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Proposed areas for inclusion in the SPAW list
ANNOTATED FORMAT FOR PRESENTATION REPORT FOR:

**Sanctuaire Agoa
France**

Date when making the proposal : *August 8th, 2012*

CRITERIA SATISFIED :

Ecological criteria

Representativeness
Conservation value
Critical habitats
Connectivity/coherence

Cultural and socio-economic criteria

Socio-economic benefits

Area name: Sanctuaire Agoa

Country: France

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Chapter 1. IDENTIFICATION

a - Country:

France

b - Name of the area:

Sanctuaire Agoa

c - Administrative region:

ZEE Antilles françaises (Guadeloupe, Martinique, Saint-Martin, Saint-Barthélemy)

d - Date of establishment:

10/10/10

e - If different, date of legal declaration:

not specified

f - Geographic location

Longitude X: -60.908203

Latitude Y: 16.688817

g - Size:

138000 sq. km

h - Contacts

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Email address: nicolas.maslach@aires-marines.fr

i - Marine ecoregion

64. Eastern Caribbean

Comment, optional

none

Chapter 2. EXECUTIVE SUMMARY

Present briefly the proposed area and its principal characteristics, and specify the objectives that motivated its creation :

Encompassing 59 square miles of ocean, Agoa Sanctuary is located in the eastern Caribbean Sea.

The sanctuary is designed to ensure the conservation of marine mammals in waters under French sovereignty and jurisdiction in the French West Indies. These include the territorial waters and Exclusive Economic Zones (EEZ's) surrounding Martinique, Guadeloupe and its dependencies of Marie Galante, the Saints Archipelago, la Desirade, Petite Terre, as well as those of St. Barthelemy and St. Martin.

The Caribbean Sea is a special habitat for feeding, reproduction and migration of marine mammals. Twenty-four species have been identified in the French Antilles waters.

With the creation of Agoa Marine Mammals Sanctuary, France wanted to contribute to make a model of the Caribbean region for the marine mammals protection and the sustainable development. The EEZ of the French Antilles are now an area of dialogue between all the stakeholders in order to set up an harmonious model of development and of conservation of the marine mammals critical habitats Agoa is based on an innovative governance system bringing together the local governments of Guadeloupe, Martinique, Saint-Martin and Saint-Barthélemy Islands and their environmental departments, the French MPA Agency, the French Ministry of Environment, the socio-economic partners, environmental NGOs but as well University and scientific bodies.

Explain why the proposed area should be proposed for inclusion in the SPAW list

Today hunting is no longer practiced in French waters, but other threats have taken place on these fragile ecologically species: increase in maritime traffic, noise pollution, chemical and oil pollution of the marine environment, degradation of the habitats...

The current legislation includes prohibition, destruction, mutilation, capture, intentional removal, transport or trade in marine mammals.

The objective of the sanctuary is to ensure the conservation of marine mammals, within the framework of a harmonious co-existence with human activities.

Within the sanctuary, adequate review and provisions will be made with regard to activities such as marine mammal observation, seismic research and other acoustic activities, motor boat races, maritime transports, the use of fishing gear that can lead to the capture of marine mammals and any other activity likely to prejudice the welfare of marine mammals or the integrity of their populations such as land and sea born pollution as well as toxins. Information, awareness and education programmes will be implemented for professionals and other sea users so that they can know more about the Sanctuary and its whales and dolphins.

In addition, the Agoa sanctuary will represent an opportunity for economic and touristic development thanks to the positive image which it will convey in the islands of the Caribbean and to the development of eco-tourism to observe the cetaceans, practiced with respect to animals. Lastly, it will be an opportunity to increase the knowledge and sensitize the young generations to the marine environment.

The success of Agoa also depends on regional co-operation, the sanctuary wanting to be extended to other States of the Caribbean which would like to join the initiative, in order

to be able to manage the corridors of migration and distribution surfaces of the Cetacea, whose populations are common to several countries.

According to you, to which Criteria it conforms (Guidelines and Criteria B Paragraph 2)

Representativeness
Conservation value
Critical habitats
Connectivity/coherence

Cultural and socio-economic criteria

Socio-economic benefits

Chapter 3. SITE DESCRIPTION

a - General features of the site

Terrestrial surface under sovereignty, excluding wetlands:

0 sq. km

Wetland surface:

0 ha

Marine surface:

138000 sq. km

b - Physical features

Brief description of the main physical characteristics in the area:

The marine and coastal environments of the French Antilles are home to various habitats, estuaries and lagoons, mangrove, beaches, coral reefs and seagrasses, high seas and deep zones. The available knowledge at the moment in French Antilles does not allow us to determine with certainty and exactitude the use of all the environments by marine mammals.

Even if the preservation of the integrity of the coastal ecosystems and their functional relations is a major stake for the sanctuary Agoa, it is also essential for the preservation of marine mammals, in particular some species which feed in deep waters, to discover the features of the habitats situated beyond 50 meters deep.

These areas are used by marine mammals, or by some of them during their life cycle for the reproduction, breeding, resting, feeding... To define the use of these areas by the marine mammals and to know the relations of MM with the ocean food web are necessary to determine effective conservation actions which will guarantee a favorable conservation status of marine mammals.

Geology:

The Caribbean Plate is a mostly oceanic tectonic plate underlying Central America and the Caribbean Sea off the north coast of South America.

The eastern boundary is a subduction zone, the Lesser Antilles subduction zone, where oceanic crust of the South American Plate is being subducted under the Caribbean Plate. Subduction forms the volcanic islands of the Lesser Antilles Volcanic Arc from the Virgin Islands in the north to the islands off the coast of Venezuela in the south. This boundary contains active volcanoes as, for the French Antilles : la Montagne Pelée on Martinique; la Soufrière on Guadeloupe.

There are two West Indian Arcs. The oldest, in the East, arises from a first volcanic episode, 55 million years ago. The islands which were born were eroded then covered with thick-layered limestones of coral; it is the case of Saint-Martin and Grande-Terre in Guadeloupe. The second arc, more on the West, dates less than 5 million years and testifies of a volcanism always active, as on the Basse-Terre.

- Ores: even if these areas conceal a big variety of ores (copper, sulfur, iron, manganese, etc.) the extractable quantities would be too much limited to value an exploitation.

- Active volcanoes are present on certain islands in the form of warm waters or of release of sour gas in Basse-Terre and in Martinique. From time to time, one of the volcanoes erupts. This was the case in 1902: the Montagne Pelée destroyed the city of Saint-Peter in Martinique.

Topography:

According to all spatial scales, the uneven topography of the Lesser Antilles leads to a great lot of biotopes. So, from species to landscapes, through phytocenoses and ecosystems, numerous types of floristic composition occur. Despite an important man-made pollution, this archipelago belongs to one of the Hotspots of biodiversity: the Caribbean.

Saint-Martin :

The coastline of St. Martin is divided into numerous bays lined with thirty white sandy beaches but only some bays are lined with pebbles.

There are many brackish water ponds : *Grand Étang de Simsonbaai, Great bay, Étang aux poissons, Étang de Grand-Case, Étang Chevrise, Étang Guichard, Grand Étang des Terres Basses* etc.. which were formed in the bottom of bays with cords of coastal sands. The entire coastline is often steep with cliffs up to forty feet high.

There are ten islets around the island.

Apart from several coastal alluvial plains and valley floors, the environment is mountainous with steep slopes. The ridges have an average altitude of 300 meters intersected by several mountain passes. The highest peak is the peak paradise, culminating at 414 meters.

Saint-Barthélemy :

Saint-Barthélemy is located approximately 230 kilometers North-west of Guadeloupe and 25 kilometers South-east of Saint-Martin. It is separated from Saint Martin by the Saint-Barthélemy Channel.

This is a mountainous island consists mainly of volcanic rocks of approximately 21 km² (24 km² with its islets). It has 32 km of coastline.

The climax of the island is Morne de Vitet, 286 meters.

Some small satellite islets belong to St. Barthélemy including Île Chevreau (Île Bonhomme), Île Frégate, Île Toc Vers, Île Tortue and Gros Îlets (Îlots Syndare). A much bigger islet, Île Fourchue, lies on the north of the island, in the Saint-Barthélemy Channel.

Guadeloupe :

The department of Guadeloupe comprises five islands: Guadeloupe island composed of Basse-

Terre Island and Grande-Terre (separated by a narrow sea channel called salt river) and the dependencies composed by the adjacent French islands of La Désirade, Les Saintes and Marie-Galante.

Basse-Terre Island is the name of the western-half of Guadeloupe proper, in the Lesser Antilles. Basse-Terre Island has a land area of 847.82 km² (327.35 sq. miles).

La Grande Soufrière, the tallest mountain in the Lesser Antilles, is located on the island. It rises to 1,467 m (4,813 ft) high. It is an active volcano. The surrounding area of Basse-Terre has a rough volcanic relief fertile land. The surrounding areas of Basse-Terre consists of forest, grassland and sugar, coffee, banana and cocoa plantations. The island has a land area of 847.82 km² (327.35 sq mi).

The eastern coast of Basse-Terre Island, known as the Windward Coast, is exposed to the trade winds and receives a lot of rain, whereas the western coast of the island, known as the Leeward Coast is protected from the winds by the Soufrière volcano and is thus much drier.

Grande-Terre is smaller than Basse-Terre Island. Its indented coastline is surrounded by coral reefs and the island itself is a limestone plateau. Its surface is a series of rolling hills, white sand beaches and cliffs. The island's beaches consist of both white and black sands, as well as beaches of golden sand. The island has a land area of 586.68 km²

La Désirade is a French West Indies island located at the eastern of Guadeloupe, in the Lesser Antilles.

It has a land area of 20.64 km² (7,97 sq. miles). La Désirade is 11 km long and 2 km wide; the interior of the island forms a central plateau.

Les Saintes is a volcanic archipelago fully encircled by shallow reefs. It arise from the recent volcanic belt of the Lesser Antilles from the Pliocene Epoch. It is composed of rocks appeared on the Tertiary age between (4.7 to 2 million years ago). By origin, it was a unique island that the Tectonic and Volcanic earthquakes separate to create an archipelago due to the subduction zone between the South American plate, the North American plate and the Caribbean plate.

Les Saintes is composed of two very mountainous inhabited islands, Terre-de-Haut Island and Terre-de-Bas Island, with seven other uninhabited îlets: Îlet à Cabrit, Grand-Îlet, la Coche, les Augustins, la Redonde, le Pâté, les Roches Percées.

The total surface is 12.8 km² (4.9 sq mi). The archipelago has approximately 22 km (14 mi) of coast and its highest hill, Chameau, reaches about 309 meters.

Marie-Galante : the island is more commonly known as "La grande galette" due to its round shape and almost flat surface (its highest peak, the hill Morne Constant, rises to 670 ft). The island is undulating substrate calcareous, fanned by the trade winds and subject to cyclones and earthquakes.

The northern coast is characterized by a high cliff. A fault called the "Bar" separates the northern quarter from the remainder of the island. To the west beaches and mangroves extend along the Caribbean Sea. The rivers of Saint-Louis and the Vieux-Fort run out there after having crossed the insular plate originating at the center of Marie-Galante. In the east and the south, the plate becomes dull to rock inclined towards a littoral plain. This one skirts the Atlantic from which it is protected by a coral barrier.

Martinique :

With the total area of 1100 km² Martinique is the 3rd largest island in The Lesser Antilles after Trinidad and Guadeloupe. It stretches 70 km in length and 30 km in width. The highest point is the volcano of Mount Pelee (1397m). The last two major eruptive phases occurred in 1902: the eruption of May 8, 1902 destroyed Saint-Pierre and took 28,000 dead in 2 minutes; that of August 30, 1902 caused nearly 1,100 deaths, mostly in Morne-Red and Ajoupa-Bouillon.

The coast of Martinique is difficult for navigation of ships. The peninsula of Caravelle clearly

separates the north-Atlantic and South Atlantic coast.

The north of the island is mountainous and lushly forested. It features four ensembles of *pitons* (volcanoes) and *mornes* (mountains): the Piton Conil on the extreme North, which dominates the Dominica Channel; Mount Pelée, an active volcano; the Morne Jacob; and the *Pitons du Carbet*, an ensemble of five extinct volcanoes covered with rainforest and dominating the Bay of Fort de France at 1,196 meters.

The highest of the island's many mountains, at 1,397 metres (4,583 ft), is the famous volcano Montagne Pelée. Its volcanic ash has created gray and black sand beaches in the north (in particular between *Anse Ceron* and *Anse des Gallets*), contrasting markedly from the white sands of *Les Salines* in the south.

Bathymetry:

The seabed of the insular shelf of Guadeloupe and Martinique.

Surface deposit maps

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The seabed of the insular shelves (from 0 to 100 m) of the archipelago of Guadeloupe and Martinique have been the subject of a detailed geological reconnaissance, using imaging techniques such as sonar sidescan, bathymetry, analysis of sediment samples and shooting underwater. Maps of two islands, initially published on a scale 1/25 000, were consolidated into a single document to scale 1/100 000.

Maps

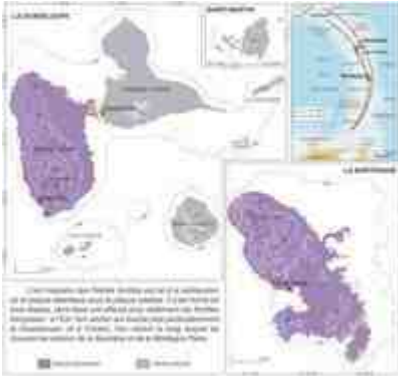


©Ifremer Carte des travaux

Small Caribbean islands are characterized by the fragility of their environment, particularly in relation to their small size. Part of their development depends on knowledge of the seabed surrounding, especially with regard to the exploitation and sustainable management of their resources. The area of island shelves being at least equal to that of the islands themselves, their mapping is even more interest.

The French Antilles is part of the Lesser Antilles which is made up of about twenty islands between the Caribbean Sea from the Atlantic Ocean.

Topography and geology



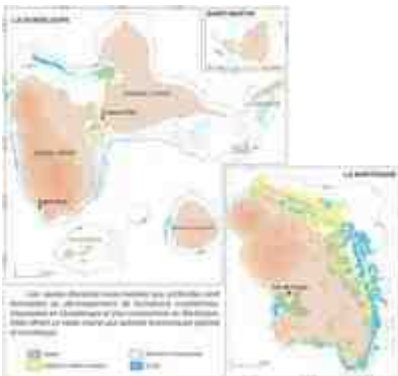
©Ifremer Relief et Géologie

These islands, earth and submarine relief high-contrasted, in relation to their geological nature, fall into two types: islands in low relief and recovery limestone (St. Martin, Grande-Terre, La Désirade, Petite Terre and Marie-Galante in Guadeloupe) and in high relief and volcanic islands (Martinique, Basse-Terre and Les Saintes in Guadeloupe).

The relief of the coastal seabed presents a clear asymmetry between the western and eastern fronts of the two islands. The depth increases rapidly on the Caribbean seaboard. The seabeds of 100 m are reached at a short distance from shore: 1 km for Guadeloupe and 400 m for Martinique. Conversely, on the Atlantic seaboard, it takes 25 km in Martinique to achieve the same depth of 100 m.

The seabed is mainly composed of coral reefs and soft sediments.

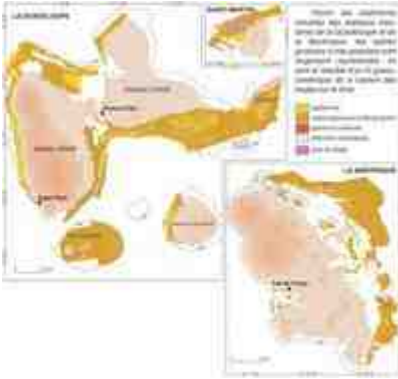
Nature of coastal seabeds



©Ifremer Nature des fonds marins côtiers

The large shallow submarine areas are favorable for the development of coral formations, scattered in Guadeloupe and more concentrated in Martinique. Coral reefs are found in various shapes and sizes. The most common form is the reef flat (planar form), whose extension can reach several tens of square kilometers.

Sediments mobility



©Ifremer Mobilité des sédiments

During trade winds, sediments are immobile except near coral reefs, bays and areas between the shore and coral.

In times of storm, and especially cyclone, waves can mobilize sediments to depths of about 50 to 60 m.

This mapping of the insular shelf of Guadeloupe and Martinique shows the baseline status of the submarine landscape. The different information can be useful for resource assessment, planning and environmental protection.

References :

Augris *et al.* (2003) - Les fond marins du plateau insulaire de la Guadeloupe et de la Martinique. Carte des formations superficielles. Échelle 1/100 000. Édition Ifremer - Conseil Général de la Martinique.

Augris *et al.* (2000) - Carte des formations superficielles du plateau insulaire de la Martinique. 4 feuilles. Échelle 1/25 000. Édition Ifremer - Conseil Général de la Martinique.

Augris *et al.* (1992) - Carte des formations superficielles du plateau insulaire de la Guadeloupe. 10 feuilles. Échelle 1/25 000. Édition Ifremer - Conseil Général de la Guadeloupe.

Volcanic formations:

Active volcanoes : La Montagne Pelée in Martinique and la Soufrière in Guadeloupe.

c - Biological features

Habitats

Brief description of dominant and particular habitats (marine and terrestrial)*: List here the habitats and ecosystems that are representative and/or of importance for the WCR (i.e. mangroves, coral reefs, etc):

1. Ecosystems features

The Caribbean Sea is a semi-closed basin between the Florida and the Bahamas in the North, and Central and South America in the West, and by the Antilles in the East. It is the second biggest sea of the world with a surface of 2 828 125 km² (Costello, Coll and al ., on 2010) and is constantly fed by Atlantic waters and currents of Guyana.

These waters are seasonally enriched by the phytoplankton coming from the Guyana Shield. This exogenous supply comes to increase a coastal local primary production, mainly bound to the contributions of terrigenous nutrients, the level of which is still underestimated. Considered as the heart of the biodiversity of the Atlantic Ocean (Huggins, Keel and al ., on 2007; Spalding, Ravilious

and al ., on 2001), the Caribbean sea is home to a multitude of species (117 types of sponges, 633 of mollusks, 378 of bivalves, 77 of stomatopodes, 148 of echinoderms, more than 1 400 species of fishes, 76 of sharks, 45 of shrimps and 28 of cetaceans) among which 13 % are endemic in the zone. Three types of major ecosystems are found : coral reefs, mangroves and seagrasses.

2. Physico-chemical features

"Battered by Atlantic swells, the windward coasts are currently protected in part by biological algae (barrier) constructions or algo-reef (fringing). This protection is dependent on the growth of organic buildings that are currently in decline. Maintaining that physical protection is of paramount importance for the preservation of coastal infrastructure, and mangroves which reduce erosion along this coast. Mangroves are the only bulwark against the discharge of terrigenous flux on other coastal ecosystems. The phanerogam seagrass is also involved in trapping coastal sediment and nutrients, thus providing to the communities some of the conditions necessary for growth.

Generally in the tropics and in the absence of nutrient enrichment phenomena, biological processes are mostly coastal. Each of the major coastal ecosystems is known to provide important primary production, habitat for communities living more or less specialized, shelter, feeding areas, and nurseries:

- The mangrove is an important source of primary production. The feet of mangrove tree also provide shelter for aquatic wildlife, resident or not, (mangrove crab, shorebird) and juvenile fish.
- The phanerogam seagrass provides shelter and feeding to a variety of wildlife resident or migrant (conch, white sea urchin, green turtles, corals, seagrass, gorgonians). It is also a nursery area.
- The coral communities offer, by their large spatial heterogeneity, multiple types of shelter and food sources allowing a very high biodiversity to live there (presence of fish, corals, mollusks and other many groups totally unknown , feeding area for hawksbill turtles). Their primary production is very high and they are also nursery grounds.

These biological functions (nursery, primary production ...) and physical (coastal protection) can be ensured only by functioning ecosystems, that is to say in good health (coral communities in good health and recrutantes , climax of seagrass beds, mangroves integrity) and whose functional relationships are preserved (exchange of matter and nutrients, migration of individuals at different time scales). "

- The intertidal habitats are rarely frequented by whales but they are very important because they provide breeding areas for fish and other prey.
- The continental shelf slopes gently from the shore at an average depth of 200 meters and is a rich food source for whales and other predators.
- The continental slope or bathyal zone which descends more abruptly ends at a depth of about 1100 meters or more and is frequented by some marine mammals like the sperm whale.
- The abyssal plain is itself extremely flat and occupies over 40% of sea area. Its depth varies by region but is generally 4000 meters.

Detail for each habitat/ecosystem the area it covers:

<i>Marine / coastal ecosystem categories</i> Detail for each habitat / ecosystem the area covers	Size (estimate)		Description and comments
	unit	Area covered	
<i>Mangroves</i>			
Antilles françaises	ha	6083	Biodiversity in mangrove tree species in the Caribbean is low. Only four different species of mangrove trees have been identified, including three predominant: <ul style="list-style-type: none"> • The red mangrove - <i>Rhizophora mangle</i> L. (Rhizophoraceae) • The black mangrove - <i>Avicennia germinans</i> L. (Avicenniaceae) • The white mangrove - <i>Laguncularia racemosa</i> Gaertn

			(Combretaceae) There is, so scarce, the gray mangrove - <i>Conocarpus erecta</i> L. (Combretaceae), in sandy or rocky environments (edges of beaches). But these mangroves areas are home to significant biodiversity. For aquatic species, they are a safe haven and nursery for the juveniles.
<i>Coral reefs</i>			
Antilles françaises (lagons et coraux)	ha	30000	In the French Antilles (Martinique, Guadeloupe, St. Barthelemy, St. Martin), the situation has deteriorated since 1980: terrigenous sedimentation, nutrient pollution, fertilizers, pesticides and sewage led a coral degradation in favor of algae . Moreover, cyclones of 1980 and 1989 have greatly achieved corals (breakage and degradation by sedimentation), while the bleaching of 1998 resulted in a mortality of the order of 20 to 30%, as well as those of 2005.
<i>Sea grass beds</i>			
sea grass	ha	20000	
Terrestrial ecosystems	Size (estimate)		
	unit	Area covered	

Flora

Brief description of the main plant assemblages significant or particular in the area:

Researches in most parts of the sanctuary will be conducted in the coming years. Improving the knowledge on habitats is one of the future priorities.

List of plant species within the site that are in SPAW Annex I

List of species in SPAW annex I	Estimate of population size	Comments if any
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List of plant species within the site that are in SPAW Annex III

List of species in SPAW annex III	Estimate of population size	Comments if any
Cactaceae: <i>Melocactus intortus</i>	not given	
Compositae : <i>Laguncularia racemosa</i>	not given	
Cymodoceaceae: <i>Halodule wrightii</i>	not given	
Cymodoceaceae: <i>Syringodium filiforme</i>	not given	
Hydrocharitaceae: <i>Thalassia testudinum</i>	not given	
Hydrocharitaceae: <i>Halophila decipiens</i>	not given	
Rhizophoraceae: <i>Rhizophora mangle</i>	not given	

List of plant species within the site that are in the IUCN Red List. UICN red list : <http://www.iucnredlist.org/apps/redlist/search> You will specify the IUCN Status (CR:critically endangered; EN:endangered; VU:vulnerable).

List of species in IUCN red list that are present in your site	IUCN Status	Estimate of population size	Comments if any
Halophila : <i>Halophila baillonii</i>	VU - Vulnerable	not given	
Halophila : <i>Halophila decipiens</i>	Unknown	not given	Least concern
Laguncularia : <i>Laguncularia racemosa</i>	Unknown	not given	Least concern
Rhizophora : <i>Rhizophora mangle</i>	Unknown	not given	Least concern

Syringodium : Syringodium filiforme	Unknown	not given	Least concern
Thalassia : Thalassia testudinum	Unknown	not given	Least concern
Acrostichum : Acrostichum danaeifolium	Unknown	not given	Least concern
Avicennia : Avicennia germinans	Unknown	not given	Least concern
Avicennia : Avicennia schaueriana	Unknown	not given	Least concern
Conocarpus : Conocarpus erectus	Unknown	not given	Least concern
Halodule : Halodule wrightii	Unknown	not given	Least concern
Acrostichum : Acrostichum aureum	Unknown	not given	Least concern

List of plant species within the site that are in the national list of protected species

List of species in the national list of protected species that are present in your site	Estimate of population size	Comments if any
Marine flora: Marine flora	not given	At the regional level The marine flora is protected by the prefectural Decree No. 2002-1249 regulating the fishing activities in coastal marine waters in the department of Guadeloupe and its dependencies - Title 1 - Chapter 3 - Article 19.
Melocactus: Melocactus intortus	not given	Protected by the Ministerial Decree of December 26th 1988 and the Order of February 27th 2006 on the list of protected plant species in Guadeloupe
Guaiacum: Guaiacum officinale	not given	Protected by the Ministerial Decree of December 26th 1988 and the Order of February 27th 2006 on the list of protected plant species in Guadeloupe

Fauna

Brief descript° of the main fauna populations and/or those of particular importance present (resident or migratory) in the area:

Cetaceans present in the Agoa sanctuary represent a remarkable biodiversity with more than 28 species theoretically present (Ward & Moscrop 2001). Among the most observed species, the humpback whale (*Megaptera novaeangliae*) during the breeding season from January to June, the sperm whale (*Physeter macrocephalus*) or some dolphins like the bottlenose dolphin (*Tursiops truncatus*) who regularly attend the sanctuary. It is interesting to note that many species are observed throughout the year which would indicate that some species (*Stenon bredanensis*, *Tursiops truncatus*, *Physeter macrocephalus*, *Stenella attenuata* and *Feresa attenuata*) have some degree of fidelity to certain sites.

List of animal species within the site that are in SPAW Annex II

List of species in SPAW annex II	Estimate of population size	Comments if any
Mammals: Balaenoptera edeni	not given	Ship strikes Accidental capture in fishing gear Accidental capture in fishing gear abandoned (waste, wrecks, etc ...) direct takes maritime traffic Oil pollution and chemical components Chronic noise pollution Disturbance by the activities of whale watching
Mammals: Megaptera novaeangliae	not given	Habitat: shoals of sand, near the islands Reproduction: Arc of Northern Caribbean and the Dominican Republic in winter Food: Small fish (herring, capelin and Greenland halibut) and krill caught near the surface of 60 to 120m depth alone or in cooperation with other individuals.

		General threats (Source: IUCN): Aboriginal Subsistence Whaling in Saint Vincent and the Grenadines (4 individuals / year) Aboriginal whaling by the West Greenland Inuit (8 individuals / year) Ship strikes Accidental capture in fishing gear Oil pollution and the chemical components Chronic noise pollution Disturbance by the activities of whale watching
Mammals: Balaenoptera acutostrata	not given	HABITAT: Coastal waters and High Seas FOOD: A variety of prey but mostly of krill and small fish (opportunistic depending on the season and prey availability) REPRODUCTION Minke whales in the North Atlantic is sexually mature at the age of 7 for females and 6 for males. Breeding occurs between October and March. Gestation lasts between 10 and 11 months, parturition occurs between November and March. Reproduction Bermuda, Bahamas / Caribbean during the winter Threats or potential: Fishery by Iceland, Norway, Russia and Japan Accidental capture in fishing gear (200 / year on the Japan Sea and South China Sea) Chronic noise pollution
Mammals: Physeter macrocephalus	not given	Habitat: Deep waters Food: squid in deep water Habitat for mating: Water above 15 ° general threats (Source: IUCN): Collision with vessels Accidental capture in fishing gear in particular because of the phenomenon of predation Accidental capture in fishing gear abandoned (waste, wrecks, etc ...) Ingestion of debris maritime traffic Chronic noise pollution Disturbance by the activities of whale watching
Mammals: Kogia breviceps	not given	Habitat: Beyond the shelf edge Food: Cephalopods, fish and shrimp in deep water General threats (Source: IUCN): Incidental capture in fishing gear Accidental capture in fishing gear abandoned (waste, wrecks, etc ...) Ingestion of debris Oil pollution and chemical components Chronic noise pollution (significant stranding in Taiwan, Gulf of Mexico, Atlantic Coast, Florida).
Mammals: Kogia simus	not given	Habitat : waters off the tropical coasts and warm temperate areas Food : mainly cephalopods and other prey in deep waters General threats (Source: IUCN) Spear fishing times in the Lesser Antilles (St. Vincent) Accidental capture in fishing gear (rare) Accidental capture in fishing gear abandoned (waste, wrecks, etc ...) (rare) Ingestion of debris Oil pollution and chemical components Acute or chronic noise pollution (significant stranding in Taiwan, Gulf of Mexico, Atlantic Coast, Florida).
Mammals: Ziphius cavirostris	not given	HABITAT: Deep waters more than 200 meters, rarely near the coast except deepwater FOOD: Fish, squid, crustaceans Ascertain or potential threats: Bycatch in fisheries of the Caribbean Islands Incidental capture in fishing gear (tangle) Incidental capture in fishing gear abandoned
Mammals: Mesoplodon europaeus	not given	Habitat: Deep temperate waters, subtropical and tropical Food: Squid, crustacean larvae General threats (Source: IUCN): Incidental capture in fishing gear Accidental capture in fishing gear abandoned Sensitive to acute and chronic noise (strandings) Ingestion of plastic waste
Mammals: Mesoplodon densirostris	not given	Habitat: temperate and tropical waters between 200 and 1000 meters depth. Food: Fish, squid General threats (source IUCN): Incidental capture in fishing gear Accidental capture in fishing gear abandoned Sensitive to acute and chronic noise (strandings) Ingestion of plastic waste
Mammals: Orcinus orca	not given	Habitat: All habitats of high productivity Food: Marine mammals of small and large sizes, seabirds, turtles e sea, many fish species, cephalopods General threats (Source: IUCN): Hunting by the Coastal Fisheries in the Caribbean islands Accidental capture in fishing gear (trawl, net, squid fishery, gillnets, driftnets) Sensitive to pollutants because of their high trophic position Sensitive to acute and chronic noise Inventory reduction of food supply Phenomena depredations
Mammals: Feresa attenuata	not given	Food: Cephalopods, fish, sometimes attacks the dolphins Habitat: Deep and warm waters, rarely near the coast with the exception of deep and

		clear water General threats: (Source: IUCN) Spear fishing in the Caribbean Accidental capture in fishing gear (purse seines for tuna, gillnets, driftnets, longlines) Vulnerable to anthropogenic loud sounds (sonar, seismic exploration) Ingestion of waste plastic and in particular Pollution: There have been reports on the presence of oil residues, including DDT, dieldrin and PCBs in various tissues of three pygmy killer whales in the Atlantic and Gulf coasts of Florida (Ross and Leatherwood, 1994).
Mammals: <i>Pseudorca crassidens</i>	not given	Habitat: temperate and tropical waters Food: Fish, cephalopods, small cetaceans, listed attacks of humpback and sperm whales, dolphin dorado, tuna, marlin ... General threats (Source: IUCN): Hunting in the coastal fisheries in the waters of St. Vincent Accidental capture in fishing gear Sensitive to acute and chronic noise Inventory reduction of food supply Ingestion of plastic waste Phenomena of depredation
Mammals: <i>Globicephala macrorhynchus</i>	not given	Habitat: Deep and warm waters, rarely near the coast with the exception of deep water Food: mainly cephalopods, fish. In southern California, the seasonal abundance of pilot whales appears to be correlated with the seasonal abundance of breeding squid. General threats: (Source: IUCN) Harpooning in St. Vincent (approx 220 individuals: year) and St. Lucia (Bernard and Reilly, 1999). Accidental capture in fishing gear (purse seines for tuna, gillnets, driftnets, longlines) in the Caribbean, off Puerto Rico, U.S. and British Virgin Islands (Mignucci et al. 1999). Accidental capture in fishing gear abandoned Vulnerable to anthropogenic loud sounds (sonar, seismic exploration) collision
Mammals: <i>Peponocephala electra</i>	not given	Habitat: Continental shelf and around oceanic islands, near the coast in deep water Food: squid, shrimp and small fish General threats (Source: IUCN): Hunting by coastal fisheries in the waters of St. Vincent Accidental capture in fishing gear (purse seine for tuna, trawl net, squid fishery, gillnets, driftnets) Sensitive to acute and chronic noise Inventory reduction of food supply Ingestion of plastic waste
Mammals: <i>Lagenodelphis hosei</i>	not given	Habitat: Deep waters offshore and near shore Food : pelagic (especially myctophids), squids and crustaceans up to 600 m and on the surface General threats (Source: IUCN): Harpooning in the Lesser Antilles Accidental capture in fishing gear (purse seines for tuna, squid fishery, gillnets, driftnets) Vulnerable to anthropogenic loud sounds (sonar, seismic exploration) and pollution
Mammals: <i>Stenella attenuata</i>	not given	Habitat: Depth - 50 meters and water at 25 ° Food: Small fish, flying fish and live fish on the bottom General threats (Source: IUCN): Fishing in St. Vincent (harpoons and gillnets) Accidental capture in fishing gear (purse seines, gillnets, driftnets, longlines) important source of mortality or abandoned
Mammals: <i>Stenella frontalis</i>	not given	Habitat: High tropical seas, temperate deep water close to shore and shallow waters sometimes Food: A wide variety of fish, squid and benthic invertebrates mesopelagic General threats (Source: IUCN): Incidental capture in fishing gear (purse seines, gillnets, driftnets, longlines) Exploitation of commercial fish and cephalopods as part of its diet
Mammals: <i>Stenella longirostris</i>	not given	Habitat: coastal tropical waters of islands or reefs, deep sea and shallow bays to rest sometimes Food: Feed especially at night, small fish, squid and shrimp General threats (Source: IUCN): Incidental capture in fishing gear (purse seines, gillnets, driftnets, longlines) and / or littering Fishery in the Caribbean Disturbance by whale watching during resting periods
Mammals: <i>Stenella clymene</i>	not given	Habitat: Tropical and subtropical deep water offshore or near shore. Food: Small fish and squid General threats (Source: IUCN): Harpooning in St. Vincent, Accidental capture in fishing gear (gill nets, purse seines)
Mammals:	not given	HABITAT: Coastal and pelagic waters. FOOD: Fish, cephalopods, squid,

Tursiops truncatus		shrimp, crustaceans. Ascertain or potential threats: Accidental capture in fishing gear (purse seine and rotary for tuna net, gill nets and drift longlines) - Incidental capture in fishing gear abandoned Capture targeted for hunting, exposure to the public Sensitive to noise acute and chronic, pollution due to its coastal habitat inventory reduction of food supply due to overfishing and loss / degradation of its habitat Ingestion of plastic waste
Mammals: Stenella coeruleoalba	not given	Habitat: High tropical seas, temperate regions with deep water near the coasts Food: Wide variety of pelagic or benthopelagic (200 to 700 m) General threats (Source: IUCN): Fishing in St. Vincent (harpoons and gillnets) Accidental capture in fishing gear (purse seines, gillnets, driftnets, longlines) important source of mortality Sensitive to pollution by oil and chemical components Exploitation of commercial fish and cephalopods as part of its diet
Mammals: Grampus griseus	not given	Abundance: In the northern Gulf of Mexico, the estimate of the abundance of Risso's dolphins in oceanic waters, from 1996 to 2001, is around 2169 (CV = 0.32) (Mullin and Fulling 2004). Habitat: Deep waters of the continental and oceanic slopes ; 400 to 1000 meters deep and sometimes shallow waters Food: squid, cephalopods and crustaceans sometimes (at night) General threats (Source: IUCN): Incidental capture in fishing gear (purse seines for tuna, squid fishery, gillnets, driftnets, longlines). Vulnerable to anthropogenic loud sounds (sonar, seismic exploration). Ingestion of plastic waste, ropes, cans
Mammals: Steno bredanensis	not given	Habitat: deep tropical coastal waters of islands or reefs and shallow waters Power: Cephalopods, fish large and small sizes General threats (Source: IUCN): Harpooning in St. Vincent Accidental capture in fishing gear (purse seines for tuna, gillnets, driftnets, longlines) Fishery in the Caribbean Disturbance by whale watching

List of animal species within the site that are in SPAW Annex III

List of species in SPAW annex III	Estimate of population size	Comments if any
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List of animal species within the site that are in the IUCN Red List. IUCN Red List : <http://www.iucnredlist.org/apps/redlist/search> You will specify the IUCN Status (CR:critically endangered; EN:endangered; VU:vulnerable).

List of species in IUCN red list that are present in your site	IUCN Status	Estimate of population size	Comments if any
Balaenoptera: Balaenoptera edeni	Unknown	not given	data deficient
Feresa: Feresa attenuata	Unknown	not given	data deficient
Globicephala: Globicephala macrorhynchus	Unknown	not given	data deficient
Grampus: Grampus griseus	Unknown	not given	Least concern
Kogia: Kogia breviceps	Unknown	not given	data deficient
Kogia : Kogia simus	Unknown	not given	data deficient
Lagenodelphis: Lagenodelphis hosei	Unknown	not given	Least concern
Megaptera: Megaptera novaeangliae	Unknown	not given	Least concern
Mesoplodon: Mesoplodon europaeus	Unknown	not given	data deficient
Mesoplodon: Mesoplodon densirostris	Unknown	not given	data deficient
Orcinus: Orcinus orca	Unknown	not given	data deficient
Peponocephala: Peponocephala electra	Unknown	not given	Least concern
Physeter: Physeter macrocephalus	VU -	not given	

	Vulnerable		
Pseudorca: Pseudorca crassidens	Unknown	not given	data deficient
Stenella: Stenella attenuata	Unknown	not given	Least concern
Stenella: Stenella clymene	Unknown	not given	data deficient
Stenella: Stenella coeruleoalba	Unknown	not given	Least concern
Stenella: Stenella frontalis	Unknown	not given	Data deficient
Stenella: Stenella longirostris	Unknown	not given	Data deficient
Steno: Steno bredanensis	Unknown	not given	
Balaenopteridae: Balaenoptera acutorastrata	Unknown	not given	Least concern
Balaenopteridae: Balaenoptera borealis	Unknown	not given	Data deficient
Delphinidae: Tursiops truncatus	Unknown	not given	Least concern
Ziphiidae: Ziphius cavirostris	Unknown	not given	least concern

List of animal species within the site that are in the national list of protected species

List of species in the national list of protected species that are present in your site	Estimate of population size	Comments if any
Balaenoptera: Balaenoptera edeni	not given	
Feresa: Feresa attenuata	not given	
Globicephala: Globicephala macrorhynchus	not given	
Grampus: Grampus griseus	not given	
Kogia: Kogia breviceps	not given	
Kogia: Kogia simus	not given	
Lagenodelphis: Lagenodelphis hosei	not given	
Megaptera: Megaptera novaeangliae	not given	
Mesoplodon: Mesoplodon europaeus	not given	
Mesoplodon: Mesoplodon densirostris	not given	
orcinus: orcinus orca	not given	
Peponocephala: Peponocephala electra	not given	
Physeter: Physeter macrocephalus	not given	
Pseudorca : Pseudorca crassidens	not given	
Stenella: Stenella attenuata	not given	
Stenella: Stenella clymene	not given	
Stenella : Stenella coeruleoalba	not given	
Stenella: Stenella frontalis	not given	
Stenella : Stenella longirostris	not given	
Steno: Steno bredanensis	not given	
Balaenoptera: Balaenoptera acutorastrata	not given	
Balaenoptera : Balaenoptera borealis	not given	
Tursiops: Tursiops truncatus	not given	
Ziphius : Ziphius cavirostris	not given	

d - Human population and current activities

Inhabitants inside the area or in the zone of potential direct impact on the protected area:

	Inside the area		In the zone of potential direct impact	
	Permanent	Seasonal	Permanent	Seasonal
Inhabitants	not given	not given	849365	3442669

Comments about the previous table:

On January 1st, 2010, the population of Martinique is estimated to 399 637 inhabitants and welcomed 620 781 tourists, the same year. According to the last demographic balance sheet of INSEE (NATIONAL INSTITUTE FOR STATISTICS AND ECONOMIC STUDIES), the Guadeloupien population is estimated to 404 394 inhabitants on January 1st, 2010. Guadeloupe welcomed approximately 390 000 tourists the same year. In 2008, the population of Saint Martin French side counted 36 661 inhabitants, increasing by 23,4 % compared with 1999. The population of Sint-Maarten in 2010 is estimated to 37 429 persons. In 2010, both territories welcomed no less than 2 150 616 tourists. In 2008, the population of Saint-Barthélemy counted 8 673 inhabitants and in 2010 Saint-Barthélemy welcomed a total of 281 272 visitors. The Agoa sanctuary has a population of approximately 849 365 inhabitants and welcomes 3 442669 visitors / year.

Description of population, current human uses and development:

MAIN THREATS	HUMAN ACTIVITIES	IMPACTS ON ANIMALS
Persistent disturbance	Military activities Scientific research	Desertion of habitats Serious injury to the inner ear
	Watercraft competition Maritime traffic (commercial and recreational)	Increased energy expenditure Malfunction of the echolocation system
	Professional Fishing Whale watching	Decline in reproduction Behavioral changes
	Seismic surveys	Disruption of vital activities and social ties Death of the animal
Vessel strikes	Military activities Scientific research	Injuries Death of the animal
	Watercraft competition Maritime traffic (commercial and recreational)	
	Professional Fishing Recreational boat Whale watching	
Chemical pollution	Immune capabilities and reproductives affected can lead to death of the animal, tumors ...	Physiological dysfunction (nervous system) Poisoning newborn
Antropiques activities of terrigenous origin	Oil dumping, hydrocarbon leaks, tanker accident ...	

(industry, agriculture, Sailing assinissements (antifouling failed, paints, waste careening oils, hydrocarbons areas ...) Offshore Piling	Intoxication (hydrocarbons)	Endocrine disruption		
	Bacterial pollution	Sailing (direct discharge of sinks and WC)	domestic wastewater discharge	Developpement of diseases
	Large waste	Terrestrial human activities Recreational boat	Professional Fishing Maritime traffic (commercial and recreational)	Injuries Death by entanglement or intestinal obstruction
	Physical degradation and modification of the environment	Development offshore and inshore		Desertion of habitats
	Acoustic pollution	Serious injury to the inner ear	Death of the animal	
	Military activities Coastal activities Watercraft competition	Seismic surveys Scientific research Maritime trafic	Temporary or permanent hearing loss	
	Mortality and direct injuries			
Depredation phenomenon	Accidental take	Injuries	Death of the animal	
Competition for prey	Commercial fishing Recreational fishery		Time quotas for increased foraging	
Activities	Current human uses	Possible development	Description / comments, if any	
Tourism	very important	increase		
Fishing	significant	increase		
Agriculture	significant	stable		
Industry	significant	stable		
Forestry	absent	stable		
Others	not specified	not specified		

e - Other relevant features

Several recent studies allowed us to list, characterize and locate potential and ascertained anthropogenic pressures on marine mammals and their habitat within the sanctuary. (Annex anthropogenic pressures)

According to these researches, the issues of all the anthropogenic pressures on marine mammal within Agoa can be summarized as follows :

- Issues related to the survival of animals: collisions, illnesses caused by stress or contaminants, entanglement, ingestion of macro-waste and noise pollution are so many threats that face directly marine mammals.
- Issues related to animals growth : low energy balance caused by a nutritional deficiency or by an energy expenditure related to a repetitive disturbance (maritime traffic, whale watching); leakage from feeding areas ...
- Issues related to the reproduction and birth rate: which can be reduced by the disease, the disturbances, a low energy balance, a contamination by pollutants and chemical molecules....
- Issues related to the environment: which can be threatened by coastal developments and marine pollution.

Scientific feature:

In Guadeloupe, current knowledge mainly concern sperm whales, thanks to a photo-identification catalog made by AET in the leeward coast for 15 years. Since 2007, monitoring campaign using transects line protocol, combining visual observations and acoustic detections, are conducted by Breach in the dry season and wet season since 2009. These campaigns cover the entire coastal area up to about 12 NM offshore. In Martinique, the relative abundance and distribution of cetaceans in territorial waters are followed by SEPANMAR since five years of field campaigns in wet and dry seasons, combining visual observations and acoustic detections. The protocols used in Martinique and Guadeloupe are a priori the same since 2009. Since 2012, the antenna of the French marine protected areas Agency in the French Antilles and the technical secretariat of the Agoa sanctuary coordinate the scientific activities in collaboration with governments and local associations. From March 9th to 14th, the Agoa scientific campaign 2012, directed by the French marine protected areas Agency, in collaboration with the SPAW RAC, and the associations Breach and Sepanmar, has initiated an extensive exploration of marine mammals but also birds, waste, vessels and all anthropogenic activities, in all the French Antilles and the Netherlands Antilles with the islands of Sint-Maarten, Saba and St. Eustatius and also the island of Anguilla. First conducted in the "Northern Islands", it continued from April 9th to 15th in Guadeloupe and Martinique was completed in April 30th. More than 10 species were observed in less than two months of observation. Cetacean acoustic recordings were made??, as well as some unidentified noise that can be described as disturbing to cetaceans. The results of this campaign will be available before the end of 2012.

f - Impacts and threats affecting the area

Impacts and threats *within* the area

Impact and threats	level	Evolution In the short term	Evolution In the long term	Species affected	Habitats affected	Description / comments
Exploitation of natural resources: Fishing	significant	stable	stable	Megaptera novaeangliae Balaenoptera edeni Balaenoptera acurostrata Physeter macrocephalus Kogia breviceps Kogia simus Stenella		Habitat degradation by waste and discarded fishing gear These wastes also have impacts on marine life, habitats and marine mammals in two ways, especially if they are made of synthetic material non-degradable: - Entanglement, the process by which animals

			<p> attenuata Stenella clymene Stenella coeruleoalba Stenella frontalis Stenella longirostris Steno bredanensis Feresa attenuata Globicephala macrorhynchus Grampus griseus Lagenodelphis hosei Orcinus orca Peponocephala electra Pseudorca crassidens Tursiop truncatus Ziphius cavirostris Mesoplodon densirostris Mesoplodon europaeus </p>	<p> and their habitats are entangled or trapped, - Ingestion, with intentional or accidental ingestion of discarded or lost fishing gear. In the past, drift nets not properly handled were the main causes of accidental catches. Their ban in 1992 certainly contributed to the reduction of “ghost fishing”. However, the use of gillnets is also particularly harmful to migratory species. If a gillnet is abandoned or lost, it can continue to fish on its own for months - and sometimes years - indiscriminately killing. The most complete study on the impact of marine debris in general, including fishing gear, is probably the one conducted by Laist (1997). In general, the entanglement is considered as a cause of death much more likely than the ingestion. In all documented accounts of entanglements of sea turtles, seabirds, marine mammals, and fish or crustaceans, the most significant source of these incidents is a fishing gear (longlines in monofilament nets and ropes). The main source of this material is apparently the commercial fishery, although commercial vessels and recreational fishing may also contribute. As such, the campaign “Exocet-Antilles” conducted in February-March 2008 by the French Marine Protected Areas Agency, under the management of the Centre for Research </p>
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					<p>on Marine Mammals of the University of La Rochelle, has made a modeling result of anthropogenic activities throughout the EEZ of the French Antilles in the sanctuary AGOA. Predictions for the distributions of fishing buoys, fishing boats, floating waste and sailboats are shown in Figure 17. The resulting predictions show that all human activities (fishing and boating) is concentrated around the islands, while the waste is most abundant west of the West Indies, and perhaps also in deep zone, as shown the area northeast of the map. The predictions of the positions of fishing buoys indicate the extensive use of coastal waters including the islands of Guadeloupe and Saint Martin and Saint Barthelemy. The distribution of the latter coincides only partially with bottom gears such FADs (fish concentration devices), gill nets and traps that can be located up beyond the insular shelf (Guillou & Lagin. 1997).</p>
Exploitation of natural resources: Agriculture	significant	stable	stable		<ul style="list-style-type: none"> - Reproductive capacities and immune system could be affected and could lead to the death of the animal, tumors ... - Intoxication (hydrocarbons) - Physiological dysfunction (nervous system) - Intoxication newborns - Endocrine disruption
Exploitation of natural resources: Tourism	significant	stable	increase		<ul style="list-style-type: none"> - Desertion of habitats

Exploitation of natural resources: Industry	limited	stable	stable			- Reproductive capacities and immune system could be affected and could lead to the death of the animal, tumors ... - Intoxication (hydrocarbons) - Physiological dysfunction (nervous system) - Intoxication newborns - Endocrine disruption
Exploitation of natural resources: Forest products	limited	stable	stable			unknown
Increased population	significant	increase	increase			Loss of habitat, pollution...
Invasive alien species	significant	increase	increase	Steno bredanensis Tursiops truncatus		The "lionfish" <i>Pterois volitans</i> has invaded the waters of the French Antilles. It is recognized that in the Caribbean, he grew to 0.5mm / d and can reach 48cm (35cm max only in the Pacific). In Mexico, in areas already infested, the density of lionfish reached 100 to 150 lionfish per hectare, and over 400 individuals per hectare in some places in the Bahamas. A recent study showed that 80 lionfish consume about 1 km of reefs around 50,000 fish / year. Its diet varies, but about 50 fish species are concerned (including commercial fish and coral), and 20 species of crustaceans. The food source for marine mammals subservient to the coastal environment is thereby greatly threatened.
Pollution	significant	stable	stable	Megaptera novaeangliae Balaenoptera edeni Balaenoptera acurostrata Physeter macrocephalus		• Oil and chemical pollution Although oil spills are regularly observed within the EEZ of French West Indies (6 cases over the period 2008-2009) and even if the phenomenon is not

			<p> <i>Kogia breviceps</i> <i>Kogia simus</i> <i>Stenella attenuata</i> <i>Stenella clymene</i> <i>Stenella coeruleoalba</i> <i>Stenella frontalis</i> <i>Stenella longirostris</i> <i>Steno bredanensis</i> <i>Feresa attenuata</i> <i>Globicephala macrorhynchus</i> <i>Grampus griseus</i> <i>Lagenodelphis hosei</i> <i>Orcinus orca</i> <i>Peponocephala electra</i> <i>Pseudorca crassidens</i> <i>Tursiops truncatus</i> <i>Ziphius cavirostris</i> <i>Mesoplodon densirostris</i> <i>Mesoplodon europaeus</i> </p>	<p> negligible (the oil spills can affect marine mammals directly by causing poisoning and chronic irritation of sensitive tissues, or by impregnating and suffocating species) the total quantity of pollutants from discharges and possible "oil spill" is insignificant compared to the pollution caused by domestic sewage, the industrial discharges, urban runoff, spills, dumping operations, mining, pesticides, agricultural fertilizers and waste heat sources that can potentially alter ecosystems and feeding areas, calving rates and rest of marine mammals. Some substances bioaccumulated by plants, marine organisms including marine mammals are known to be toxic, carcinogenic or teratogenic or inducing death, sterility, malformations, etc. ... This is the case of benzo [a] pyrene (class of polycyclic aromatic hydrocarbons), polychlorinated biphenyls, endocrine disruptors, lead and other metals in the environment due to pollution. Bioaccumulation occurs through food, and all through the food web. The more the food chain is important, the greater is the accumulation and the greater are the adverse effects. Predators such as toothed whales, located in the terminal portions of food chains are particularly vulnerable to this type of pollution that can impair </p>
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					<p>their ability to reproduce and disease resistance. It is difficult today - to date no studies in the French West Indies - to determine precisely the effects of pollutants on marine mammal populations that frequent the sanctuary. Wastewater, contaminated by various endocrine disruptors (eg.: Xenoestrogens or drugs) are treated through the wastewater treatment plants (WWTP). In these treatments, chemical compounds can be degraded completely or partially, creating sewage sludge on their absorption by suspended particles. Various factors such as type of treatment or the residence time may influence the efficiency of removal of pollutants through STEP. The problem stems from the inefficiency of STEP to retain certain substances, it follows that the latter are found in the treated water which will then contaminate surface water. In Martinique and Guadeloupe, the use of chlordecone used as an insecticide, especially against the weevil in banana plantations from 1979 to 1993 resulted in contamination of 40 to 45% of agricultural parcels (Asconit, 2005). It was used until the years 2005-2007. Its use has polluted the whole Antillean ecosystem in which we find concentrations greater than 100 times the norm, especially in water and soil. Research conducted by IFREMER showed that some of the coastal</p>
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						marine environments are contaminated with organochlorine, but no data exists on the potential contamination of cetaceans and the amplification of the toxic effects of some solvents (carbon tetrachloride , chloroform and dichloromethane, associated with chlordecone. In fact, the presence of fish and contaminated areas in the waters of Guadeloupe and Martinique may have a direct influence on the health of marine mammals that frequent these areas particularly for food.
Other	significant	not specified	not specified	Megaptera novaeangliae Balaenoptera edeni Balaenoptera acurostrata Physeter macrocephalus Kogia breviceps Kogia simus Stenella attenuata Stenella clymene Stenella coeruleoalba Stenella frontalis Stenella longirostris Steno bredanensis Feresa attenuata Globicephala macrorhynchus Grampus griseus Lagenodelphis hosei Orcinus orca Peponocephala electra Pseudorca crassidens Tursiops truncatus Ziphius cavirostris Mesoplodon	Marine environment near the coasts and offshore	Noise disturbance. We must distinguish in the different noise disturbance from human activities in the ocean: - The point-source emission of high intensity at low and medium frequency (associated with seismic surveys, underwater explosions, implementation of sediment profilers or military sonar), - The "ambient noise", continuous and low-frequency, emitted mainly by shipping, - The potential impact of offshore wind fields represents another kind of emerging threat. For cetaceans which have a strong dependency relationship with the acoustic information (foraging, navigation, social interactions), all reductions of listening skills, whether by noise or physical alteration of the inner ear, can compromise the survival of individuals and populations. It is

				<p>densirostris Mesoplodon europaeus</p>	<p>recognized that the peaks of noise pollution (high intensity low frequency) are a major cause of stranding of cetaceans. The impacts of anthropogenic noise on cetaceans are multiple. Here we resume those discussed in the management plan of the Pelagos sanctuary for marine mammals (Tilot, 2004): - Physical impact : body tissue and auditory system damaged - Perceptive impact : make difficult to communicate with other of their kind, mask other important biological sounds, interference with listening skills, adaptive shift vocalizations - Behavioral impact: interruption of normal behavior, behavior change (less efficient), travel outside the area of noise. - Chronic stress - Indirect effects: depletion of preys, inciting an addiction to sounds The maritime traffic and the risk of collision Disturbance Marine traffic in the area of ??the sanctuary AGOA can be a threat for the cetacean at critical times (feeding, breeding, resting, socializing and migration). The stress can cause changes in behavior and physiology with a lower reproductive rate, decreased lactation, reduced disease resistance (David, 2002) ... These repeated disturbances may also have long term consequences on marine mammals and in particular the movement of animals in areas less favorables to their</p>
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					<p>lifestyle. The collision Collisions are a recognized cause of cetacean mortality in the world, but there is little information about it. It is therefore difficult to assess the importance and impact of collisions on cetacean populations. As part of a specific research on this issue, Laist et al (2001) shows that: - Any type of boat or craft may encounter cetaceans - The most lethal and serious injuries are caused by vessels over 80 m, and / or vessels up to a speed exceeding 13 knots - Collisions are responsible for many cetacean strandings since the fifties, when the speed and number of boats in action exceeded a certain threshold. All species can be potentially impacted by shipping, but at different levels depending on several parameters. The primary factors are the intensity and frequency of exposure to disturbance, and the biological importance of the period. We must also consider the individual characteristics of animals and the habitat characteristics. Small dolphins, fastest and strongest, are generally less affected by the boats. However, exceptional conditions, such as unusual concentration of boats in confined and shallow, could significantly increase the risks and collisions (Wells and Scott 1997 in David 2002). This risk is poorly documented, because little data exist on the main maritime routes used by ships in</p>
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					<p>the French Antilles. AIS (Automatic Identification System) phased in during 2011 by the CROSS will know more precisely the maritime traffic in the Caribbean. Whale watching Today, there are still no regulations concerning the activity of whale watching in the waters under French jurisdiction. This is necessary because Martinique is facing a recent development of whale watching, rapid and uncontrolled, potentially detrimental to the well being and survival of animals observed, especially as the observation mainly concerns some dolphin populations (<i>Stenella attenuata</i>, <i>Trusiops truncatus</i> <i>Lagenodelphis hosei</i>). In Guadeloupe, a charter of good practice was proposed in 2000 and signed in 2002 by institutional management (Regional Council, National Park, Council of Bouillante and DIREN) and professionals. For both islands, the activity is practiced in the leeward coast. In the Northern Islands, St. Martin and St. Barts, there is not yet commercial enterprises whose main activity is the observation of marine mammals. The whale watching activities, but also the recreational craft, sporting competitions or research can cause disturbance: the observation of whales and dolphins that often occurs during periods of breeding or resting, during which animals are more sensitive, can</p>
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						induce stress and reducing the rest, which cause a decrease in reproductive rates and increased mortality. Eventually, these repeated interactions and performed poorly may cause the flight of animals to other sites.
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Impacts and threats *around* the area

Impact and threats	Level	Evolution In the short term	Evolution In the long term	Species affected	Habitats affected	Description / comments
Exploitation of natural resources: Fishing	significant	unknown	unknown			unknown
Exploitation of natural resources: Agriculture	significant	unknown	unknown			unknown
Exploitation of natural resources: Tourism	significant	increase	increase			unknown
Exploitation of natural resources: Industry	significant	unknown	unknown			unknown
Exploitation of natural resources: Forest products	limited	unknown	unknown			unknown
Increased population	significant	increase	increase			unknown
Invasive alien species	significant	increase	increase			unknown
Pollution	significant	unknown	unknown			unknown
Other	significant	not specified	not specified	Megaptera novaeangliae Balaenoptera edeni Balaenoptera acurostrata Physeter macrocephalus Kogia breviceps Kogia simus Stenella attenuata Stenella clymene Stenella coeruleoalba Stenella frontalis		Noise disturbance We must distinguish in the different noise disturbance from human activities in the ocean: - The point-source emission of high intensity at low and medium frequency (associated with seismic surveys, underwater explosions, implementation of sediment profilers or

				<p> <i>Stenella longirostris</i> <i>Steno bredanensis</i> <i>Feresa attenuata</i> <i>Globicephala macrorhynchus</i> <i>Grampus griseus</i> <i>Lagenodelphis hosei</i> <i>Orcinus orca</i> <i>Peponocephala electra</i> <i>Pseudorca crassidens</i> <i>Tursiops truncatus</i> <i>Ziphius cavirostris</i> <i>Mesoplodon densirostris</i> <i>Mesoplodon europaeus</i> </p>	<p> military sonar), - The "ambient noise", continuous and low frequency, emitted mainly by shipping, - The potential impact of offshore wind fields represents another kind of emerging threat. For cetaceans which have a strong dependency relationship with the acoustic information (foraging, navigation, social interactions), all reductions of listening skills, whether by noise or physical alteration of the inner ear, can compromise the survival of individuals and populations. It is recognized that the peaks of noise pollution (high intensity low frequency) are a major cause of stranding of cetaceans. The impacts of anthropogenic noise on cetaceans are multiple. Here we resume those discussed in the management plan of the Pelagos sanctuary for marine mammals (Tilot, 2004): - Physical impact : body tissue and auditory system damaged - Perceptive impact : make difficult to communicate with other of their kind, mask other important biological sounds, interference with listening skills, adaptive shift vocalizations - Behavioral impact: interruption of normal behavior, behavior change (less efficient), travel outside the area of noise. - Chronic stress - Indirect effects: depletion of preys, inciting an addiction to sounds </p>
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h - Information and knowledge

Information and knowledge available

The Agoa sanctuary has a detailed management plan, well documented with maps (see Annex)

List of the main publications

Title	Author	Year	Editor / review
Distribution et Abondance des Cétacés dans la Zone Économique Exclusive des Antilles Françaises par Observation Aérienne : Campagne EXOCET - Antilles	Van Canneyt, Olivier/ Certain, Grégoire/ Dorémus, Ghislain/ Ridoux, Vincent/ Jérémie, Stéphane/ Rinaldi, Renato/ Watremez, Pierre/ CRMM	2009	Van Canneyt, Olivier/ Certain, Grégoire/ Dorémus, Ghislain/ Ridoux, Vincent/ Jérémie, Stéphane/ Rinaldi, Renato/ Watremez, Pierre/ CRMM
A la rencontre des cétacés	Terrasse, Marie-Ange	2012	Terrasse, Marie-Ange
A Review of Whale-Watching and Whaling with Application for the Caribbean	Hoyt, Erich/ Hvenegaard, Glen T.	2002	Hoyt, Erich/ Hvenegaard, Glen T.
Abondance et Distribution des Mammifères Marins dans l'Archipel Guadeloupéen 2008	Gandilhon, Nadège/ Girou, Etienne/ Breach/ DIREN Guadeloupe	2009	Gandilhon, Nadège/ Girou, Etienne/ Breach/ DIREN Guadeloupe
Ceaceans and Gillnet Fisheries in Mexico, Central America and the Wider Caribbean: A Preliminary Review	Vidal, Omar/ Van Waerebeek, Koen/ Findley, Lloyd T.	1994	Vidal, Omar/ Van Waerebeek, Koen/ Findley, Lloyd T.
Cetaceans of Martinique Island (Lesser Antilles) : Occurrence and Distribution Obtained From a Small Boat Dedicated Survey	Jérémie, Stéphane/ Gannier, Alexandre/ Bourreau, Stéphane/ Nicolas, Jean-Claude	2006	Jérémie, Stéphane/ Gannier, Alexandre/ Bourreau, Stéphane/ Nicolas, Jean-Claude
Draft Compilation of Capacities for Marine Mammals	UNEP	2008	UNEP
Échantillonnage Visuel & Acoustique des Cétacés et de l'Avifaune Marine dans les Eaux Territoriales à la Martinique : Novembre-Décembre 2004	Jérémie, Stéphane/ SEPANMAR	2004	Jérémie, Stéphane/ SEPANMAR
Échantillonnage Visuel et Acoustique des Populations de Cétacés et de l'Avifaune Marine dans les Eaux Territoriales à la Martinique : Février-Mars 2004	Jérémie, Stéphane/ SEPANMAR	2004	Jérémie, Stéphane/ SEPANMAR
État des Lieux et Évolution du Trafic Maritime en Côte sous le Vent de la Guadeloupe 2005-2009	Rinaldi, Caroline/ Rinaldi, Renato/ Association Évasion Tropicale	2010	Rinaldi, Caroline/ Rinaldi, Renato/ Association Évasion Tropicale
France Progress Report on Cetacean Research, January 2005 to December 2005, with Statistical Data for the Calendar Year 2005	Ridoux, Stéphane/ Van Canneyt, Olivier	2005	Ridoux, Stéphane/ Van Canneyt, Olivier
France. Progress Report on Cetacean Research, January 2007 to December 2007, with Statistical Data for the Calendar Year 2007	Ridoux, Stéphane/ Van Canneyt, Olivier	2008	Ridoux, Stéphane/ Van Canneyt, Olivier
Inventaire et Suivi des Cétacés des Eaux Territoriales à la Martinique par Échantillonnages Visuel & Acoustique: Résultats de 2005	Jérémie, Stéphane/ Nicolas, Jean-Claude/ Martail, Fred/ Raigné, Séverine/ SEPANMAR	2005	Jérémie, Stéphane/ Nicolas, Jean-Claude/ Martail, Fred/ Raigné, Séverine/ SEPANMAR

Mapping Diversity and Relative Density of Cetaceans and Other Pelagic Megafauna Across the Tropics: General Design and Progress of the REMMOA Aerial Surveys Conducted in the French EEZ and Adjacent Waters	Ridoux, Vincent/ Certain, Grégoire/ Dorémus, Ghislain/ Laran, Sophie/ Van Canneyt, Olivier/ Watremez, Pierre	2010	Ridoux, Vincent/ Certain, Grégoire/ Dorémus, Ghislain/ Laran, Sophie/ Van Canneyt, Olivier/ Watremez, Pierre
Observations of Small Cetaceans in the Eastern Caribbean	Boisseau, Olivier/ Leaper, Russel/ Moscrop, Anna	2006	Boisseau, Olivier/ Leaper, Russel/ Moscrop, Anna
Population Estimate and Inter-Island Movement of Sperm Whale, <i>Physeter macrocephalus</i> , in the Eastern Caribbean	Gero, Shane/ Gordon, Jonathan/ Carlson, Carole/ Evans, William E./ Whitehead, Hal	2006	Gero, Shane/ Gordon, Jonathan/ Carlson, Carole/ Evans, William E./ Whitehead, Hal
Rapport Final de l'Atelier Régional pour les Territoires Francophones de la Caraïbe en Réponse aux Échouages de Mammifères Marins	Ward, Nathalie/ Rinaldi, Caroline/ Association Évasion Tropicale/ ECCN	2010	Ward, Nathalie/ Rinaldi, Caroline/ Association Évasion Tropicale/ ECCN
Reintroduction of Manatees <i>Trichechus manatus</i> into Guadeloupe, Lesser Antilles : Issues, Questions and Possible Answers	Reynolds, John E. III/ Mote Marine Laboratory/ Parc National de Guadeloupe	2008	Reynolds, John E. III/ Mote Marine Laboratory/ Parc National de Guadeloupe
Report of Surveys Conducted on Small Cetaceans off Guadeloupe 1998 to 2005	Rinaldi, Renato/ Rinaldi, Caroline/ Sahagian, Philippe/ Association Évasion Tropicale	2006	Rinaldi, Renato/ Rinaldi, Caroline/ Sahagian, Philippe/ Association Évasion Tropicale
Sanctuaire Agoa : Mers sans frontières	Derivery, Muriel	2012	Derivery, Muriel
Sustainable Ecotourism on Atlantic Islands, with Special Reference to Whale Watching, Marine Protected Areas and Sanctuaries for Cetaceans	Hoyt, Erich	2005	Hoyt, Erich
Synthèse des Connaissances Acquises sur les Cétacés Présents en Guadeloupe et Martinique 1998-2006	DIREN Martinique/ SEPANMAR/ Association Évasion Tropicale/ BREACH	2008	DIREN Martinique/ SEPANMAR/ Association Évasion Tropicale/ BREACH
Synthesis of Cetaceans off the Island of Martinique, French West Indies	Jérémie, Stéphane/ UNEP/ SEPANMAR/ ECCEA	2005	Jérémie, Stéphane/ UNEP/ SEPANMAR/ ECCEA
The Potential of Whale-Watching in the Caribbean: 1999	Hoyt, Erich/ WDCS	1999	Hoyt, Erich/ WDCS
The Project for a Marine Mammals Sanctuary in the French West Indies in 2007 (Submitted by France)	UNEP	2007	UNEP
Projet de réinsertion du lamantin des Antilles (<i>Trichetus manatus manatus</i>) dans le Grand cul de sac marin en Guadeloupe : implications écologiques, économiques et sociales	Jessica Martial	2008	Jessica Martial

Briefly indicate in the chart if any regular monitoring is performed and for what groups/species

Species / group monitored (give the scientific)	Frequency of monitoring (annual / biannual /	Comments (In particular, you can describe here the monitoring methods that are used)

name)	etc...)	
Marine mammal	biannual	<p>For observation of cetaceans in their natural environment, visual observation is classically done from boats. This approach presents some drawbacks. First, the observers have to find the animals and approach them, either to provide individual recognition (photo-identification), or to confirm the presence/absence of animals in certain marine areas. Each survey was carried out using simultaneously two sails motorized boats. On a daily effort, each platform prospected randomly a different target of four line transects, spaced between waypoints defined in advance. Successive on-transect GPS boat positions were automatically tracked by the software MAX SEA, 10.1.3.2 version (http://comfr.maxsea.fr/MaxSea/). Concretely, three trained observers and one more observer (minimum) qualified in cetacean's recognition constantly observed at 180° front and sides on a constant speed moving platform. Minimum on-transect navigation speed for boats was determinate to 5 knots in accordance with approximated whales travelling speed of 3 (especially in mother and calf pod) to 6 miles per hour, even if they can swim much faster especially for isolated animals. Watches were conducted with the unaided eye reticulated 7X50 Marine BUSHNELL waterproof binoculars and distances measured in mil-dot graduations in situ. Cetaceans on-transect observation on the line transect was digitally reported at its initial position with relevant parameters such as axis of the boat, compass bearing, compass heading, angle of the cluster detected with the boat and height of each human observer and platform. The size estimation of each cluster (average of minima and maxima of individuals in a group) was fixed by at least 2 different observers. Each observation was reported with the date, the time, the name of the observers, the weather, the speed of the boat, the GPS position (station or interval, as the platform is moving or not) and biological or ecological notations. NIKON D300 were used to take pictures of the animals, directly from the line transect or in the merging mode when necessary. All events occurring off and on-transect (macro-wastes, birds, fishes, turtles, human activities, changes in the cap or navigation, observer rotation, boat-breaks, climatic changes etc.) were systematically reported with localization in notepads with detailed information. Cetaceans are vocally active. They emit various sounds depending on the species and individuals in the same species: harmonics or transients signals as calls, wheezing, moans, vocalizations, clicks, click trains (buzzes)... For some species, the acoustic intensities can reach more than 200dB re 1µPa at 1m. The sounds could be narrowband (wheezing) or broadband (clicks). The objectives of acoustic observations are: detecting the presence of cetaceans, identifying species, classifying different types of sounds and possibly locating individuals. This diversity of sounds makes it difficult to use the same system for recordings different species. For many applications, the recording system is dedicated to the observations of one specific species. The technical specifications (D/A converter, range, accuracy...) will be chosen in taking account the acoustic intensities, the forms and the frequencies of the emitted sounds. The classical technique is to use easy portable equipment on vessels, including one or more than one hydrophone (Instantaneous Acoustic Observatories), a preamplifier and a data acquisition system (DAT, personal computer or portable digital recorder). The global research effort of the marine zone that will be investigated will associate visual and acoustics observations, these both techniques are complementary. This approach is instantaneous (the results</p>

	<p>are obtained only during this effort), localized on a specific marine zone and generally requires strong financial support. Acoustic detections of singing males whales were performed with one portable hydrophone DolphinEAR / Pro omni (spectral band: 15Hz-24000Hz and preamp) in 2008, with the Aquarian hydrophone H2b (spectral band: 20Hz-20000Hz and preamp rolls MP13 Mini Mic used with audio earphones SBC HL145 Philips) in 2009 and the Colmar GP0280 Omni directional preamplifier hydrophone in 2009 and 2010. These acoustics observations were done on-transect with a boat-stop, noted in the line transect as a limited break and removed from visual observation time-pressure (average of 12 minutes by acoustic station, except in case of positive detection). After each stop times (merging mode, acoustic stations, interrupted line transect because of rainstorms or technical check needs), the effort started again at the initial interruption GPS point. In case of long-time non compliant climatic conditions, we have definitively disrupted the effort and, when possible, have reported the prospection for another day.</p>
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Chapter 4. ECOLOGICAL CRITERIA

(Guidelines and Criteria Section B/ Ecological Criteria) Nominated areas must conform to at least one of the eight ecological criteria. Describe how the nominated site satisfies one or more of the following criteria. (Attach in Annex any relevant supporting documents.)

Representativeness:

The Caribbean islands are one of 34 global biodiversity hotspots, characterized by great ecological particularly threatened. This diversification can be explained by the geographical isolation of the islands. In total, this archipelago of tropical islands and semi-tropical volcanic features 10000 km² of coral containing 25 genera of coral, 22000 sq km of mangroves and upto 33,000 sq km of seagrass beds. The shallow marine environment contains 663 species of molluscs, 30 species of cetaceans, over 1400 species of fish and 76 species of sharks. Many wide-ranging migratory species such as seabirds, turtles and whales, occupy a great diversity of habitats at different stages of development or the seasons.

Martinique

Martinique is a volcanic island inserted into the center of the West Indies. Its marine field contains a significant natural heritage but very degraded.

Generally, in the tropical, the richets coastal environments are the mangroves, seagrass beds and coral reefs.

In total, on the coast of Martinique, there are 300 species of benthic and pelagic fish, 35 species of gorgonians, 45 coral species, 370 mollusks and 5 species of sea turtles and 21 marine mammal species (all species of turtles and marine mammals are classified as "threatened" on the IUCN Red list and listed in Annex II of SPAW).

Guadeloupe

The Department of Guadeloupe is an archipelago of two main islands, Basse Terre (848 km²) and Grande-Terre (590 km²), surrounded by several small islands, including Marie-Galante, Les Saintes and La Désirade. Like the other islands of the Lesser Antilles, it is entirely volcanic formation, the product of subduction of oceanic crust under the Atlantic Caribbean plate.

Marine ecosystems of Guadeloupe are characteristic of the island systems in the region. As in Martinique, we find coral formations (fringing reef, barrier reef in the Great cul-de-sac marine), seagrass beds in sheltered areas (6700 hectares) and mangroves covering approximately 3,000 hectares.

Among the wildlife species most remarkable, three species of turtles (hawksbill, leatherback and green turtle) nest on the beaches of Guadeloupe. Loggerhead and olive ridley turtles are found mainly in oceanic waters.

As for Martinique, the ocean waters are frequented by 24 species of cetaceans.

Saint Martin and Saint Barthelemy

These two islands contain ecosystems characteristics of the Caribbean, including coral reefs, coral bioconstruits and seagrass beds. Saint Martin has three species of endangered turtles (hawksbill, leatherback and green turtle) that nest on the beaches back.

Conservation value:

Habitat loss and degradation are the main factors in the decline of global biodiversity, and a major threat for marine mammals region-wide. In the Caribbean, the main causes of destruction of these habitats are the coastal degradation for urban development, tourism, agriculture, deforestation and pollution (UNEP, 2005).

The article 3 of the Declaration of the Agoa sanctuary mentions that appropriate measures (...) will be taken into the sanctuary to ensure a favorable conservation of marine mammals by protecting them and their habitats, of direct or indirect negative impacts, ascertain or potential, of human activities. The sanctuary thus contributes to the preservation and maintenance of marine ecosystems, ensures their long term viability and maintenance of their biological and genetic diversity, and therefore ensures favourable conditions for marine mammals throughout the area it covers. Besides, the sanctuary and its management board is equipped with regulation competencies that gives it legitimacy to take any appropriate initiative, including regulatory and/or management measures, to guarantee the conservation of marine mammal species and populations in their different life cycle stages. Consequently, the sanctuary participates in the conservation of an important number of marine mammal species that are present in, and of major importance for, the Wider Caribbean.

Critical habitats:

The sanctuary includes 24 species of marine mammals, all included in the Annex II of the SPAW Protocol and in the Annex II of the CITES, and 8 are listed on the IUCN Red List as "Least concern" and one other as "vulnerable". By the huge area it encompasses, located along the northern part of the Lesser Antilles, the sanctuary contains important population numbers of these species, therefore an important contribution to their overall population sizes in the region.

Connectivity/coherence:

In September 2011, NOAA's Office of National Marine Sanctuaries and France's Marine Protected Areas Agency signed a sister sanctuary agreement to protect endangered humpback whales that migrate annually between NOAA's Stellwagen Bank National Marine Sanctuary and the Agoa Marine Mammal Sanctuary in the French Antilles. This area includes the islands of Guadeloupe, Martinique, St. Martin and St. Barthelemy at the Caribbean's eastern edge. Both sanctuaries provide critical support for the North Atlantic population of humpback whales, which spend spring and summer at Stellwagen Bank and other northern feeding grounds before heading south to the warmer waters of the Caribbean Sea in late fall to mate and give birth to their young.

The entire 138,000 square-kilometer French Exclusive Economic Zone (EEZ) in the Caribbean is currently defined as a critical habitat for marine mammals. In all, 21 of the 28 cetacean species, including baleen whales, dolphins and other toothed whales, that can be found in the Caribbean Sea have been documented in the French Antilles. Some of these species are year-round residents, others are seasonal visitors, and still others simply pass through the waters around these islands. Agoa was created consistent with the objectives of the Convention for the Protection and

Development of the Marine Environment of the Wider Caribbean (the Cartagena Convention) and its Protocol on Specially Protected Areas for Wildlife (SPA), and the United States Under the auspices of UNEP's SPA Protocol, the sister sanctuary agreement will help improve humpback whale recovery in the North Atlantic by providing new avenues for collaborative education, scientific and management efforts, including joint research and monitoring programs. This effort will help improve knowledge about humpbacks in the Atlantic and the threats they face from both natural and man-made changes to their environment. NOAA anticipates the relationship will be crucial to the long-term conservation of the North Atlantic humpback whale population, as well as to the development of future cooperative agreements with other countries. Before the end of the year (2012) an agreement will be signed between the Agoa sanctuary and the future marine mammal sanctuary in the Dutch Antilles. The cooperation with the Marine Mammal Sanctuary of the Dominican Republic (SMMRD) will also be strengthened.

Chapter 5. CULTURAL AND SOCIO-ECONOMIC CRITERIA

(Guidelines and Criteria Section B / Cultural and Socio-Economic Criteria) Nominated Areas must conform, where applicable, to at least one of the three Cultural and Socio-Economic Criteria. If applicable, describe how the nominated site satisfies one or more of the following three Criteria (Attach in Annex any specific and relevant documents in support of these criteria).

Socio-economic benefits:

The French overseas territories, as regards to the West Indies (archipelago of Guadeloupe, Martinique, St. Barthélemy, St. Martin), have a particularly extensive maritime public domain, and are home to many terrestrial and marine protected areas (national parks, regional park, nature reserves, biosphere reserves, etc.). The valorization of their natural resources, biodiversity and wildlife, is a decisive advantage in the promotion of a sustainable nature tourism.

Socio-economic benefits

Overall diagnosis of the activity of whale watching in the French Antilles in 2010

Our studies have identified nine operators offering whale watching trips in the French Antilles. Table 3 indicates the number of operators for each island. The activity is growing in Martinique. In Guadeloupe, its evolution was moderated but it would seem that in light of investigations conducted during this study, its evolution can be intensified in the coming years (Table 3). Whale watching is not developed in the islands of St. Barthelemy and St. Martin. This finding may reflect the fact that the observations of dolphin populations are not regular. However, a structure of St. Martin is considering of developing this activity during the humpback whales season in the area. Except one structure, all operators of Martinique reported to be growing and plan to invest in new boats and hire in the next 5 years. During the writing of this report, an operator has acquired a new boat and hired an employee to enable it to increase its capacity to carry passengers.

Table 3 : Number of ww structures in the French Antilles

	Ww operators	Operators offering multi-topic trip with a ww component	Number of structures considering of developing a ww activity (specific or multi-topic) in a short or long term

Martinique	4	2	5
Guadeloupe	3	0	5
Saint-Barthélemy	0	0	0
Saint-Martin	0	0	1

The activity of whale watching started in Guadeloupe in 1998 with excursions organized from Bouillante by the diving club "les heures saines" accompanied by naturalist guides from the association "Evasion Tropicale".

In Martinique, the activity began in 2003 and has grown strongly since the number of operators increased from 1 in 2003 to 6 in 2010 (Figure 8). Five more structures are planning to develop in the short term this activity and the "Direction de la Mer" (navy) considers that this activity could be a possible opportunity for a dozen commercial fishermen to change profession.

In Guadeloupe, growth has remained moderate since the evolution of the number of operators increased from 1 to 3 of 1998 to 2010.

However, according to surveys in this study, it appears that the activity of whale watching will evolve similarly in the two islands in the coming years. Indeed, if we take into account the operators who reported us that they are thinking about developing a commercial whale watching, this is a total of 11 operators who may soon pursue the activity in Martinique and 8 in Guadeloupe. The investigations focused only on tourist facilities offering boat trips (diving, sport fishing, day cruise). It is therefore difficult to estimate the future development in the short and long term activity.

Number of whale watchers and economic contributions

In total, the activity of whale watching attracts each year 18,500 whale watchers and brings in about 561,000 euros.

The activity is most developed in Martinique where there are near 14,500 whale watchers in 2009. The economic contributions are valued at 381,000 euros per year. The activity is growing, and will soon be implementing new structures.

Guadeloupe has received in 2009, about 4000 whale watchers, 3.5 times less than Martinique. The outings are also different compared to Martinique since all are accompanied by naturalist guides.

	Number of whale watchers/year	Economic contributions of the whale watching by year	Average price
Martinique	14500	381 000	49 euros
Guadeloupe	4 000	180 000	63 euros
Saint-Barthélemy	0	0	0
Saint-Martin	0	0	0

Compared to neighboring islands, Martinique has an activity of whale watching almost similar to the islands of Dominica and St. Lucia. The number of whale watchers is identical to Dominica. Economic contribution, however, are significantly lower for Martinique, this is due to the fact that the multi-thematic outputs (7430 whale watchers), we only counted a percentage of turnover reported by the operator (see previous paragraph).

Guadeloupe has an activity for its whale watching far less developed than its neighboring islands, but will probably soon be implementing new structures.

The trade of whale watching in St. Lucia is one of the most important in the Caribbean (O'Connor et al, 2009).

Table 5 : Comparison between whale watching in the French Antilles and in Dominica and St Lucia

	Number of whale watchers/year	Economic contributions of the whale watching by year in \$ (direct expenditure)	Number of tour operators
Martinique	14 500	529 461 \$	6
Guadeloupe	4 000	250 139 \$	3
Dominique	14 500	585 000 \$	4
Sainte-Lucie	16 650	832 500 \$	4

Chapter 6. MANAGEMENT

a - Legal and policy framework (attach in Annex a copy of original texts, and indicate, if possible, the IUCN status)

National status of your protected area:

A public establishment dedicated to the protection of the marine environment

The French Marine Protected Area Agency is a public establishment of an administrative nature created by the law of 14 April 2006 and placed under the governance of the Ministry of Ecology, Sustainable Development, Transport, and Housing.

The main assignments of the French Marine Protected Area Agency are :

- supporting public policies for the creation and management of marine protected areas in the entirety of French maritime waters
- running the MPA network
- technical and financial support of natural marine parks
- reinforcing French potential in international negotiations concerning the sea.

Agency Organisation and governance

Its head office is in Brest (Finistère). It has branches in mainland France and overseas, outreach teams linked to natural Marine parks and park projects. Its government is exercised by an executive board on which other deliberating authorities are dependent (the Natural Marine Park management advisory councils and board) and a consultative instance (the Scientific Council).

Deliberating authorities

The executive board

The executive board is the main decision-making authority of the agency. Its members are appointed for three years. Its president is elected from within.

The executive board meeting of 25 February 2010 re-elected Jérôme BIGNON (Member of Parliament for the Somme), as president and Pierre-Georges DACHICOURT (President of the Comité National des Pêches Maritimes et des Élevages Marins) and Ferdy LOUISY (President of the Parc National de Guadeloupe), as vice-presidents.

This board is made up of two colleges (composition is defined in article R334-4):

1. State representatives (16 members)
2. elected members, users, and associations (23 members)

Article R334-8 of the environmental code defines its sphere of competence, which notably enables the executive board to define Natural Marine Park and Marine Protected Area management policies in its sphere of competence (creation, management, evaluation).

The executive board meets approximately 3 times per year.

The executive committee

Within the executive board there is an executive committee comprised of the executive board president, the vice presidents, a representative of the governing ministry, a representative of the ministry responsible for the sea, a representative of the ministry responsible for maritime fishing and marine farming, a representative of the ministry responsible for overseas departments, a representative of regional authorities, a president of the Natural Marine Park Management Council, a representative of another category of Marine Protected Area, the establishment employee representative, and another qualified person.

The committee prepares works, monitors the execution of executive board decisions, and exercises the powers given to by the executive board. It also meets approximately 3 times per year.

Natural Marine Park management councils: local governance

The natural Marine Park Management Council groups together the main local people involved representing the different users of the maritime area; maritime professionals and leisure users, environmental protection and cultural heritage associations, elected representatives, qualified celebrities, State departments, etc. The composition of the management council of each park is laid out by the decree concerning the creation of each park.

The objective of a park management council is to associate each of the people concerned to decisions relating to the sea and its management. This participative means of operating constitutes one of the original features of a natural marine park. In fact, the state is traditionally the only organisation competent at sea.

The management council is the decisional authority of the park. It draws up the management plan, a document specifying the park's objectives over 15 years, action plans, means, and monitoring indicators of the classified maritime area to be put in place. The management council can issue

simple or compliant opinions when activities are likely to have a notable effect on the Marine Park environment (article L 334 – 5 Environmental Code).

To put in place its policy, the management council has delegations of the executive board of the Agence Des Aires Marines Protégées, and the use of a team of agents and financial and technical means put in place by the agency.

Agency consultative authority

Scientific Council

The Scientific Council is consulted by the president of the executive board or the director of the agency for any question concerning all the assignments of the agency, including Natural Marine Parks. (refer to article R 334-17 of the Environmental Code). It is notably consulted concerning projects regarding the creation of Natural Marine Parks and their management plans.

The Scientific Council is made up of 10 people appointed by an order issued by the governing ministry due to their competence in the fields of protection, rehabilitation, or sustainable development of the natural marine heritage.

The president of the Scientific Council is Eric FEUNTEUN.

IUCN status (please tick the appropriate column if you know the IUCN category of your PA):

unknown

b - Management structure, authority

A strong involvement of the local communities of the French Antilles in the governance of the sanctuary

A shared governance

With the creation of the Agoa sanctuary, France and the four French communities demonstrate their commitment. The strong support demonstrated by the communities during the creation of the sanctuary, is continued by a common governance involving local political authorities, socio-professional associations and state departments in the governance of the Agoa sanctuary. A management committee of the sanctuary was established in July, 2012. Composed of local players from Guadeloupe, Martinique, St. Martin and St. Barthelemy (political, associational, economic, scientific, administrative), the committee will be responsible for recommending measures to protect and conserve species and their habitats over the entire EEZ of the French Antilles.

Similarly the coordination and management of AGOA involves active participation of all including sea users and the general public. A provision of the means necessary for supervision of the sanctuary as part of the "State action in the Sea." A necessary regional and international approach.

Conservation and management issues of marine mammals, transcend national boundaries, due to their high mobility and migration. A regional and international approach are needed. Since its creation, Agoa has been presented under the sign of the opening to forge cooperative links with existing and new sanctuaries in the Caribbean. To do this the Agency is working closely with the Regional Activity Centre for the Specially Protected Areas and Wildlife of the Caribbean (SPAW RAC) which has developed an action plan for

the conservation of marine mammals in the Caribbean region.

The main objectives are:

- support the establishment of protected areas in the Caribbean region in particular "corridors", breeding areas and nurseries attended by a species or group of species of marine mammals. Some countries have already demonstrated their commitment to this process (Dominican Republic, the Netherlands under the Dutch Antilles).
- deepen the technical and scientific cooperation between sanctuaries which are visited by marine mammal throughout their migratory route. To this end, a joint declaration was adopted at the second international conference on marine mammals held in Martinique in November 2011. It has also celebrated the twinning of Agoa and the US sanctuary of Stellwagen Bank.

c - Functional management body (with the authority and means to implement the framework)

Description of the management authority

The French MPA Agency is represented in the French Antilles by its local branch, based in Guadeloupe, the National Park.

The team of the French Antilles

The Agency is, by convention, represented by the Director of the National Park of Guadeloupe, main MPA sector.

The team consists of two people:

Denis GIROU, Head of the local branch of the French MPA Agency

Nicolas Maslach, head of Agoa sanctuary for marine mammals in the French Antilles

Means to implement the framework

The activities of the local branch of the French Antilles are organized around four main areas:

- The Agoa marine mammal sanctuary
- Activities related to the network of marine protected area in the region: meetings, events, funding. These actions are carried out with support from project coordinators located at the Agency headquarters in Brest. They are financed from non-regionalised budgets. Based on the regional strategic analysis conducted by the French MPA Agency in partnership with the National Park of Guadeloupe and the University of the West Indies and French Guiana, the branch is supporting the development of the network.

Scientific, cooperation and awareness activities which could be interesting for the Caribbean region. These actions are carried out with support from project coordinators located at the Agency headquarters in Brest. They are financed by non-regionalised budgets. These actions of regional cooperation are under the framework of the protocols signed (SPAW RAC, NOAA, etc.).

- Representational activities of the Agency in the region or in regional cooperation. They are financed by non-regionalised budgets in liaison with the Agency management. These cooperative operations are conducted primarily through the network of protected areas under SPAW, or cooperative actions of the protocol (for example, the action plan for marine mammals).

d - Objectives (clarify whether prioritized or of equal importance)

Objective	Top priority	Comment
Improve knowledge on protected areas and species	No	In order to implement concrete actions, it is essential to fully understand the species present in the sanctuary, and the threats they face. For this it is necessary to continue scientific monitoring implemented during recent years. PROMOTE SCIENTIFIC RESEARCH Management actions: implement the means necessary for the periodic assessment of: -the status of marine mammal populations -the state of human pressures and ascertain or potential threats on marine mammals in the sanctuary.
Control human impacts on protected areas and species	No	Control human activities that can have ascertain or potential negative impact on areas and threatened species, such as shipping, fishing, whale watching ... PRIORITY: - The seismic research and other activities using acoustics - The use of fishing gear which may result in the capture of marine mammals - The competitions of fast craft engines - Maritime transport and other travel motorized boats - Any other activity likely to prejudice the welfare of marine mammals and integrity of their population.
Preserve animals/plants and key/endangered habitats	No	Implementation of supporting measures and regulatory measures
Strengthen regional cooperation	No	Further foster partnerships established with various regional institutions and NGOs; Partner with other sanctuaries under the auspices of the Cartagena Convention and its SPAW Protocol (Stellwagen, Silver Bank sanctuary and the future of the Netherlands Antilles). This cooperation will do as well on the scientific, economic and cultural.
Prevent, reduce and control priority pollution (see Cartagena Convention)	No	1. Intensify the fight against all forms of pollution from maritime or land or who may have a direct or indirect impact on marine mammals conservation. 2. Eliminate the discharges of toxic compounds in the sanctuary on the priority substances as listed in Annex 1 of the Protocol on pollution sources and land-based activities of the Cartagena Convention PRIORITY POLLUTION : - Pollution caused by discharges from ships - Pollution by dumping of wastes/oils from ships, aircraft or manmade structures at sea - Pollution caused by discharges from shore or from rivers, estuaries, coastal establishments, outfall of, or from any other sources within their territories.

e - Brief description of management plan (attach in Annex a copy of the plan)

MANAGEMENT ACTIONS

1 - KNOWLEDGE / MONITORING

- 1 - Campaigns : biannual transect lines and acoustic samples:
 - Study the evolution of the estimated numbers in the sanctuary,
 - Identify the number of individuals during migration periods,
 - Inform on the population dynamics
 - Study the evolution of the abundance and distribution
- 2 - Genetic monitoring campaign (biopsy) and movement of individuals (tags).
- 3 - Program of photo-identification of individuals to describe their site fidelity (humpback whales, sperm whales ...).
- 4 - Characterization of habitat favorable for marine mammals,
- 5 - Acoustic monitoring (including buoys), identification of marine mammals and noise.

6 - Continuous assessment of interactions with human uses (bycatch, depredation, water activities, pollution, noise, etc. ..)

2 -SUPPORT/GUIDANCE

1 - Definition of an intervention network for animals in distress, entangled and/or stranded,

2 – Definition/support/guidance of an intervention network for prevention of pollution, pollution control, and followed post-pollution,

3 - Support and assistance for projects aiming at conserving and restoring habitats likely to receive marine mammals,

4 - Support for tourism operators in an eco-responsible approach,

5 - Support for the production of scientific studies and scientific articles,

6 - Expertise and advice to project developers for impact assessments,

7 - Support/Training for MPA managers of the French Antilles and the Caribbean islands for the observation, identification and intervention in case of distress and strandings

8 - Support the targets of the chlordecone plan,

9 - Support/search for innovative devices intended to limit the impact of human activities on marine mammals

10 - Promotion of the sanctuary at regional level, of its work, its governance, organization...

3 - CONTROL/AWARENESS

1 - Pooling of resources of the State action at sea, of the services and operators of the state and of the network of MPAs for:

- Establishment/strengthening control over the disturbance and harassment of cetaceans,

- Strengthening control on the degradation of natural areas and seascapes that can have adverse effects on habitats of marine mammals,

- Awareness of stakeholders to approach techniques

- Promoting respect of the Order of July 1st 2011

- Establishment of outreach and educational tools (website, code of conduct, activities, exhibitions, forums)

4 – REGULATION:SUPERVISION

As recommended by the statement:

1 - Regulate:

- Activities of whale watching,

- Seismic research and other activities using acoustics,

- The use of fishing gear which may result in the capture of marine mammals,

- Offshore competition, nautical events,

2 - Supervise:

- Shipping,

- The establishment of a network "alert : stranded and distressed animals" throughout the French Antilles

Management plan - date of publication

: 7/20/12

Management plan duration

: 5

Date of Review planned

: 7/20/17

f - Clarify if some species/habitats listed in section III are the subject of more management/recovery/protection measures than others

Habitats

Marine / costal / terrestrial ecosystems	Management measures	Protection measures	Recovery measures	Comments/description of measures
Mangroves	yes	yes	no	
Coral	yes	yes	no	
Sea grass beds	yes	yes	no	
Wetlands	yes	yes	no	
Forests	yes	yes	yes	
Others	no	no	no	

Flora

Species from SPAW Annex 3 present in your area	Management measures	Protection measures	Recovery measures	Comments/description of measures
Cactaceae: Melocactus intortus	no	no	no	
Compositae : Laguncularia racemosa	no	no	no	
Cymodoceaceae: Halodule wrightii	no	no	no	
Cymodoceaceae: Syringodium filiforme	no	no	no	
Hydrocharitaceae: Thalassia testudinum	no	no	no	
Hydrocharitaceae: Halophila decipiens	no	no	no	
Rhizophoraceae: Rhizophora mangle	no	no	no	

Fauna

Species from SPAW Annex 2 present in your area	Management measures	Protection measures	Recovery measures	Comments/description of measures
Mammals: Balaenoptera edeni	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild.

				<p>II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
Mammals: Megaptera novaeangliae	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of</p>

				deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Balaenoptera acutostrata	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Physeter macrocephalus	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually

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Mammals: Kogia breviceps	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Kogia	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order

simus				<p>of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
Mammals: Ziphius cavirostris	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The</p>

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Mammals: Mesoplodon europeus	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Mesoplodon densirostris	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are

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Mammals: Orcinus orca	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction</p>

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Mammals: <i>Feresa attenuata</i>	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: <i>Pseudorca crassidens</i>	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including

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Mammals: Globicephala macrorhynchus	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times:</p> <p>I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild.</p> <p>II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles.</p> <p>III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild:</p> <ul style="list-style-type: none"> - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May

				1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Peponocephala electra	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Lagenodelphis hosei	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or

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<p>Mammals: Stenella attenuata</p>	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>

Mammals: Stenella frontalis	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
Mammals: Stenella longirostris	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the</p>

				<p>fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
<p>Mammals: Stenella clymene</p>	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
<p>Mammals: Tursiops truncatus</p>	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and</p>

				<p>sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
Mammals: Stenella coeruleoalba	yes	yes	no	<p>JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine</p>

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Mammals: Grampus griseus	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological samples, the deliberate disturbance including prosecution or harassment of animals in the wild. II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles. III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild: - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.
Mammals: Steno bredanensis	yes	yes	no	JORF No 0171 of July 26th, 2011 ORDER Order of July 1st 2011 establishing the list of protected marine mammals (all) on the national territory and the procedures for their protection NOR: DEVL1110724A: For species of cetaceans and sirenians which the list is set out below, are prohibited on national territory, and in marine waters under the sovereignty and jurisdiction in, and at all times: I. - The destruction, mutilation, intentional capture or removal including biological

				<p>samples, the deliberate disturbance including prosecution or harassment of animals in the wild.</p> <p>II. - The destruction, alteration or degradation of breeding sites and resting places for animals. These prohibitions apply to physical or biological factors deemed necessary for the reproduction or the rest of the species, as long as they are actually used or usable in successive rounds of breeding or resting of this species and provided the destruction, alteration or degradation jeopardize the conservation of the species by questioning the fulfillment of biological cycles.</p> <p>III. - The possession, transportation, naturalization, peddling, sale or purchase, the commercial use or not of marine mammal specimens collected in the wild:</p> <ul style="list-style-type: none"> - The national territory, and in marine waters under the sovereignty and jurisdiction under after October 1, 1995; - The European territory, and in marine waters under the sovereignty and under the jurisdiction of other Member States of the European Union, after the date of entry into force of the Directive of 21 May 1992 referred to above. <p>The prohibition of deliberate capture does not apply to accidental capture in fishing gear as defined in Regulation (EC) No 812/2004 mentioned above.</p>
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g - Describe how the protected area is integrated within the country's larger planning framework (if applicable)

JORF No 0171 of July 26th, 2011

ORDER

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h - Zoning, if applicable, and the basic regulations applied to the zones (attach in Annex a copy of the zoning map)

Name	Basic regulation applied to the zone
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i - Enforcement measures and policies

All means available to the State action at sea (navy, customs, marine brigade, means of marine protected areas...).

The means of State action at sea in the Caribbean are the following :

- Navy

2 surveillance frigates with 2 helicopters (Alouette and Panther)
 1 BATRAL class landing ship ("Light ferry ship")
 1 tugboat
 1 patrol boat from the gendarmerie

- Customs

3 ocean-going patrol boats and 6 coastal vessels
 2 helicopters
 2 Cessnas

- Maritime Affairs

6 small boats

- Departemental Gendarmerie

7 coastal craft
 2 helicopters

- Public safety

Two helicopters provided by end 2012

- MPA managers

4 boats

j - International status and dates of designation (e.g. Biosphere Reserve, Ramsar Site, Significant Bird Area, etc.)

International status		Date of designation
Biosphere reserve	yes	2/20/89
Ramsar site	yes	12/8/93
Significant bird area	no	
World heritage site (UNESCO)	no	
Others:	no	

k - Site's contribution to local sustainable development measures or related plans

not evaluated

l - Available management resources for the area

Ressources		How many/how much	Comments/description
Human ressources	Permanent staff	2	Permanent staff : 2 + support from the staff of the French Marine Protected Areas Agency (about 4 people working on the Sanctuary issues) Volunteers : for the monitoring campaign (local NGO's from the four collectivities) Partners : SPAW-RAC, Action de l'Etat en Mer, stakeholders from marine protected areas, NGO's, NOAA, Stellwagen Bank, Dutch Antilles and Ministry of environment of the Netherlands...
	Volunteers	20	
	Partners		
Physical ressources	Equipments	Computer and scientific equipment	
	Infrastructures	Office within the National Park of Guadeloupe	
Financial ressources	Present sources of funding	French Marine Protected Areas Agency (operating costs), SPAW-RAC (scientific mission)	
	Sources expected in the future	French Marine Protected Areas Agency (budget in progress)	
	Annual budget (USD)	400000	

Conclusion Describe how the management framework outlined above is adequate to achieve the ecological and socio-economic objectives that were established for the site (Guidelines and Criteria Section C/V).

Through the conservation of habitats and species of cetaceans, the Agoa sanctuary contributes to the preservation of a natural resource which may promote the development of ecotourism and cultural activities (whale watching, festivals, awareness on the protection of the marine environment ...)

Chapter 7. MONITORING AND EVALUATION

In general, describe how the nominated site addresses monitoring and evaluation

Twice a year, a scientific team made up of people and volunteers from the French MPA Agency, the SPAW-RAC, regional institutions, NGO's, "Action de l'Etat en mer"...realizes a monitoring transect in the French and neighboring countries EEZ (Dutch Antilles, Anguilla...).

The method employed is the following :

The proposed methodology includes four monitoring techniques – identifying marine mammals from above, on and under water, as well as monitoring human activities (e.g., fisheries, maritime traffic, pollution) that impact cetaceans and wider region ocean health.

1 – Campaigns at sea - transects

a) Scientific activities

- Populations surveys (movements, behavior, distribution, abundance)
- Photo-identification
- Genetic sample
- Tagging (exclusively on the humpback whale- in the Lesser Antilles, with the exception of Guadeloupe where a tagging mission is already scheduled in 2012 by another partner institution)
- Passive acoustic monitoring (gather information using submerged specially equipped and strategically placed hydroacoustic buoys)
- Status report of human activities which could have an impact on cetaceans (fisheries, marine traffic maritime, pollution, waste...)

Objective: analysis and mapping of data collected during the campaigns at sea.

What indicators are used to evaluate management effectiveness and conservation success, and the impact of the management plan on the local communities

Indicators by category	Comments
<i>Evaluation of management effectiveness</i>	
Action plan and indicators	See the management plan attached
<i>Evaluation of conservation measures on the status of species populations within and around protected area</i>	
Action plan and indicators	See the management plan attached
<i>Evaluation of conservation measures on the status of habitats within and around the protected area</i>	
Action plan and indicators	See the management plan attached
<i>Evaluation of conservation measures on the status of ecological processes within and around the protected area</i>	
Action plan and indicators	See the management plan attached
<i>Evaluation of the impact of the management plan on the local communities</i>	

Chapter 8. STAKEHOLDERS

Describe how the nominated site involves stakeholders and local communities in designation and management, and specify specific coordination measures or mechanisms currently in place

Stackeholders involvement	Involvement	Description of involvement	Specific coordination measures	Comments (if any)
Institutions	yes	French MPA Agency, SPAW-RAC, DEAL, Ministries of Environment and Foreign Affairs, four local communities of the French Antilles	Financial, technical and logistical support	
Public	yes	local NGO's from the four collectivities	Lobbying and volunteers' contribution	
Decision-makers	yes	Management Committee	Approvement of : - the scientific mission - communication campaign - management measures - proposition of regulations	
Economic-sectors	yes	Whale watching operators	contribution to the management committee	
Local communities	yes	Four collectivities of the French Antilles	Participation in the management committee, especially for the ecotourism development	
Others	no			

Chapter 9. IMPLEMENTATION MECHANISM

Describe the mechanisms and programmes that are in place in regard to each of the following management tools in the nominated site (fill only the fields that are relevant for your site)

Management tools	Existing	Mechanisms and programmes in place	Comments (if any)
Public awareness, education, and information dissemination programmes	yes	- Awareness of stakeholders to approach techniques - Promoting respect of the Order of July 1st 2011 - Establishment of outreach and educational tools (website, code of conduct, activities, exhibitions, forums)	
Capacity building of staff and management	yes	1 - Regulate: - Activities of whale watching, - Seismic research and other activities using acoustics, - The use of fishing gear which may result in the capture of marine mammals, - Offshore competition, nautical events, 2 - Supervise: - Shipping, - The establishment of a network "alert : stranded and distressed animals" throughout the French Antilles	

Research, storage, analysis	data and yes	1 - Campaigns : biannual transect lines and acoustic samples: - Study the evolution of the estimated numbers in the sanctuary, - Identify the number of individuals during migration periods, - Inform on the population dynamics - Study the evolution of the abundance and distribution 2 - Genetic monitoring campaign (biopsy) and movement of individuals (tags). 3 - Program of photo-identification of individuals to describe their site fidelity (humpback whales, sperm whales ...). 4 - Characterization of habitat favorable for marine mammals, 5 - Acoustic monitoring (including buoys), identification of marine mammals and noise. 6 - Continuous assessment of interactions with human uses (bycatch, depredation, water activities, pollution, noise, etc. ..)	
Surveillance and enforcement	yes	1 - Pooling of resources of the State action at sea, of the services and operators of the state and of the network of MPAs for: - Establishment/strengthening control over the disturbance and harassment of cetaceans, - Strengthening control on the degradation of natural areas and seascapes that can have adverse effects on habitats of marine mammals	
Participation exterior users	of yes	1 - Definition of an intervention network for animals in distress, entangled and/or stranded, 2 – Definition/support/guidance of an intervention network for prevention of pollution, pollution control, and followed post-pollution, 3 - Support and assistance for projects aiming at conserving and restoring habitats likely to receive marine mammals, 4 - Support for tourism operators in an eco-responsible approach, 5 - Support for the production of scientific studies and scientific articles, 6 - Expertise and advice to project developers for impact assessments, 7 - Support/Training for MPA managers of the French Antilles and the Caribbean islands for the observation, identification and intervention in case of distress and strandings 8 - Support the targets of the chlordecone plan, 9 - Support/search for innovative devices intended to limit the impact of human activities on marine mammals 10 - Promotion of the sanctuary at regional level, of its work, its governance, organization...	
Alternative sustainable livelihoods	and yes	Direct and indirect financial resources from ecotourism (whale watching)	
Adaptative management	yes	The management plan is conducted every five years outlining and prioritizing targets assigned to the manager.	

Chapter 10. OTHER RELEVANT INFORMATION

Contact addresses

	Name	Position	Contact adress	Email adress
who is submitting the proposal (national focal point)	MEYER Lydia	Coordinatrice affaires internationales et communautaires - DGALN/DEB/CIC		Lydia.Meyer@developpement-durable.gouv.fr
who prepared the report (manager)	MASLACH Nicolas	Manager	Habitation Beausoleil Montéran 97120 SAINT-CLAUDE	nicolas.maslach@aires-marines.fr

Date when making the proposal

: 8/8/12

List of annexed documents

Name	Description	Category	
PLAN DE GESTION DU SANCTUAIRE AGOA PARTIE II : Plan d'actions et indicateurs		Management plan	View
PLAN DE GESTION DU SANCTUAIRE AGOA PARTIE I : Etat initial		Management plan	View