrass beds during at least part of their life cycle. The shallow mud banks are essential for various species of wading birds, as they provide the only feeding access to the bay's fish populations.

The Keys' nearshore habitats and tidal channels are transitional areas of species mixing between the Gulf and the Atlantic, and the presence or absence of tidal passes, coupled with their bathymetric features (e.g., depth, width, current velocity, etc.), plays an important role in the distribution of biota and the establishment of marine communities within the Sanctuary. The region is an area of ecological and biological mixing where the temperate waters of the Gulf meet the tropical waters of the Atlantic, producing one of the most complex habitats in the Sanctuary. The majority of the commercially and recreationally important species in the region forage and seek shelter in the nearshore habitat both in their early life stages and as adults.

Major Atlantic Ocean habitats include: 1) the mangrove fringe and nearshore hardbottom; 2) inshore patch reef; 3) Hawk Channel (mid-channel) reef; 4) Hawk Channel (mid-channel) seagrass and softbottom; and 5) reef tract habitats. The complex reef tract community is composed of habitats including offshore patch reef, seagrass, back reef/reef flat, bank reef/transitional reef, intermediate reef, deep reef, outlier reef, and sand and softbottom environments.

The region's reefs are highly complex and diverse communities whose success is limited by the presence of suitable substrate and a narrow range of environmental and hydrographical parameters. Corals are the principal builders of the reef community and form the main source of spatial complexity and shelter. Biogeographic and environmental factors determine the density and diversity of the species on coral reefs.

List of regionally important species (flora and fauna)

List here ONLY those species protected by international agreements, particularly those species included in Annexes I, II and III of the Protocol, which are present in the area. Any other species may be listed if it is clearly considered of regional importance given its high representation in the area. Display the species under the headings Marine Plants, Terrestrial Plants, Invertebrates, Fish, Amphibians and Reptiles, Birds, and Mammals.

For each species state:

- a) Its relative abundance as Common (C), Uncommon (U) or Occasional (O),
- b) Its global status as rare (r), endemic (e), and/or threatened (t), and
- c) Its status as an important resident population (R), or important for its breeding (B), feeding (F) or migratory passage (M).

SPECIES	Rel. Abundance (C) (U) (O)	Global STATUS (r) (e) (t)	Local STATUS (R) (B) (F) (M)
State and Federal listed threatened and endangered animal and plant species, and closely related species, in the Florida Keys that are also listed in Annexes I, II and II of SPAW Protocol			

TERRESTRIAL PLANTS

Key tree cactus (*Cereus robinii*)
Small's milkpea (*Galactia smallii*)
Garber's spurge (*Euphorbia garberi*)

INVERTEBRATES

Florida Tree Snail (*Liguus fasciatus*)
Stock Island tree snail (*Orthalicus reses reses*)
Coral-Numerous species

AMPHIBIANS and REPTILES

American crocodile (*Crocodylus acutus*)
Atlantic green turtle (*Chelonia mydas mydas*)
Hawksbill turtle (*Eretmochelys imbricata*)
Atlantic loggerhead (*Caretta caretta caretta*)
Atlantic ridley turtle (*Lepidochelys kempii*)
Leatherback turtle (*Dermochelys coriacea*)
Florida Keys Mole skink (*Eumeces egregius*)

BIRDS

Bachman's warbler (*Vermivora bachmani*)
Bald eagle (*Haliaeetus leucocephalus*)
Brown pelican (*Pelecanus occidentalis*)
Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*)
Florida sandhill crane (*Grus canadensis pratensis*)
Least tern (*Sterna antillarum*)
Little blue heron (*Egretta caerulea*)
Tricolored heron; Louisiana heron (*Egretta tricolor*)
Osprey (*Pandion haliaetus*)
Piping plover (*Charadrius melodus*)
Roseate tern (*Sterna dougallii*)
Wood stork (*Mycteria americana*)

MAMMALS

Blue whale (*Balaenoptera musculus*)
Fin whale (*Balaenoptera physalus*)
Humpback whale (*Megaptera novaeangliae*)
Right whale (*Eubalaena glacialis*)
Sei whale (*Balaenoptera borealis*)
Sperm whale (*Physeter macrocephalus*)
Florida manatee (*Trichechus manatus*)
Key deer (*Odocoileus virginianus clavium*)
Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*)

d) Flora: Description in a few sentences of the main plant assemblages significant in the area

The Seagrasses and Mangroves of the Keys and surrounding region are highly productive and essential ecological habitats for numerous species that live in the Florida Keys National Marine Sanctuary. Turtle grass (*Thalassia testudinum*) is the dominant submerged macrophyte in both areal extent and biomass. Manatee grass (*Syringodium filiforme*) and shoal grass (*Halodule wrightii*) are found where conditions prevent dense turtle grass growth. Manatee grass is prevalent in deep channels on the outer fringes of Florida Bay, while shoal grass is common in shallow waters on banks or adjacent to mangrove islands.

Most islands are fringed by red mangroves, which form a narrow outer border of taller trees at the periphery and exhibit the characteristics of the fringe mangrove forest. A broader zone of black mangroves generally dominates inside the red mangrove fringe

Numerous species of algae occur on the reefs of the Florida Keys including encrusting red algae of the genera *Lithothamnium*, *Goniolithon*, and *Peyssonellia*. Other plants present include *Halimeda opuntia*, *Bryopsis pennata*, *Dictyota spp.*, *Udotea conglutiata* and *Galazura obtusata*.

Fauna: Description in a few sentences, which are the main fauna populations present in the area

The South Florida and Florida Keys region contains one of North America's most diverse assemblages of terrestrial, estuarine, and marine fauna. The area has mangrove-fringed shorelines, mangrove islands, seagrass meadows, hardbottom habitats, thousands of patch reefs, and one of the world's largest coral reef tracts, which create one of the most complex ecosystems on Earth that houses thousands of animal species. Bisecting the region is the Florida Keys, which serve as a partial biogeographic barrier between the warm-temperate waters of the Gulf of Mexico and the tropical to subtropical waters of the Atlantic Ocean. This division has resulted in a marine ecosystem with fauna components that are found in both the warm-temperate and tropical Caribbean.

HUMAN POPULATION AND USE OF NATURAL RESOURCES (Point B of the Guidelines; Cultural and Socio-economic criteria).

Human population

a) Inhabitants inside the area:

Permanent	80,000	2003 data
Seasonal number (additional to permanent residents)	~3 Million (visitors & non-permanent residents)	

Description of the population:

Of the 1,700 islands in the Keys, approximately 70 are inhabited. In 2003 the total resident population was approximately 80,000. Seasonal visitors, including those living in residential accommodations, in tourist facilities, aboard vessels, or with friends and relatives.

Main human settlements and their populations

b) Inhabitants within the zone of potential direct impact on the protected area

Main human settlements and their populations (1996)

Areas*	Resident Population	Percent Total	Seasonal Population	Percent Total	Population Density
Key West (CDP)	24,832	32	12,887	23	6,472
Stock Island, Cow Key, and Key Haven	4,541	6	1,734	3	5,976
Boca Chica, Rockland, and Big Coppitt Keys	3,106	4	717	1	499
Saddlebunch, Upper and Lower Sugarloaf Keys	1,786	2	944	2	147
Cudjoe, Summerland, Ramrod, No Name, Little Torch, MiddleTorch, and Big Torch Keys	3,983	5	2,117	4	405
Big Pine Key	4,208	5	2,154	4	671
Spanish Harbor, Bahia Honda, Ohio, Missouri, Little Duck, and Pigeon Keys	441	1	981	2	1,637
Knight, Vaca, Stirrup, and Boot Keys	8,861	11	5,099	9	3,328
Key Colony Beach (CDP)	977	1	576	1	3,487
Fat Deer, Crawl, and Coco Plum Keys	697	1	371	1	563
Grassy Key	1,086	1	455	1	1,541
Duck, Walker's, and Conch Keys	629	1	1,917	3	7,147
Long Key and Fiesta Key	356	<1	1,401	2	951
Layton (CDP)	183	<1	70	<1	1,907
Lower Matecumbe, Craig, and Windley Keys	1,096	1	1,650	3	1,426
Upper Matecumbe Key	1,220	2	2,049	4	2,628
Plantation Key	4,405	6	4,745	8	3,967
Key Largo (Tavernier)	2,433	3	1,500	3	NA
Key Largo (Dove Creek)	2,287	3	2,940	5	NA
Key Largo (Rock Harbor)	2,465	3	2,703	5	NA
Key Largo (Tarpon Basin)	4,127	5	2,948	5	NA
Key Largo (Largo Sound)	908	1	418	1	NA
Key Largo (Blackwater Sound)	1,549	2	2,236	4	412
N. Key Largo (Port Bouganville to Angelfish)	1,787	2	3,862	7	328
Cross Key to Dade County Line	61	<1	169	<1	147

* Areas not identified as a Census Designated Place (CDP) are Planning Analysis Area/Enumeration Districts (PAED).

Note: Population density represents persons per square mile. Population density is based on the sum of the resident and seasonal population.

Description of the population:

Because of the region's unique geography, the Keys are divided into discreet population centers. Larger islands, such as Key Largo, have multiple population foci, while other islands have just one. Several inhabited Keys have never been the focus of concentrated growth, however, and remain rural. Certain areas have also become the center of communities, and can be defined by their "sense of community," rather than their population. The size of an area is often determined by the boundaries of the islands on which it is located. Monroe County's economy is essentially based on tourism and tourist-related service industries, and the Keys' population fluctuates seasonally. Peak tourist populations occur in the first quarter (January to March) of each year. The tourist season is longer in the Upper Keys than in the Lower Keys, extending from January to August, and is based on weekend tourists from Miami and South Florida.

Current human use and development

- a) Briefly describe the current use of the area by subsistence, artisan, commercial and recreational fishing, hunting, tourism, agriculture and other economic sectors.

Tourism is the number one industry in the Florida Keys, with over \$1.2 billion dollars being spent annually by over 3 million visitors. The majority of visitors participate in activities such as snorkeling, SCUBA diving, recreational fishing, viewing wildlife and studying nature. Recreational and commercial fishing are the next most important sectors of the local economy, annually contributing an estimated \$500 million and \$57 million respectively.

b) Enter how many of the users depend on these resources, seasonality.:

ACTIVITY AND CATEGORY	Estimated No. of users	Seasonality
FISHING Subsistence Commercial, local Commercial, non local Controlled recreational Un-controlled recreational Other	~ 5000 commercial fishing permits issued ~ 30,000 recreational fishing permits issued	Distinct seasonality controlled by regulations and season.
TOURISM Regulated Unregulated Indicate the type of tourism Tourism facilities	~3 Million tourists annually	Distinct winter and summer peaks.
FOREST PRODUCTS Subsistence Non-timber commercial, local Non-timber commercial, non-local Timber commercial, local Timber commercial, non-local	n/a	
Agriculture Stockbreeding Aquaculture	n/a	
EXTENSIVE STOCK GRAZING Subsistence Commercial, local Commercial, non-local	n/a	
OTHER ACTIVITIES	n/a	

Traditional economic or subsistence uses

Name any environmentally sound traditional activities integrated with nature, which support the well being of the local population. E.g. land, water use, target species, if closed seasons or closed zones are used as management techniques.

n/a

4. BIOLOGICAL AND SOCIOECONOMIC IMPORTANCE OF THE SITE

This section aims at stressing the importance of the site in sustaining the natural resources of the nation and the region, as set in Art.4 of the Protocol.

PRESENCE OF REPRESENTATIVE TYPES OF COASTAL AND MARINE ECOSYSTEMS/HABITATS (Art. 4 para. 2(a))

Name the type of habitats considered of Caribbean representativeness and their estimated cover (ha).

Mangroves ~95,000 ha
Seagrass beds ~1 Million ha
Bank Barrier Coral Reefs 356 km long

PRESENCE OF HABITATS THAT ARE CRITICAL TO ENDANGERED, THREATENED OR ENDEMIC SPECIES (Art. 4 para. 2(b))

A critical habitat is an area essential to the conservation of species concerned and in particular to those species included in Annexes I, II and III of the Protocol. E.g; undisturbed sand beaches where marine turtle nesting occurs; coastal lagoons where threatened fish or bird species feed or breed, nursery areas for some endangered or commercially extinct locally fishes, etc.

Name the habitat types and the species linked to it.

The habitats of the Florida Keys are the basis for a complex ecosystem of countless species that interact with many different parts of the environment. It is possible to list where some species are found, but their dependence on the condition of all the habitats of the Keys cannot be overstated. For example:

Coral Reefs:

Numerous coral and fish species

The turtles listed in above endangered species table

Mangroves:

American Crocodile (*Crocodylus acutus*)

Numerous birds (see above table of endangered species)

Sea Grass beds:

Florida manatee (*Trichechus manatus*)

PRESENCE OF PRODUCTIVE ECOSYSTEMS OR NATURAL RESOURCES that provide economic or social benefits and upon which the welfare of local inhabitants is dependent. (Art. 4 para. 2(c) of the Protocol and B. *Cultural and Socio-Economic Criteria* (a and b) of the Guidelines)

Name the habitat types and the economic or social benefit to local inhabitants linked to it.

The linkages between the economic health of the human communities of the Florida Keys to that of the ecosystem's health is an essential aspect of why the Florida Keys National Marine Sanctuary exists. As a result, each habitat within the ecosystem has an essential link to nearly all aspects of the social and economic health of the Florida Keys.

OTHER RELEVANT FEATURES (Art. 4 para 2(d) of the Protocol and B. *Cultural and Socio-Economic Criteria* (b and c) of the Guidelines)

Educational Interest

E.g. particular values for activities of environment education or awareness

The diverse habitats, resources, and unique setting of the Keys offer opportunities for the interpretation of marine subtropical and temperate environments. Education and outreach have been used as a tool in resource protection from the beginning of the Sanctuary Program in the Keys. A number of educational programs are implemented in the sanctuary. Examples of these programs include instruction to teachers and students about the Sanctuary environment, onsite interpretive tours, the Florida Keys Eco-Discovery Center in Key West, subject-specific lectures, interpretive law enforcement, interpretive exhibits at trade shows and festivals, training seminars, and volunteer programs.

Scientific Interest

Explain if the site represents a particular value for the research in the field of natural sciences.

Research and monitoring are critical to achieving the Sanctuary's primary goal of resource protection. The Keys' ecosystem is diverse and complex, and many of its processes and their interrelationships are not well known. Also, while many resource impacts are obvious and severe, they are often not documented or quantified, and their causes may be even less clear or completely unknown. The purpose of research and monitoring is to establish a baseline of information on the resource and the various components of the ecosystem, and how they interact. In this way, research and monitoring ensures the effective implementation of management strategies using the best available scientific information. Research and monitoring activities focus on fundamental processes and specific management-driven topics. Information generated from such activities is used to:

- provide the public with a means to evaluate the effectiveness of the Sanctuary;
- provide a means to distinguish between the effects of human activities and natural variability;
- develop hypotheses about causal relationships which can then be investigated;
- evaluate management actions; and
- verify and validate quantitative predictive models used to evaluate and select management actions.

Historical and archaeological features

Name and briefly describe any outstanding historical features, monuments or sites.

The sea remains the common thread through the region's cultural and historic sites. From the prehistoric Indian mounds of the Upper Keys to the Customs House of Key West, ties to the sea are everywhere. Because of the Keys' significant maritime history, submerged cultural and historic resources are as representative of the area's past as those on land.

There are 16 lighthouses within or just outside the Sanctuary, with three listed in the National Register of Historic Places.

The Keys are situated on one of the world's most important historical and modern shipping routes. As a result there is a high concentration of shipwrecks in the area that date from the 1500 to today.

Aesthetic Interest

Name and briefly describe any outstanding natural features, landscapes or seascapes (example: the presence of pristine sites for their use as reference sites)

The coral reefs and associated communities comprise one of the most unique and diverse assemblages of plants and animals in North America.

Main cultural features

Indicate if the area has high representative value with respect to the cultural heritage, due to the existence of environmentally sound traditional activities integrated with nature, which support the well-being of local populations such as indigenous communities.

The culture of the Florida Keys can be described as unique, and it is fundamentally linked to the marine ecosystems and maritime history of the region.

5. IMPACTS AND ACTIVITIES AFFECTING THE AREA (Article 19 (2)(h) of the Protocol)

IMPACTS AND ACTIVITIES WITHIN THE SITE

Exploitation of natural resources

Assess if the current rates of exploitation of natural resources within the area (sand, water and mineral exploitation, wood gathering, fishing, grazing...) are deemed unsustainable in quality or quantity, and try to quantify these threats, e.g. the percentage of the area under threat, or any known increase in extraction rates.

Two recent (2000-01, 2003) non-concurrent studies showed that 3.64 million person days were spent fishing on natural reefs annually in the Florida Keys. Concomitant with increasing fishing pressure associated with increasing population, average fishing power (the proportion of stock removed per unit of fishing effort) may have quadrupled in recent decades because of technological advances in fishing tackle, hydroacoustics (depth sounders and fish finders), navigation (charts and global positioning systems), communications, and vessel propulsion.

In southwest Florida (including Monroe County), decapod crustaceans (shrimp, stone crab, and spiny lobster), snappers (e.g., yellowtail), groupers, king mackerels, and Spanish mackerels dominate commercial catches. In Monroe County, the total annual commercial landings for these species average almost 15 million pounds. In recent years, crustaceans have comprised 81 to 92 percent of the total catch value, while finfish made up the remainder.

Threats to habitats and species

Mention any serious threats to terrestrial, marine or coastal habitats (e.g. fragmentation, desiccation, disturbance, pollution) or to species (e.g. disturbance, poaching, fishing and hunting, introduced alien species...) within the area.

Climatic events play an important role in the ecosystem productivity of the Florida Keys NMS. Winter storms are common and recent cold periods have killed fish, manatees and corals. Summertime tropical cyclones are always a threat to this area. Recent periods of high sea temperature has caused many corals of the Keys to die due to coral bleaching.

Diseases of coral have caused significant declines in coral species abundance and cover on coral reefs.

Vessel groundings and anchor damage

Dredging and Desalination plants

Pollution from point and non-point sources, marinas, boats, and cruise ships

Harmful algal blooms

Poaching by fishers is a constant threat and a focus of much law enforcement activity.

Demand by an increased population and infrastructures

Assess whether the current human presence or an expected increase in visitation (tourism, passage of vehicles and boats) and any human immigration into the area, or plans to build infrastructures, are considered a threat.

Increasing human populations and development remains a constant threat to the regions natural resources.

Historic and current conflicts

Make a brief statement of any historic or current conflicts between users or user groups

The establishment of the Florida Keys National Marine Sanctuary (FKNMS) began with an act of the US Congress in 1990. This legislation was in response to a growing number of threats to the Keys ecosystem that included oil exploration, deteriorating water quality, loss of living coral and seagrass, declines in reef fish populations, and the grounding of several large ships on its reefs in 1989. The FKNMS was the first marine area in the US to embrace management at the ecosystem scale and to implement a network of restricted-use zones in the ocean. While many applauded this move, others opposed the plans. In response, the initial zoning plan was modified. The resulting hard-won management plan has now proven its value, with increasing numbers of critical fish and invertebrate species within designated no-take reserves and replenishing surrounding fish areas. However, on-going management and enforcement of regulations is necessary to address user conflicts that often still occur.

Direct human impacts include vessel groundings, anchor damage, destructive fishing, and damage to corals as a result of divers and snorkelers touching and standing on them. Boat propellers and large ships have damaged over 30,000 acres of seagrasses and more than 20 acres of coral reef habitat in the Sanctuary.

Most pressures stem from the 5 million annual visitors and approximately 80,000 year-round residents of Monroe County. Their high levels of use in the Sanctuary have significant direct and indirect effects on the ecosystem. Sanctuary visitors primarily seek water-related recreation, including diving, snorkeling, fishing and boating.

Although less immediate than direct physical damage to the corals, other stressors also significantly affect the Florida Keys ecosystem. Overfishing has dramatically altered fish and other animal populations on the coral reef, contributing to an imbalance in ecological relationships that are critical to sustaining a diversity of organisms. Eutrophication (an outcome of excess nutrients in the water, such as fertilizers) of nearshore waters is a documented problem. Wastewater and stormwater treatment and solid-waste disposal facilities are highly inadequate, directly affecting nearshore water quality. Some solutions to water quality problems are being implemented, but given the scope of the problem, more action is required. In Florida Bay, reduced freshwater flow has increased plankton blooms, sponge and seagrass die-offs, and fish kills. Since Florida Bay and nearshore waters provide important nursery and juvenile habitat for a variety of reef species, the declines in these areas affect the overall health and structure of offshore coral reefs. Therefore, regional strategies to address the quantity, quality, timing, and distribution of freshwater flows through the South Florida ecosystem into Florida Bay and the estuaries of South Florida contained in the Comprehensive Everglades Restoration Plan are critical.

In addition, seasonal and yearly seawater temperature fluctuations, increasing solar radiation and atmospheric changes all affect the ecosystem. The impacts are seen in coral disease and bleaching, which have increased in frequency, duration and range, coinciding with the ten warmest years on record. Under normal conditions, corals and reef organisms would be expected to tolerate and recover from sporadic events such as temperature variation. However, additional human-induced stresses are likely affecting the ability of these organisms to adequately recover from climate fluctuations.

IMPACTS AND ACTIVITIES AROUND THE SITE

Pollution

Name any point and non-point sources of external pollution in the nearby areas, including solid waste, and especially those affecting water up-current.

Recent declines in coral recruitment, increases in the frequency and size of fish kills, and seagrass die-offs are implicated in declining water quality within the sanctuary. Pressures to water quality in the sanctuary are best described by the following:

- Point sources of pollution: These are sources that release effluents directly into surface waters. When the Florida Keys NMS was designated in 1990 there were 19 facilities actively discharging into sanctuary waters, which included water treatment plans, power plants, a desalination plant, and other industrial facilities.
- Non-point sources of pollution: These are discharges not made directly to surface waters. The primary non-point contributors within the sanctuary in 1990 were domestic wastewater (cesspits and septic tanks), abandoned landfills, marinas/live-aboards, and stormwater runoff. Beach closures are often a result of this type of pressure to water quality.
- External input: Examples of this input include Florida Bay, Biscayne Bay, and canal structures operated by the local water management district. Additionally, the regions boundary currents (Loop and Florida), transport most of the water from the west coast of Florida, Mississippi River outfall, contributions from Central America and northern South America (Orinoco Flow), and various islands of the Caribbean. Lastly, eddies that form along boundary currents paralleling the shoreline can cause periodic upwelling of cold, nutrient-rich waters.

Fishing

Name any type of fisheries that is not regulated or the regulations that are not efficiently enforced, in the nearby areas, including finfish, lobster, shrimp and sea turtle.

All recreational and commercial fishing is regulated, including gear, catch limits, season and species.

Other external threats, natural and/or anthropogenic

Briefly describe any other external threats to the ecological, biological, aesthetic or cultural value of the area, such as regulated exploitation of natural resources, serious threats on habitats or species, increase of human presence, significant impacts on landscapes and cultural values, pollution problems, any sectoral development plans and proposed projects that are likely to influence the area in question, etc.

Global climatic change is considered a significant threat to ocean environments and ecosystems worldwide. This includes temperature increases, sea level rise and ocean acidification. All of these impacts, which are predicted to occur due to elevated greenhouse gases in the atmosphere and to natural causes, are of significant concern for the habitats, ecosystems and human communities in the Florida Keys and beyond.

Sustainable development measure

Comment whether the area is covered by an integrated coastal management plan, or bordering upon a zone under such a plan. Are there other opportunities for sustainable development provided for in the neighbouring areas

In 1978 the State legislature passed the Florida Coastal Management Act. NOAA's Office of Ocean and Coastal Resource Management approved the state's program in 1981, and has provided management grants of approximately \$2 million per year in accordance with Section 306 of the Federal Coastal Zone Management Act. Federal approval of the state's program also mandated that Federal activities within and seaward of the coastal zone had to be consistent, to the maximum extent possible, with the policies of approved State coastal management programs. The Florida Coastal Management Plan is structured as a network of State agencies that improves the effectiveness and efficiency of implementing existing laws and programs in the coastal zone.

6. EXPECTED DEVELOPMENT AND TRENDS*

The foreseeable development and trends of the site do not appear in the list of common criteria for the choice of protected marine and coastal areas that could be included in the SPAW List, as established in the Protocol and "the Guidelines and Criteria for the Evaluation of Protected Areas to be listed under SPAW". Moreover, this is not always easy to assess and it is necessary to have knowledge about the site, which is not always available to all managers of protected areas; thus, it is not obligatory to fill in the boxes in this section 6.

However, the assessment of this foreseeable evolution and trends constitutes a dynamic supplement to the static knowledge of the site, as it appears in Sections 3,4 and 5 above. Moreover, it is of significant importance for the definition of the objectives and the management plan of the site.

It thus appears desirable to bringing out the main outlines at least in respect to the following points:

EXPECTED DEVELOPMENT AND TRENDS OF THREATS TO AND PRESSURES UPON THE AREA

Deal briefly in succession with:

- The demographic development in and around the site
- The development of economic activities (other than tourism and recreation) within the area
- The development of local demand on tourism and recreation
- The development of tourism pressure on the area

Given that the Florida Keys National Marine Sanctuary, together with its state, federal and non-government partners is well established and undergoes periodic management plan reviews, the future development of the region will likely occur with the marine conservation and resource protection needs of the sanctuary as part of the development process. The purpose of the sanctuary is to provide marine conservation and management for compatible uses of its resources. Success will be determined by timely and scientifically-based management actions and the continued engagement of users and the public in the management process.

POTENTIAL CONFLICTS IN THE AREA

Make a brief statement of potential use conflicts between the users or group of users of the site.

Conflicts do and will arise between socio-economic uses of the area and resource protection. An informed collaborative process is in place for addressing and reducing these user conflicts.

*By expected development and trends are meant the development, which is thought most likely to occur in the absence of any deliberate intervention to protect and manage the site.

EXPECTED DEVELOPMENT AND TRENDS OF THE NATURAL LAND ENVIRONMENT AND LANDSCAPES OF THE AREA: as expected arising from the evolution of the pressures.

Sanctuary management is designed to respond to changes in human and natural pressures in order to maintain resource protection goals. However, issues related to climate change are a concern. Increased storm intensities, ocean acidification and sea level rise are likely to have profound impacts on the terrestrial and marine environments of the area and on the society that depends on them. Sanctuary management will be challenged to prepare and respond to these impacts.

EXPECTED DEVELOPMENT AND TRENDS OF THE MARINE ENVIRONMENT AND SEASCAPES OF THE AREA: as expected arising from the evolution of the pressures.

See above.

7. LEGAL FRAMEWORK (Articles 3, 4, 5 et 6 of the Protocol and Para. C of the Guidelines)

LEGAL STATUS

Historical background of the protection of the site

The Florida Keys National Marine Sanctuary (FKNMS) was designated in accordance with the 1972 National Marine Sanctuaries Act (NMSA). Regulatory and enforcement powers of National Marine Sanctuaries are specified in the Act. The National Oceanic and Atmospheric Administration (NOAA), a Federal agency, has been assigned responsibility for managing the nations thirteen National Marine Sanctuaries and has developed regulations uniquely suited to protect the resources at each sanctuary. The primary regulations governing management of the FKNMS are described in the United States Code of Federal Regulations, Title 15, Part 922. A final rule was published in the Federal Register regarding technical corrections and minor substantive changes to the FKNMS Regulations, in effect August 31, 2009.

Legal texts currently ruling the protection on the site

Enter the national conservation category, the dates and the present enforcement status of the legal instrument declaring the protection of the area. Consider both the land and the marine areas of the site. Include the full text(s) as an annex.

National Marine Sanctuary Act

Florida Keys National Marine Sanctuary and Protection Act

Federal Register Notice: FKNMS Final Rule

Amendment: The Area to be Avoided

No-Discharge Zone

No-Discharge Zone Fact Sheet

Federal Register Notice: Technical Corrections and Minor Substantive Changes

Sanctuary Wide Regulations

Regulations by Zone

Tortugas Final Supplemental Environmental Impact Statement/Final Supplemental Management Plan (SEIS/SMP)

Federal Register Notice Vol. 66, No. 11, 15 CFR Part 922

Anchoring on Tortugas Bank

FSEIS Executive Summary

Draft SEIS/SMP

Objectives

Name in order of importance the objectives of the area as stated in its legal declaration

Florida Keys National Marine Sanctuary and Protection Act

SEC. 3.(a) POLICY.—It is the policy of the United States to protect and preserve living and other resources of the Florida Keys marine environment.

(b) PURPOSE.—The purpose of this Act is to protect the resources of the area described in section 5(b), to educate and interpret for the public regarding the Florida Keys marine environment, and to manage such human uses of the Sanctuary consistent with this Act. Nothing in this Act is intended to restrict activities that do not cause an adverse effect to the

resources or property of the Sanctuary or that do not pose harm to users of the Sanctuary.

Indicate whether the national protection regime arises from international treaties enforced or from implementation measures of treaties (Art. 5 of the Protocol).

FKNMS protection does not arise from international treaties.

INTERNATIONAL STATUS

International category

Mention if an area, or part of it, has been designated and on what date, with an international conservation category (e.g. Biosphere Reserve, Ramsar site, World heritage site, etc.)

n/a

PREVIOUS LEGAL BACKGROUND AND LAND TENURE ISSUES

Briefly mention if the area or part of it is subject to any legal claim, or to any file open in that connection within the framework of an international body. Describe the land tenure regimes within the area, and append a map if existing.

n/a

LEGAL PROVISIONS FOR MANAGEMENT (Article 5 of the Protocol)

Basic regulations

Mention the provisions, which apply to the area concerning the implementation of Article 5 of the Protocol.

Allowed activities

All activities (e.g., fishing, boating, diving, research, education) may be conducted unless prohibited or otherwise regulated here or by any other Federal, State, or local authority of competent jurisdiction.

Prohibited activities - Sanctuary-wide

(a) Except as specified in paragraph (b) through (e) of this section in the full set of regulations, the following activities are prohibited:

- (1) Mineral and hydrocarbon exploration, development and production.
- (2) Removal of, injury to, or possession of coral or live rock.
- (3) Alteration of, or construction on, the seabed. Drilling into, dredging, or otherwise altering the seabed of the Sanctuary (including prop-dredging or abandoning any material on the seabed), except as an incidental result of:
 - (i) Anchoring vessels in a manner not otherwise prohibited;
 - (ii) Traditional fishing activities not otherwise prohibited;
 - (iii) Authorized installation and maintenance of navigational aids;
 - (iv) Harbor maintenance including dredging of entrance channels and repair, replacement, or rehabilitation of breakwaters or jetties;
 - (v) Authorized construction, repair, replacement, or rehabilitation of docks, seawalls, breakwaters, piers, or marinas with less than ten slips.
- (4) Discharge or deposit of materials or other matter.
 - (i) Discharging or depositing, from within the boundary of the Sanctuary, any material or other matter, except:
 - (A) Fish, fish parts, chumming materials, or bait used or produced while conducting a traditional fishing activity;
 - (B) Biodegradable effluent incidental to vessel use and generated by a marine sanitation device approved in accordance with Section 312 of the Federal Water Pollution Control Act, as amended;
 - (C) Water generated by routine vessel operations (e.g., deck wash down and graywater), excluding oily wastes from bilge pumping; or
 - (D) Cooling water from vessels or engine exhaust;

(ii) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource, except those listed in paragraph (a)(4)(i)(A) through (D) above and those authorized under Monroe County land use permits.

(5) Operation of vessels.

(i) Operating a vessel in such a manner as to strike or otherwise injure coral, seagrass, or any other immobile organism attached to the seabed.

(ii) Anchoring a vessel on coral other than hardbottom in water depths less than 40 feet when visibility is such that the seabed can be seen.

(iii) Except in officially marked channels, operating a vessel at a speed greater than 4 knots or in manner which creates a wake:

(A) within an area designated idle speed only/no wake;

(B) within 100 yards of navigational aids indicating emergent or shallow reefs (international diamond warning symbol);

(C) within 100 feet of the red and white "divers down" flag (or the blue and white "alpha" flag in Federal waters);

(D) within 100 yards of residential shorelines; or

(E) within 100 yards of stationary vessels.

(iv) Operating a vessel in such a manner as to injure, take or cause disturbance to wading, roosting, or nesting birds or marine mammals.

(v) Operating a vessel in a manner which unreasonably or unnecessarily endangers life, limb, marine resources, or property, including but not limited to, weaving through congested vessel traffic, jumping the wake of another vessel unreasonably or unnecessarily close to such other vessel or when visibility around such other vessel is obstructed, or waiting until the last possible moment to avoid a collision.

(6) Conduct of diving/snorkeling without flying a "divers down" flag.

(7) Release of exotic species of plant, invertebrate, fish, amphibian or mammals.

(8) Damage or removal of markers, buoys and scientific equipment.

(9) Movement of, removal of, injury to, or possession of Sanctuary historical resources.

(10) Take or possession of protected wildlife.

(11) Possession or use of explosives or electrical charges.

(12) Harvest or possession of marine life species as protected by State law.

(13) Interference with law enforcement.

Additional activity regulations by Sanctuary area

In addition to the prohibitions set forth in the previous section, which apply throughout the Sanctuary, the following regulations apply with respect to activities conducted within the Sanctuary areas.

(a) Areas To Be Avoided. Operating a tank vessel or a vessel greater than 50 meters in registered length is prohibited in all areas to be avoided (unless essential for national defense, law enforcement, or responses to emergencies).

(b) Existing Management Areas.

(1) Key Largo and Looe Key Management Areas. The following activities are prohibited within the Key Largo and Looe Key Management Areas (also known as the Key Largo and Looe Key National Marine Sanctuaries):

(i) Removing, taking, damaging, harmfully disturbing, breaking, cutting, spearing or similarly injuring any coral or other marine invertebrate, or any plant, soil, rock, or other material, except commercial taking of spiny lobster and stone crab by trap and recreational taking of spiny lobster by hand or by hand gear which is consistent with these regulations and the applicable regulations implementing the applicable Fishery Management Plan.

(ii) Taking any tropical fish.

(iii) Fishing with wire fish traps, bottom trawls, dredges, fish sleds, or similar vessel-towed or anchored bottom fishing gear or nets.

(iv) Fishing with, carrying or possessing, except while passing through without interruption or for law enforcement purposes: pole spears, air rifles, bows and arrows, slings, Hawaiian slings, rubber powered arbaletes, pneumatic and spring-loaded guns or similar devices known as spearguns.

(2) Great White Heron and Key West National Wildlife Refuge Management Areas. The following activities are prohibited within the marine portions of the Great White Heron and Key West National Wildlife Refuge Management Areas:

(i) Operating a personal watercraft, operating an airboat, or water skiing. (Refer to the full set of regulations for exceptions)

(ii) Discharging or depositing any material or other matter except cooling water or engine exhaust.

(c) Wildlife Management Areas. Marine portions of the Wildlife Management Areas may be designated "idle speed only/no-wake," "no-motor" or "no-access buffer" zones or "closed". Signs shall be posted conspicuously and shall display the official logo of the Sanctuary.

(d) Ecological Reserves and Sanctuary Preservation Areas.

(1) The following activities are prohibited within the Ecological Reserves and Sanctuary Preservation Areas:

(i) Discharging or depositing any material or other matter except cooling water or engine exhaust.

(ii) Possessing, moving, harvesting, removing, taking, damaging, disturbing, breaking,

cutting, spearing, or otherwise injuring any coral, marine invertebrate, fish, bottom formation, algae, seagrass or other living or dead organism, including shells, or attempting any of these activities. However, fish, invertebrate, and marine plants may be possessed aboard a vessel in an Ecological Reserve or Sanctuary Preservation Area, provided such resources can be shown not to have been harvested within, removed from, or taken within, the Ecological Reserve or Sanctuary Preservation Area, as applicable, by being stowed in a cabin, locker, or similar storage area prior to entering and during transit through such reserves or areas.

(iii) Fishing by any means except for catch and release fishing by trolling in the Conch Reef, Alligator Reef, Sombrero Reef, and Sand Key SPAs. However, gear capable of harvesting fish may be aboard a vessel in an Ecological Reserve or Sanctuary Preservation Area, provided such gear is not available for immediate use when entering and during transit through such Ecological Reserve or Sanctuary Preservation Area, and no presumption of fishing activity shall be drawn therefrom.

(iv) Touching living or dead coral, including but not limited to, standing on a living or dead coral formation.

(v) Placing any anchor (including the anchor, chain or rope) to touch living or dead coral, or any attached organism.

(vi) Anchoring instead of mooring when a mooring buoy is available or anchoring in other than a designated anchoring area when such areas have been designated and are available.

(vii) Violating a temporary access restriction imposed by the Director.

(2) The Director may temporarily restrict access to any portion of any Sanctuary Preservation Area or Ecological Reserve if it is determined that a concentration of use appears to be causing or contributing to significant degradation of the living resources. The Director will provide public notice of the restriction by publishing a notice in the Federal Register, and by such other means. The Director may only restrict access to an area for a period of 60 days, with one additional 60 day renewal. The Director may restrict access to an area for a longer period pursuant to a notice and opportunity for public comment. Such restrictions will be kept to the minimum amount of area necessary to achieve the purposes thereof.

(e) Special-use Areas.

(1) The Director may set aside discrete areas of the Sanctuary as Special-use Areas and impose access and use restrictions. The following types of Special-use Areas are allowed:

(i) "Recovery area" to provide for the recovery of Sanctuary resources from degradation or other injury attributable to human uses;

(ii) "Restoration area" to provide for restoration of degraded or otherwise injured Sanctuary resources;

(iii) "Research-only area" to provide for scientific research or education relating to protection and management; and

(iv) "Facilitated-use area" to provide for the prevention of use or user conflicts or the facilitation of access and use, or to promote public use and understanding of Sanctuary resources.

(2) A Special-use Area shall be no larger than the size that is reasonably necessary to accomplish the applicable objective.

(3) Except for passage without interruption through the area, no person may enter a Special-use Area except to conduct the activities for which the area was set aside.

(4) The Director may modify the number of, location of, or designations applicable to, Special-use Areas by publishing in the Federal Register, after notice and an opportunity for public comment.

Emergency regulations

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss, or injury, any and all activities are subject to immediate temporary regulation, including prohibition. Any such temporary regulation may be in effect for up to 60 days, with one 60-day extension. Additional or extended action will require notice and comment rulemaking under the Administrative Procedure Act, notice in local newspapers, notice to Mariners, and press releases.

Penalties

(a) Each violation of the NMSA or FKNMSPA, any regulation in this part, or any permit issued pursuant thereto, is subject to a civil penalty of not more than \$100,000. Each day of a continuing violation constitutes a separate violation.

(b) Regulations setting forth the procedures governing administrative proceedings for assessment of civil penalties, permit sanctions, and denials for enforcement reasons, issuance and use of written warnings, and release or forfeiture of seized property appear at 15 CFR part 904.

Response costs and damages

Under section 312 of the Act, any person who destroys, causes the loss of, or injures any Sanctuary resource is liable to the United States for response costs and damages resulting from such destruction, loss or injury, and any vessel used to destroy, cause the loss of, or injure any Sanctuary resource is liable in rem to the United States for response costs and damages resulting from such destruction, loss or injury.

Permits - application procedures and issuance criteria

(a) National Marine Sanctuary General Permit. (Refer to the full set of regulations for application procedures and issuance criteria for permits)

(b) National Marine Sanctuary Survey/Inventory of Historical Resources Permit. (Refer to the full set of regulations for application procedures and issuance criteria for permits)

(c) National Marine Sanctuary Research/Recovery of Sanctuary Historical Resources Permit. (Refer to the full set of regulations for application procedures and issuance criteria for permits)

(d) National Marine Sanctuary Special-use Permit. (Refer to the full set of regulations for application procedures and issuance criteria for permits)

Certification of preexisting leases, licenses, permits, approvals, other authorizations, or rights to conduct a prohibited activity

A person may conduct a prohibited activity if such activity is specifically authorized by a

valid Federal, State, or local lease, permit, license, approval, or other authorization in existence on the effective date of these regulations, or by any valid right of subsistence use or access in existence on the effective date of these regulations. (For details of restrictions please refer to the full set of regulations)

Notification and review of applications for leases, licenses, permits, approvals, or other authorizations to conduct a prohibited activity

A person may conduct a prohibited activity if such activity is specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization issued after the effective date of these regulations. (For details of restrictions please refer to the full set of regulations)

Appeals of administrative action

An appeal under paragraph (a) of this section must be in writing, state the action(s) by the Director appealed and the reason(s) for the appeal, and be received within 30 days of receipt of notice of the action by the Director.

Legal competencies

Mention in which way do the legal provisions clearly establish the institutional competencies and responsibilities for the administration and conservation of the area, and if being the case, their co-ordination means, including those between land and sea authorities.

The National Oceanic and Atmospheric Administration (NOAA), a Federal agency, has been assigned responsibility for managing the nations thirteen National Marine Sanctuaries and has developed regulations uniquely suited to protect the resources at each sanctuary.

Other legal provisions

Describe any other relevant legal provisions, such as those requiring a management plan, the establishment of a local participation body, binding measures for other institutions or economic sectors present in the area, allocation of financial resources and tools, or any other significant measures concerning the protection and management of the area or its surrounding zones.

The National Marine Sanctuaries Act [pdf] (NMSA) authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries.

Day-to-day management of national marine sanctuaries has been delegated by the Secretary of Commerce to NOAA's National Marine Sanctuary Program (program). The primary objective of the NMSA is to protect marine resources, such as coral reefs, sunken historical vessels or unique habitats.

The NMSA provides several tools for protecting designated national marine sanctuaries. For example—

The NMSA provides the program with the authority to issue regulations for each sanctuary and the system as a whole. These regulations can, among other things, specify the types of activities that can and cannot occur within the sanctuary. [See section 308 of the NMSA.]

The NMSA requires the program to prepare and periodically update management plans that guide day-to-day activities at each sanctuary. [See sections 304(a) and 304(e) of the NMSA.]

The NMSA authorizes NOAA and the program to assess civil penalties (up to \$130,000 per day per violation) for violations of the NMSA or its implementing regulations and damages against people that injure sanctuary resources. [See sections 306, 307, and 312 of the NMSA.]

The NMSA requires federal agencies whose actions are “likely to destroy, cause the loss of, or injure a sanctuary resource,” to consult with the program before taking the action. The program is, in these cases, required to recommend reasonable and prudent alternatives to protect sanctuary resources. [See section 304(d) of the NMSA.]

Further, with certain exceptions, in the FKNMS the following activities are prohibited in the Ecological Reserves (ERs) and Sanctuary Preservation Areas (SPAs) and Special Use (Research only Areas):

Discharging any matter except cooling water or engine exhaust.

Fishing by any means; removing, harvesting, or possessing any marine life. Catch and release fishing by trolling will be allowed in Conch Reef, Alligator Reef, Sombrero Reef, and Sand Key SPAs only.

Touching or standing on living or dead coral.

Anchoring on living or dead coral, or any attached organism.

Additional regulations for Tortugas South ER:

Vessels may only enter if they remain in continuous transit with fishing gear stowed. (Diving and snorkeling are prohibited)

Additional regulations for Tortugas North ER:

Access permit required to stop or use a mooring buoy.

Anchoring is prohibited

Mooring vessel(s) more than 100 feet in total or combined length overall is prohibited

No access permit necessary if vessel remains in continuous transit with fishing gear stowed

Wildlife Management Areas (WMA's):

Public access restrictions in these areas include idle speed only/no wake, no access buffer, no motor, and limited closures, and are marked as such

Existing Management Areas (EMA's):

Check with the appropriate State or Federal agency for applicable rules and regulations that apply in these areas

Special Use Areas:

There are four Special Use Areas designated within the Sanctuary as research only areas. These areas are be closed to all activities. They are located in the vicinity of: Conch Reef, Tennessee Reef, Looe Key (Hawk Channel patch reef), and Eastern Sambo Reef.

Activities prohibited in the Key Largo and Looe Key Existing Management Areas:

Removing, taking, spearing, or otherwise damaging any coral, marine invertebrate, plant, soil, rock, or other material. However, commercial taking of spiny lobster and stone crab by trap and recreational taking of spiny lobster by hand or hand gear consistent with applicable State and Federal fishery regulations are allowed

Spearfishing

Possession of spearfishing equipment, except while passing through without interruption

8. MANAGEMENT

Article 6 of the Protocol state that each Party shall adopt and implement planning, management and enforcement measures for Protected areas. Through paragraph D of the Guidelines, the Parties also agree that the sites included in the SPAW List must have a management framework and a research and monitoring programme that allows for assessing the effectiveness of the management scheme.

INSTITUTIONAL LEVEL

Authority/Authorities responsible for the area (management body) Guidelines Paragraph D.I.(b)

NOAA's Office of National Marine Sanctuaries

Other participants in the management body

Such as other relevant stakeholders and local communities, as stated in section D.III. of the Guidelines.

The Sanctuary Advisory Council: Members include representatives of commercial and recreational user groups (i.e. commercial and recreational fishermen, the dive industry, and the boating industry), conservation and other public interest organizations, scientific and educational organizations, and members of the public interested in the protection and multiple use management of sanctuary resources. The Council advises and assists in the development and implementation of management strategies for the sanctuary.

Participants in other committees or bodies

Such as a scientific committee, advisory board or a body of representatives from the local stakeholders, the public, the professional and non-governmental sectors.

National Marine Fisheries Service

Gulf of Mexico Fishery Management Council

South Atlantic Fishery Management Council

Florida Fish and Wildlife Conservation Commission, Division of Marine Fisheries

MANAGEMENT FRAMEWORK

Management framework (D.I in the Guidelines)

State if there is a management framework or management plan and include the documents as an annex.

Formal management plan documents that describes in detail the management framework of the sanctuary have been published: <http://floridakeys.noaa.gov/management/welcome.html>

Formulation and approval of the management framework. Mention how the management framework was formulated, e.g. by an expert team and /or under consultation and/or participation with other institutions or stakeholders. State the legal status of the management framework, whether it is officialized, and how, and if it is binding for other institutions and sectors involved in the area.

The establishment of the Florida Keys National Marine Sanctuary (FKNMS) began with an act of the US Congress in 1990. What followed was a vigorous designation process that culminated in the National Oceanic and Atmospheric Administration and the State of Florida jointly undertaking the implementation of the sanctuary in 1997. This resulted in the first marine area in the US to embrace management at the ecosystem scale and to implement a network of restricted-use zones in the ocean. This initial zoning plan was modified through a public comment process.

This first phase of the sanctuary's designation gave sanctuary staff and its Advisory Council the experience necessary to achieve an even greater success in designating the Tortugas Ecological Reserve, which adjoins the western boundary of the sanctuary. At the center of this effort was the Tortugas 2000 Working Group. This body was composed of representatives from user and conservation groups as well as government agencies. Its purpose was to reach consensus on the boundaries and regulations for the Reserve.

In a series of meetings, detailed spatial patterns of the Tortugas marine environments and their uses by fishers and divers were presented. Based on these data, several boundary and zoning alternatives were compiled by sanctuary staff and debated by the Working Group. Consensus was reached on a preferred alternative in May 1999, and this preferred plan was recommended to NOAA for implementation.

Zoning and objectives. (Para. D(I)(c) of the Guidelines.) Briefly state if the management framework provides for different zones to allocate different management objectives of the area (e.g. core and scientific zones in both land and sea, fishing zones, visitation, anchoring, gathering, restoration zones, etc.) and in this case the surface area in ha of these zones. Include a map as an annex.

Sanctuary Regulations by Zone

With certain exceptions, the following activities are prohibited in the Ecological Reserves (ERs) and Sanctuary Preservation Areas (SPAs):

- Discharging any matter except cooling water or engine exhaust.
- Fishing by any means; removing, harvesting, or possessing any marine life. Catch and release fishing by trolling is allowed in Conch Reef, Alligator Reef, Sombrero Reef, and Sand Key SPAs only.
- Touching or standing on living or dead coral.
- Anchoring on living or dead coral, or any attached organism.
- Anchoring when a mooring buoy is available.
- Bait fishing is allowed in SPAs by FKNMS permit.

Additional regulations for Tortugas South ER:

- Vessels may only enter if they remain in continuous transit with fishing gear stowed. (Diving and snorkeling are prohibited.)

Additional regulations for Tortugas North ER:

- Access permit required to stop or use a mooring buoy.
- Anchoring is prohibited.
- Mooring by vessel(s) more than 100 feet in total or combined length overall is prohibited.
- No access permit necessary if vessel remains in continuous transit with fishing gear stowed.

Special-use Research Only Areas:

- No entry or activities without a FKNMS permit.

Wildlife Management Areas (WMAs):

- Public access restrictions in these areas include idle speed only/no wake, no access buffer, no motor, and limited closures, and are marked as such.

Existing Management Areas (EMAs):

- Check with the appropriate State or Federal agency for applicable rules and regulations that apply in these areas.

Activities prohibited in the Key Largo and Looe Key Existing Management Areas:

- Removing, taking, spearing, or otherwise damaging any coral, marine invertebrate, plant, soil, rock, or other material. However, commercial taking of spiny lobster and stone crab by trap and recreational taking of spiny lobster by hand or hand gear consistent with applicable State and Federal fishery regulations are allowed.
- Spearfishing.
- Possession of spearfishing equipment,

Information and knowledge available. (Para D(I)(d) of the Guidelines)

- a) Briefly describe the extend of knowledge of the area, considering at least specific maps, main ecological processes, habitat distribution, inventories of species and socio-economic factors, such as artisan fishing. Assess the state of knowledge in each field (low, medium, satisfactory).

While a comprehensive knowledge of the FKNMS is a goal, it is a continuing moving target. However, FKNMS is fortunate to have a large volume of research and a wealth of expertise to draw upon from a variety of scientific, economic and social sectors that a satisfactory level of knowledge has been assembled to create the management plan for the sanctuary.

- b) Quote the main publications, information on traditional, scientific, technical and management knowledge that have been used to set up planning, management and enforcement measures.

These publications are referenced in the management plan documents.

Contents of the management framework

State the degree of detail in the framework by entering YES or NO in the following list of potential contents:

	<u>Existin MP</u>	
Detailed management objectives	YES	
Zoning	YES	
Regulations for each zone	YES	
Governing body(s)	YES	
Management programmes as:		
Administration	YES	
Protection	YES	
Natural resources management	YES	
Tourism and visitation	YES	
Education and training	YES	
Research and monitoring	YES	
Services and concessions n/a		NO
Fund raising activities n/a		NO
Periodic revisions of the MF	YES	

CONSERVATION AND MANAGEMENT MEASURES

By Article 6 of the Protocol the parties agree to adopt and implement planning, management and enforcement measures for protected areas to ensure the effective implementation of the measures set out in Article 5.

Boundaries and signing

Briefly state if the boundaries of the area and its zones are adequately marked in the field, both on land, in the sea, and at the principal points of access.

Boundaries are marked

Institutional collaboration

Name the different national and local institutions or organisations with legal responsibilities or involved in the protection and surveillance of land and sea zones, and any measures or mechanism through which their co-ordination is pursued.

Drawing on 20 years of management experience in the Key Largo and Looe Key National Marine Sanctuaries, NOAA developed regulations to protect natural and historic resources as part of the *Final 1996 Florida Keys National Marine Sanctuary Management Plan* (Appendix C). These regulations meet national legislative mandates as well as carefully considering resource protection and multiple uses compatible with resource protection. These regulations were developed through a process that included an impact assessment of

expected environmental and socioeconomic consequences and extensive public comment. As outlined in the Management Agreement between the State of Florida and NOAA, any changes to the regulations will need to be reviewed and approved by the Governor and Cabinet, acting as the Board of Trustees of the Internal Improvement Trust Fund. In addition to establishing new regulations, NOAA utilized existing regulations under federal, state, and local laws to the extent possible. These authorities include existing federal laws, such as the Coastal Zone Management Act, the Magnuson-Stevens Fishery Conservation and Management Act, the Clean Water Act, the Rivers and Harbors Act, Coastal Barrier Resources Act. They also include state laws, such as: the Beach and Shore Preservation Act, the Florida Environmental Land and Water Management Act, the Florida Air and Water Pollution Control Act, the Florida Aquatic Preserves Act of 1975, and the Florida Clean Vessel Act. To achieve this coordination, Sanctuary regulations supplement, rather than replace, existing authorities that already regulated some portion of the actions called for in specific management strategies. In a few instances, agencies have specifically requested that Sanctuary regulations incorporate existing laws and regulations. This is accomplished using tools which can be administered under the NMSA and the FKNMSPA. At the local level, the regulations in this action plan complement the goals, objectives, and policies established by Monroe County in its *Year 2010 Comprehensive Plan*.

For more details and additional relationships see ***Existing Jurisdictional Responsibilities and Institutional Arrangements*** page 101 Vol II of the FKNMS Final Management Plan/Environmental Impact Statement 1996.

Surveillance

Consider the adequacy of the existing protection means (human and material), and your present ability to survey land and sea uses and accesses.

As identified in the original management plan (1996) FKNMS needs 43 Sanctuary enforcement officers for high-use and sensitive areas. Six support personnel will be required to provide clerical, mechanical, and dispatch duties. FKNMS current employs 17 officers and 2 support personnel. This will require additional funding for 26 officers and 4 support personnel. This strategy seeks to (1) increase the presence of law enforcement officers on the water to protect resources and reduce user conflicts, (2) provide resources to aid officers in long-term investigations and (3) adequately staff enforcement of the Tortugas Ecological Reserve. Remote observation techniques may be used to aid enforcement efforts.

Enforcement

Briefly consider the adequacy of existing penalties and powers for effective enforcement of regulations, whether the existing sanctions can be considered sufficient to dissuade infractions, and in the field staff is empowered to impose sanctions.

While considerable success has been achieved in enforcing sanctuary regulations, development of interagency agreements are needed to establishing cross-agency enforcement authority. These agreements would set forth federal, state, and local enforcement authority among all officers. Interagency agreements to cross-deputize officers among NOAA and USFWS, and NOAA and the NPS have been explored but not consummated. Also, standard operating procedures are being implemented. This will increase the efficiency and effectiveness of enforcement by establishing coordination and cooperation among agencies and increase communication by scheduling staff and equipment efficiently, developing a process for handling violations, standardizing radio communications, promoting cooperation with the military and determining priority enforcement areas.

IMPLEMENTATION MECHANISM. (Paragraph D.IV of the guidelines).

Public awareness and education programme

Mention if the management framework has public awareness and education programmes for users, decision-makers and the public (Guidelines paragraph D.IV(b)) and in this case briefly describe the main thrust of the programmes.

One of the primary mandates of the [Florida Keys National Marine Sanctuary and Protection Act \(FKNMSPA\)](#) is to educate the public about the marine environment surrounding the Keys. The diverse habitats, resources, and unique setting of the Keys offer opportunities for the interpretation of marine subtropical and temperate environments. Education and outreach strategies in the action plan fall into two general categories: community involvement/community program strategies and product development strategies. The first group includes education and outreach strategies designed as interactive programs for user groups (e.g., exhibit production, training programs, workshops, school programs, public-involvement forums, and special events). Strategies that result in the development of specific products (i.e., printed materials, audio-visual materials, signs and displays in high-use areas of the Keys, public service announcements, visitor booths/displays etc.) providing a mechanism for public education and outreach are included in the second group. The education and outreach strategies were developed based on input from environmental educators, Sanctuary education staff, user groups, environmental activists, concerned citizens, and thorough public comment received on the draft management plan.

Monitoring programme

Mention if the management framework has a research and monitoring programme that allows for the effectiveness of the management scheme to achieve the conservation goals. (Guidelines paragraph D.IV(c)).

- a) Is there a monitoring programme? YES
- b) If NO, are there plans to start one, and when?
- c) If YES, briefly describe the main thrust of the monitoring programme with regard to the conservation goals. Assess as low, medium, satisfactory, its adequacy and present level of development:

Two laws require that a research and monitoring program be implemented within the Sanctuary. Section 309 of the NMSA mandates that the "Secretary of Commerce shall take such action as is necessary and reasonable to promote and coordinate the use of national marine sanctuaries for research, monitoring, and education purposes." The 1992 amendments to the FKNMSPA (Section 7(a)(4)) are much more specific, calling on the Secretary of Commerce to:

- identify priority needs for research and amounts needed to improve management of the Sanctuary, and in particular, the coral reef ecosystem within the Sanctuary;
- identify clearly the cause-and-effect relationships between factors threatening the health of the coral reef ecosystem in the Sanctuary; and
- establish a long-term ecological monitoring program and database, including methods to disseminate information on the management of the coral reef ecosystem.

- d) If YES, who is/are carrying out the monitoring programme?

NOAA's National Ocean Service and the Florida Fish and Wildlife Conservation Commission's Florida Marine Research Institute (FMRI) are implementing jointly the "Florida Keys Ecosystem Monitoring Integration" project. The initiative is designed to fulfill NOAA's responsibility under the Florida Keys National Marine Sanctuary and Protection Act, which calls for the establishment of a long-term ecological monitoring program and database for South Florida, Florida Bay, and the Florida Keys. It also supports and enhances state and federal restoration efforts of the South Florida environment.

A monitoring data base and GIS are prerequisites for developing a Florida Keys marine ecosystem monitoring plan. This plan is being developed through a series of structured, collaborative workshops that will be issue-oriented and will rely upon the knowledge and experience of the workshop participants. The resulting regional monitoring plan is expected to provide not only consensus on the details of a monitoring program (such as the hypotheses to be tested, location and number of monitoring sites, frequency of measurement, etc.), but also alternatives and priorities based on available resources and short-term versus long-term information needs.

- e) If YES, briefly describe how the monitoring programme will be used in reviewing the management framework.

Two acts, the NMSA and the FKNMSPA, establish research and monitoring goals, including:

- identification of priority areas for research;
- establishment of an ecological monitoring program;
- development of standards based on biological monitoring or assessment to ensure the protection and restoration of water quality, coral reefs, and other marine resources;
- establishment of a comprehensive water quality monitoring program to determine the sources of pollution and evaluate the results of pollution-reduction efforts;
- evaluation of progress in achieving water quality standards and protecting and restoring the Sanctuary's coral reefs and living marine resources;
- establishment of strong communication and cooperation between the scientific community and resource managers;
- coordination of research efforts to achieve the most beneficial results; and
- promotion of public awareness and resource stewardship.

EVALUATION

Briefly describe the indicators set up to measure the management success (Guidelines paragraph. D.II). (Indicators may, for instance, supply information about species status, condition of the ecosystem, land-use changes, extraction of natural resources; sand, water, game, fish, visiting, adherence to the provisions of the management plan, etc.)

There are four activities in this action plan. Each is designed to carry the Sanctuary through the performance evaluation process and integrate performance measurement into the regular cycle of site management.

(1) Assess Implementation of the FKNMS Management Plan Annually. This assessment will be conducted internally on an annual basis by FKNMS staff and will consider the progress and effectiveness of activities implemented over the previous year.

(2) Collaboratively Evaluate the Action Plans Found in this Document. As the NMSP continues to increase the rigor of its self-evaluation, the program would also like to increase the frequency with which partners formally join with the Sanctuary in assessing the effectiveness of our joint management actions. Toward this end, regular evaluation of the action plans within this document is proposed. It is envisioned that each quarter, Sanctuary staff will facilitate collaborative evaluation of one action plan. As a result, a systematic rotation through the action plans will be completed every four years.

(3) Monitor Existing Performance Measures Consistently Over Time. FKNMS staff will conduct routine performance evaluations to collect and record data on Sanctuary performance over time. Using this data, staff will determine effectiveness by a) evaluating progress towards achievement of each action plan's desired outcomes and b) assessing the role or added value of those outcomes in the overall accomplishment of site goals and objectives. Effectiveness will be evaluated for both FKNMS performance measures as well as NMSP national performance measures where applicable.

(4) Report Results. Results from performance monitoring will be collected, analyzed and used to populate and inform the NMSP Report Card and, when necessary, state, NOS or NOAA-wide performance requirements. Performance data may also be presented in a site-specific annual report that would explain each measure, how it was evaluated, the site team that conducted the evaluation, and next steps. Based on this analysis, site staff, in cooperation with the Sanctuary Advisory Council, will identify accomplishments as well as work to determine those management actions that need to be changed to better meet their stated targets. The targets themselves may also be analyzed to determine their validity (if, for instance, they are too ambitious or unrealistic given current site capacities). The public may have opportunity to comment on the Sanctuary's perception of its performance, ways in which the site could be more effective and methods for improving performance measurement when evaluation is on the agenda at future Sanctuary Advisory Council meetings.

Management effectiveness

As stated in section D.V. of the Guidelines, assess as very low, low, moderate, satisfactory very satisfactory, and comment as needed on the following aspects:

- a) Effectiveness of the conservation and management measures on biophysical features with regard to this objectives;

Very Satisfactory. The management plan has now proven its value, with increasing numbers of critical fish and invertebrate species within designated no-take reserves and replenishing surrounding fish areas. In addition no new groundings of large vessels have occurred, which were common before sanctuary regulations restricted their navigation away from sensitive reef areas. The deployment and maintenance of mooring buoys, coupled with education and enforcement activities have reduced many of the user impacts to the ecosystem.

- b) Quality of involvement by the public, local communities, economic sectors, scientific community:

Very Satisfactory. Through the Sanctuary Advisory Council and public participation in all aspects of the management plan development, the sanctuary is a model for engaging stakeholders in planning for the protection and use of marine resources. Of particular importance is the now wide acceptance that the sanctuary has successfully addressed user conflict issues and provided much needed protection of the Keys marine ecosystem.

9. AVAILABLE RESOURCES

HUMAN RESOURCES (Article 6.2(i) of the Protocol)

Available staff

Assess the adequacy of the human resources available to the management body, in number of employees and training level, both in central headquarters and in the field. Indicate if there is staff training programmes.

While the sanctuary budgets have not allow a full complement of staff, the dedicated employees of FKNMS and its state partners have made great achievements in conserving the Florida Keys. However, staff shortages remain a challenge to effectively implementing the management plan for the sanctuary.

A staff list can be found at: <http://floridakeys.noaa.gov/staff/welcome.html>

Permanent field staff

Answer YES or NO on the current existence of the following FIELD staff categories. If YES, enter the number of staff either permanent or part-time in that category.

	YES/NO	NUMBER Permanent/Part-time
Field Administrator	YES	3
Field Experts (scientific monitoring)	YES	2
Field Technicians (maintenance, etc)	YES	14
Wardens	YES	17
Of which marine wardens	YES	17
Guides	NO	
Others	YES	6 Education & Outreach staff

Additional support

Briefly describe if the area currently has the advantage of other external human resources in support of its objectives, either from other national or local institutions, volunteer programmes, non-governmental organisations, academic or international organisations. Mention if there are any significant changes in prospect for the near future.

Three staff at the SE Regional level support the work of local FKNMS staff. Additionally, ONMS headquarters staff are integrally involved with many aspects of administration and planning for the sanctuary. Many local, state, regional and national agency staff work on sanctuary programs and academic researchers are closely involved in sanctuary science and monitoring.

FINANCIAL RESOURCES AND EQUIPMENT

By Article 6 of the Protocol the Parties agree to adopt measures or mechanisms to ensure the financing of the Specially protected areas (Art. 6.2(f)), and the development of an appropriate infrastructure (Art.6.2(i)). Paragraph D of the Guidelines call upon the Parties to provide the areas with adequate management means.

Present financial means

Note if the basic financing is ensured: a core funding for basic staff, protection and information measures. Who provides the core funding? Briefly assess the degree of adequacy of the present financial means for the area, either low, moderate, satisfactory; e.g. the implementation of the management plan, including protection, information, education, training and research.

The FKNMS budget is part of the ONMS federal budget allocation within the Department of Commerce's National Oceanographic and Atmospheric Administration's budget. ONMS budget has been level for a number of years, which has severely slowed implementation of new programs for FKNMS.

Expected or additional financial sources

Briefly describe any alternative sources of funding in use or planned, and the perspectives for long-term funding from national or other sources.

Basic infrastructure and equipment

Answer YES or NO to the following questions.

	YES/NO
Office and/or laboratory in the field	YES
Signs on the main accesses	YES
Guard post on the main accesses	NO
Visitors information centre	YES
Self guided trails with signs	YES
Terrestrial vehicles	YES
Marines vehicles	YES
Radio and communications	YES
Environment awareness materials	YES
Capacity to respond to emergencies	YES
Comment on basic infrastructure and equipment	

10. CONTACT ADDRESSES (name(s), position(s) and contact address(es) of the person(s) in charge with the proposal and that compiled the report)

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11. SIGNATURE (S) ON BEHALF OF THE STATE (S) PARTY/PARTIES MAKING THE PROPOSAL

12. DATE