

BEST

VOLUNTARY SCHEME
FOR BIODIVERSITY AND
ECOSYSTEM SERVICES
IN TERRITORIES OF
EUROPEAN OVERSEAS



EUROPEAN OVERSEAS

REGIONAL ECOSYSTEM PROFILE

Caribbean

- Cayman Islands
- Turks and Caicos Islands
- British Virgin Islands
- Anguilla
- Saint Martin
- Sint Maarten
- Saint Barthélemy
- Saba
- Sint Eustatius
- Montserrat
- Martinique
- Aruba
- Curaçao
- Bonaire
- Guadeloupe



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Prepared by:
Regional Activity Centre for the SPAW Protocol
& Réserve Naturelle Nationale de Saint-Martin

Under the coordination of the Caribbean hub team for BEST III:
Amandine VASLET - SPAW-RAC / Réserve Naturelle Nationale de Saint-Martin
Romain RENOUX - SPAW-RAC / Réserve Naturelle Nationale de Saint-Martin
Anne FONTAINE - SPAW-RAC

with the technical support of:
BEST III Consortium
Pierre Carret - Critical Ecosystem Partnership Fund (CEPF)

Assisted by local Governments, local actors and stakeholders and individual experts from the following institutions and organisations (names in alphabetical order).
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Dutch Overseas Countries and Territories

Applied Ecological Solutions, Inc.
Dutch Caribbean Nature Alliance (DCNA)
Environmental Protection in the Caribbean (EPIC)
IMARES - Institute for Marine Resources and Ecosystem Studies
Government of the Netherlands -
Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
Ministry of Infrastructure and the Environment
Naturalis - National Museum of Natural History
Vogelbescherming Nederland - BirdLife International
Waitt Foundation - Blue Halo Initiative
WWF Netherlands

ARUBA

Arikok National Park Foundation
Aruba BirdLife Conservation Foundation
Aruba Marine Park Foundation
Aruba Marine Mammal Foundation
Island Government of Aruba -
Directorate Nature and Environment (DNM)
Turtugaruba Foundation

BONAIRE

Echo Foundation
Foundation Sea Turtle Conservation Bonaire (STCB)
Island Government of Bonaire
STINAPA Bonaire National Park Foundation

CURACAO

EcoVision
Island Government of Curaçao -
Ministry of Public Health, Environment & Nature

CARMABI Foundation - Caribbean Marine Biological Institute
Island Government of Curaçao
Uniek Curaçao Foundation

SABA

Island Government of Saba -
Governor of Saba
Commissioner at Island Government of Saba
Island Government of Saba
Saba Archaeological Center (Sabarc)
Saba Conservation Foundation (SCF)

SINT-EUSTATIUS

Caribbean Netherlands Science Institute (CNSI)
Island Government of St-Eustatius
St.Eustatius National Parks Foundation (STENAPA)

SINT-MAARTEN

Be The Change Foundation
Emilio Wilson Estate Foundation (EWEF)
Environmental Protection in the Caribbean (EPIC)
Island Government of St-Maarten -
Department of Interior & Kingdom Relations (AZ/BAK)
Ministry of Public Housing, Spatial Planning,
Environment and Infrastructure (VROMI)
Ministry of Public Health, Social Development and
Labor
Governor of St.Maarten
Sint-Maarten Nature Foundation
St Maarten PRIDE Foundation

French Outermost Regions and Overseas Territories

Agence des Aires Marines Protégées (AAMP)
AAMP - Sanctuaire AGOA
BirdLife International
Centre d'Activité Régional - Protocole SPAW (CAR-
SPAW)

Conseil Scientifique Régional du Patrimoine Naturel
(CSRPN) (Guadeloupe, Martinique)
Conservatoire de l'Espace Littoral et des Espaces
Lacustres (CELRL) - Délégation Outre-Mer
IFREMER Antilles françaises

Office de l'Eau et Comité de Bassin (Guadeloupe, Martinique)
Office National de la Chasse et de la Faune Sauvage
Office National des Forêts
ReguaR - Réseau requins des Antilles françaises
Université des Antilles

GADELOUPE

Association Conseil Environnement Développement Durable (ACED)
AMAZONA
Association pour l'Etude et la protection des Vertébrés et Végétaux des Petites Antilles (AEVA)
Association pour la Sauvegarde et la réhabilitation de la Faune des Antilles (ASFA)
Association Ti-Té
Conseil Général de Guadeloupe
Conseil Régional de Guadeloupe
Conservatoire Botanique de Guadeloupe
DEAL Guadeloupe
Evasion Tropicale
Kap'Natirel
Le GAIA
Observatoire des Mammifères Marins de l'Archipel Guadeloupéen (OMMAG)
Parc National de Guadeloupe
PARETO EcoConsult
Réserve Naturelle Nationale de Petite-Terre

MARTINIQUE

AAMP - Mission d'Etude pour le Parc Naturel Marin de Martinique
Association Martinique Entomologie

Association OCEANvironnement
Conseil Général de Martinique
Conseil Régional de Martinique
Conservatoire Botanique de Martinique
DEAL Martinique
Institut Caribéen pour la Nature et la Culture (ICNC)
Observatoire du Milieu Marin Martiniquais (OMMM)
Parc Naturel Régional de Martinique
Réserves Naturelles Nationales de la Presqu'île de la Caravelle et des îlets de Ste Anne
Société pour l'Etude, la Protection et l'Aménagement de la Nature à la Martinique (SEPANMAR)

SAINT-MARTIN

Association de gestion de la Réserve Naturelle Nationale de St-Martin
Association Les Fruits de Mer
Association Mon Ecole, Ma Baleine
Collectivité de St-Martin -
Conseil Territorial
Service Environnement
Service Coopération Régionale et Fonds Européens
Préfecture de St-Martin / St-Barthélemy

SAINT-BARTHÉLEMY

Agence Territoriale de l'Environnement de St-Barthélemy -
Collectivité de St-Barthélemy
Association ALSOPHIS
Association pour la Protection des Oiseaux (APO)
Association St-Barth Essentiel
Coral Restoration Project St Barth

UK Overseas Territories

BirdLife International
Coastal Zone Management UK
Coral Cay Conservation
Joint Nature Conservation Committee (JNCC)
Royal Botanic Gardens KEW (RBG)
Royal Society for the Protection of Birds (RSPB)
UKOTCF- UK Overseas Territories Conservation Forum
Waitt Foundation - Blue Halo Initiative

ANGUILLA

Anguilla Beautification Club
Anguilla National Trust (ANT)
Environmental Club at ALHCS
Island Government of Anguilla -
Department of Environment
Department of Fisheries and Marine Resources
University of Liverpool (UK)
Youth Environmental Society of Anguilla (YESA)

BRITISH VIRGIN ISLANDS

Island Government of the Virgin Islands -
Ministry of Natural Resources and Labour (MNREL)
MNREL - Conservation and Fisheries Department
MNREL - Department of Agriculture
Governor Office of the Virgin Islands
Econcerns, Ltd.
Jost Van Dyke Preservation Society (JVDPS)
National Parks Trust of the Virgin Islands (NPTVI)

CAYMAN ISLANDS

Central Caribbean Marine Institute (CCMI)
Island Government of the Cayman Islands -
Department of Environment (DOE)
National Conservation Council of the Cayman Islands (NCC)
Government representative office in the UK
National Trust for the Cayman Islands
Queen Elizabeth II Botanic Park
Verdant Isle Orchids Research of the Cayman Islands

MONTserrat

Aqua Montserrat
Coral Cay Conservation - Montserrat Expedition
Blue Halo Initiative - Montserrat
Fishermen Cooperative
Island Government of Montserrat -
Ministry of Agriculture, Trade, Lands, Housing and Environment (MATLHE)
MATLHE - Department of Environment (DOE)
MATLHE - Department of Agriculture
MATLHE - Physical Planning Unit
Montserrat National Trust
Montserrat Hydroponics Ltd.
Montserrat Island Dive Centre

TURKS AND CAICOS ISLANDS

Island Government of the Turks and Caicos Islands -
Department of Environment and Maritime Affairs
(DEMA)
DEMA - Caicos Pine Restoration Project
School of Field Studies TCI
SWA Ltd.

Turks and Caicos National Trust (TCNT)
Turks and Caicos Reef Fund
UK Marine Conservation Society
University of Greenwich (UK)

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<http://ec.europa.eu/best>

Disclaimer: The **Regional Ecosystem Profile** is a technical document with input from regional and local experts and other stakeholders, obtained in a participatory consultation process. The results of this background document were used to elaborate a **Regional Investment Strategy** in the same participatory manner, which may serve as a guiding document for future national and regional strategies. Neither document is politically binding or replaces a national or regional strategy authorized by the respective decision makers.

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ABBREVIATIONS

ABC	Aruba, Bonaire and Curaçao islands
ACS	Association of Caribbean States
AFD	French Development Agency (Agence Française du Développement)
ANT	Anguilla National Trust
AZE	Alliance for Zero Extinction
BES	Bonaire, St. Eustatius and Saba islands
BEST	Biodiversity and Ecosystem Services in the Countries, Territories and Outermost Regions of Europe Overseas
BVI	British Virgin Islands
CaMPAM	Caribbean Marine Protected Areas Managers and Network Forum
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CARMABI	Caribbean Research and Management of Biodiversity
CBD	Convention on Biological Diversity
CBF	Caribbean Biodiversity Fund
CCCCC	Caribbean Community Climate Change Centre
CELRL	Conservatoire de l'Espace Littoral et des Rivages Lacustres
CEP	Caribbean Environment Programme
CEPF	Critical Ecosystem Partnership Fund
CI	Conservation International
CITES	Convention on International Trade in Endangered Species
COM	Overseas collectivities
COP	Conference of the Parties
CR	Critically endangered species (IUCN RedList criteria)
CSRPN	Regional Scientific Council of Natural Heritage
DCNA	Dutch Caribbean Nature Alliance
DEAL	Direction de l'Environnement, de l'Aménagement et du Logement
DECC	Department for Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs of UK Government
DFID	Department for International Development
DFMR	Anguilla - Department of Fisheries and Marine Resources
DG DEVCO	European Commission Directorate-General Development and Cooperation
DG ENV	European Commission Directorate-General Environment
DROM	Overseas Department and Region
EAFRD	European Agricultural Fund for Rural Development
EBSA	Ecologically or Biologically Significant Marine Areas
EDF	European Development Fund
EC	European Commission
EEZ	Exclusive Economic Zone
EMFF	European Maritime and Fisheries Fund
EN	Endangered species (IUCN RedList criteria)
EP	Ecosystem Profile
ERDF	European Regional Development Fund
EU	European Union
FCO	Foreign and Commonwealth Office
FWI	French West Indies
GCCA	Global Climate Change Alliance Project
GCRMN	Global Coral Reef Monitoring Network
IAC	Inter-American Convention for the Protection and Conservation of Sea Turtles
IBA	Important Bird Area
ICRI	International Coral Reef Initiative
IFRECOR	French Initiative for Coral Reefs

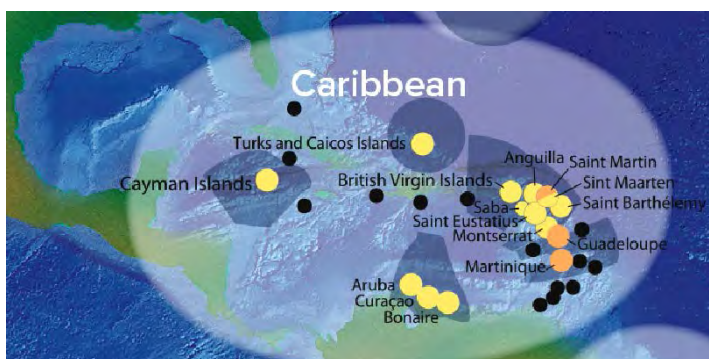
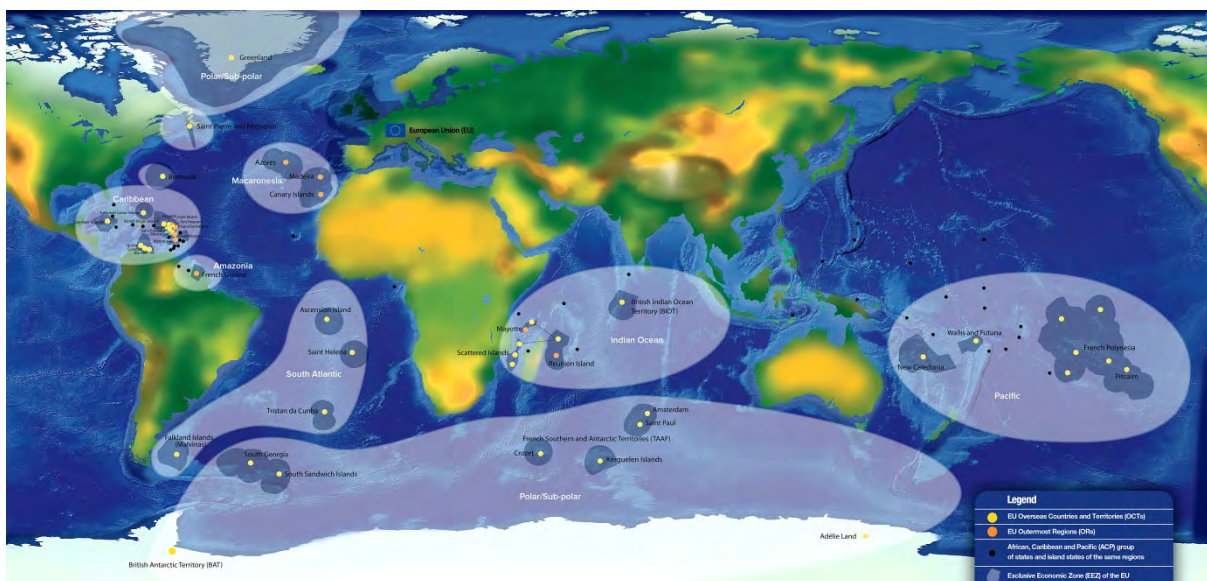
IPA	Important Plant Areas
IUCN	International Union for the Conservation of Nature
IUCN - SSC	IUCN Species Survival Commission
JNCC	Joint Nature Conversation Committee
KBA	Key Biodiversity Areas
KEW RBG	Royal Botanic Gardens KEW
LME	Large marine ecosystem
LPO	Ligue pour la Protection des Oiseaux
MAB	Man and Biosphere Reserve
MEA	Multi-lateral Environmental Agreement
MNHN	Muséum National d'Histoire Naturelle
MPA	Marine Protected Area
NACRI	Netherlands Antilles Coral Reef Initiative
NEMS	National Environmental Management Strategies
NGO	No-governmental Organisation
NL	Netherlands
OECS	Organisation of Eastern Caribbean States
OCTA	Association of the Overseas Countries and Territories of the European Union
OCTs	Overseas Countries and Territories
ONF	Office of the National Forestry
ORs	Outermost Regions
OTs	Overseas Territories
OTEP	Overseas Territories Environment Programme
PNG	Parc National de la Guadeloupe
PSSA	Particularly Sensitive Sea Area
REDOM	Ecological Network for French Overseas Departments (Réseau écologique des départements d'Outre-mer)
RIS	Regional investment strategy
RNSM	Réserve Naturelle Nationale de Saint-Martin
RSPB	Royal Society for the Protection of Birds
SCRFA	Science and Conservation of Fish Aggregation
SGD	St George's Declaration of principles for Environmental Sustainability (in the OECS)
SPAW-RAC	Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region
SRCE	Regional Scheme for Ecological Coherence (Schémas Régionaux de Cohérence Ecologique)
SSS	SSS islands - St.Maarten, Saba, St.Eustatius
TCI	Turks and Caicos Islands
TNC	The Nature Conservancy
UA	Université des Antilles
UK	United Kingdom
UKOTCF	UK Overseas Territories Conservation Forum
UNEP	United Nations Environment Programme
VU	Vulnerable species (IUCN RedList criteria)
WCR	Wider Caribbean Region
WIDECAS	Wider Caribbean Sea Turtle Conservation Network

EXECUTIVE SUMMARY

The Caribbean Islands are composed of 30 nations and overseas entities: 12 independent nations, 3 U.S. territories (Puerto-Rico, US Virgin Islands, Navassa Island) and 15 European Overseas entities that are politically attached to France, the Kingdom of the Netherlands and the United Kingdom. The region is considered as a biodiversity hotspot of international importance, which encompasses over 7,000 islands, islets, cays and reefs ranging in size from just 5 km² to over 100,000 km².

BEST – an initiative to promote conservation in European overseas

The Caribbean region comprises one of the seven regions in the world, in which European Union (EU) Overseas entities are located: from the Arctic to the Antarctic, in the Atlantic, the Pacific, and Indian Ocean, and even in parts of the Amazon. Combined their Exclusive Economic Zones (EEZs) make the largest marine area worldwide, covering 15% of the ocean. They host 20% of coral reefs and lagoons, provide the last refuge to 6% of globally threatened and endangered species and are acknowledged as [biodiversity hotspots](#) for their immense diversity of species, ecosystems and landscapes. Together, the 9 EU Outermost Regions (ORs) and 25 Overseas Countries and Territories (OCTs) host more than 70% of Europe's biodiversity.



Map showing the 34 Overseas entities of the European Union, located in 7 regions of the world with a zoom in the Caribbean region (Credit: Imre Sebestyén/UNITgraphics© IUCN).

The global importance of the rich, unique and valuable biodiversity in these regions as well as the ecosystems it depends on has been recognized internationally. Moreover, there is increasing awareness of the value of healthy ecosystems providing critical services that not only support local, regional economies and livelihoods but also offer cost-efficient climate change solutions. However, these ecosystems as well as the biodiversity are vulnerable and already affected by the impacts of climate change and other threats, as demonstrated in this ecosystem profile elaborated in a participatory approach with local and regional stakeholders under the [European BEST Initiative](#)¹.

The European BEST Initiative aims to strengthen biodiversity conservation and climate change adaptation in the 7 European Overseas regions by raising awareness, profiling the key biodiversity areas (KBAs) as priority areas for actions, supporting actions on the ground. To achieve these objectives knowledge hubs were established in the 7 EU Overseas regions and tasked to develop a regional ecosystem profile by assessing the current situation of the region's biodiversity, habitats and their threats based on the most recent scientific data and observation and present them in the socio-economic and political context. Each regional knowledge hub has mobilized during 3 years local and regional actors and authorities in order to compile and discuss in a very participatory manner the latest available data feeding into the analysis before agreeing on priority areas for action for the region based on the outcomes of the species and ecosystems and threats assessments. Each ecosystem profile also includes an analysis of current conservation activities and relevant investments in the region.

The biological importance of the Caribbean region

The 15 EU overseas entities are part of the **Caribbean Islands Biodiversity Hotspot**. The Hotspot features an exceptional array of ecosystems, from coral reefs, seagrass beds, mangroves to tropical rainforests, dry seasonal forests or cactus scrublands.

The Caribbean region is characterized by a high-level of species endemism as a consequence of geographic isolation of populations among islands and is globally important for biodiversity conservation. There is about 7,500 plant species and 880 vertebrates that are endemic to this region.



In terms of endemism at the genus level, the Caribbean region ranks third among the world's hotspots with 205 plants and 65 vertebrate genera endemic to the Caribbean islands.

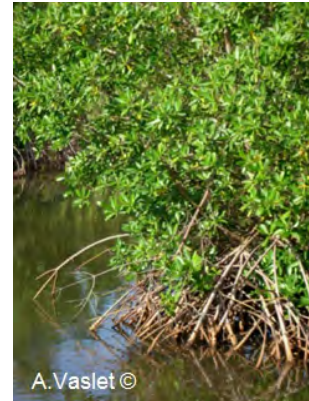
These islands also suffer high levels of natural and anthropogenic threats affecting the terrestrial and marine biodiversity.

¹ BEST – Voluntary scheme for Biodiversity and Ecosystem Services in Territories of European Overseas. For more information visit: <http://ec.europa.eu//best/>

Among the 15 EU overseas entities, there is about 1,094 species that are restricted to the Eastern Caribbean islands or strictly endemic to one of the overseas entities. These species with a restricted distribution range encompasses 488 plant species, more than 400 invertebrates and 173 vertebrates, including 8 fishes, 12 amphibians, 105 reptiles, 35 birds and 13 mammals (see Chapter 3.3).

Conservation outcomes

The Ecosystem profile for the Caribbean region was coordinated by SPAW-RAC and RNSM in collaboration with CEPF experts, IUCN and regional stakeholders and local actors. The consultation process that informed this ecosystem profile involved about **250 individual stakeholders and experts** from about 145 local governments, local and regional institutions and organizations. From 2014 till 2016 a total of **33 regional and local workshops and meetings** were organized in the EU overseas entities by the Caribbean Hub. These consultations were supplemented by local actors and experts interviews and consultancies.



As a result, this ecosystem profile identifies and maps a total of **92 key biodiversity areas** (KBAs), covering an area of 8090 km² and including 42 terrestrial KBAs, and 50 marine and coastal KBAs as well as 43 ecological corridors. The site outcomes take into account **194 globally threatened species, 1094 endemic and restricted-range species** and about **45 species congregating in significant numbers** to feed or reproduce, mainly represented by birds and marine mammals (see Chapters 3.3 and 4).



The assessment of the socioeconomic context (Chapter 5), the policies, framework of organisations and institutions and civil society context (Chapter 6) and the current status of the conservation community (Chapter 7) were conducted through desk review by the profiling team with a final validation during targeted interviews and consultation meetings on each of the 15 EU overseas entities. These chapters provide general information on the skills and capacities of local stakeholders involved in biodiversity conservation.

Threats to biodiversity and ecosystems

The main threats affecting biodiversity and ecosystems in the Caribbean region are habitat destruction and fragmentation, invasive alien species, overexploitation of living resources, pollution and the negative impact of natural events and climate change (Chapter 8).

Alien invasive species can cause severe ecological damage on native populations, with sometimes serious economic, social and public health repercussions. In the overall Caribbean region, there is at least 552 exotic species reported, including 390 species regarded by at least one authority as naturalized and/or invasive.

Climate change is considered as one of the main threats as it is believed to have increased the frequency and intensity of tropical storms and hurricanes.

Current investments in conservation

As the 15 EU overseas entities are politically attached to three different EU member states (i.e. France, Kingdom of the Netherlands, United Kingdom), with different status (i.e. ORs, OCTs), there is diverse funding mechanisms reported (Chapter 9). Besides the EU BEST initiative, few of these funding are fully dedicated to biodiversity and conservation actions in the overseas entities.

Priority areas for action

Several criteria, concerning biodiversity outcomes, ecosystem services, management of sites and assessment of threats, have been used in order to refine the focus for the priority for action among the identified KBAs (see Chapter 10). Therefore, priorities were sorted between very high priority, high priority and medium priority. Among the 92 identified KBAs for the 15 EU overseas entities, 51 KBAs and 34 KBAs are assessed with a very high priority and high priority for action, respectively.

This profile highlights several strategic directions within a general objective to promote the management and conservation of biodiversity outcomes and ecosystem services:

- Support actions dedicated to biodiversity conservation and the sustainable use of ecosystem services;
- Improve the management, enforcement and legislation within KBAs ;
- Assess and mitigate the pressures and threats affecting biodiversity and KBAs;
- Support the local conservation community.

Conclusions

The results of this inclusive and comprehensive ecosystem profile serve as the basis for a regional investment strategy (RIS). This accompanying strategy presents priority areas for investment over the next 5 years with project ideas, also taking into account the current and past investments as well as the capacity for the implementation of conservation projects in the region.

Building on this intense analysis, through the consultation and discussion with about 250 individual stakeholders, actors and experts from about 145 local governments, local and regional institutions and organisations, the regional ecosystem profile and investment strategy aim to inform local, national, regional, European and international decision makers, politicians and investors when planning future developments and prioritizing sustainable investments.

1. INTRODUCTION

The Caribbean region comprises one of the seven European Union (EU) Overseas regions, including a total of 34 overseas entities: 9 Outermost Regions (ORs) and 25 Overseas Countries and Territories (OCTs), linked to the 6 Member States: Denmark, France, the Netherlands, Portugal, Spain and the United Kingdom. These ORs and OCTs are home to biodiversity hotspots with an immensely rich diversity of species, ecosystems and landscapes, which are highly vulnerable to human impacts and to the impacts of climate change. Hosting more than 70% of Europe’s species, the biodiversity in these regions has been recognized as being of international importance and crucial for achieving global and regional biodiversity targets. The ecosystems, on which they depend and the services they provide, have an estimated economic value of up to €1.5 trillion per year². They do not only support local economies and livelihoods but also offer cost-efficient solutions to the looming threats of climate change, which are already intensely felt in many ORs and OCTs as they are amongst the most countries most vulnerable to climate change. With increasing pressure on these ecosystems, effective management, conservation and restoration measures are critical to maintain the rich biodiversity and allow sustainable development.

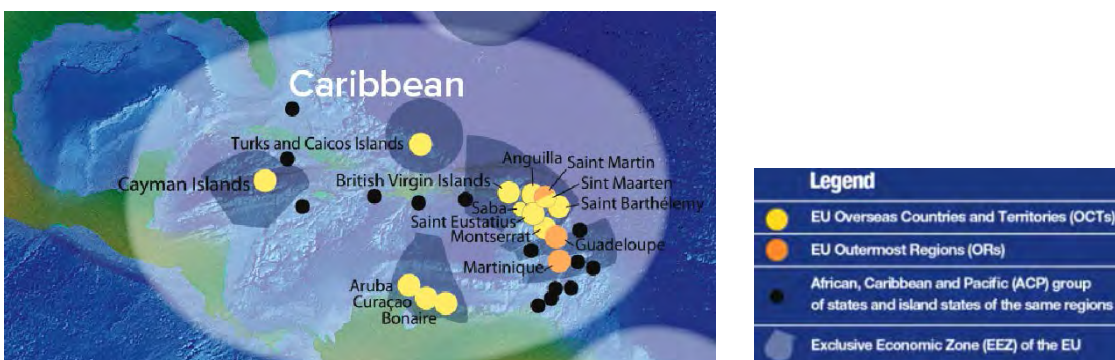
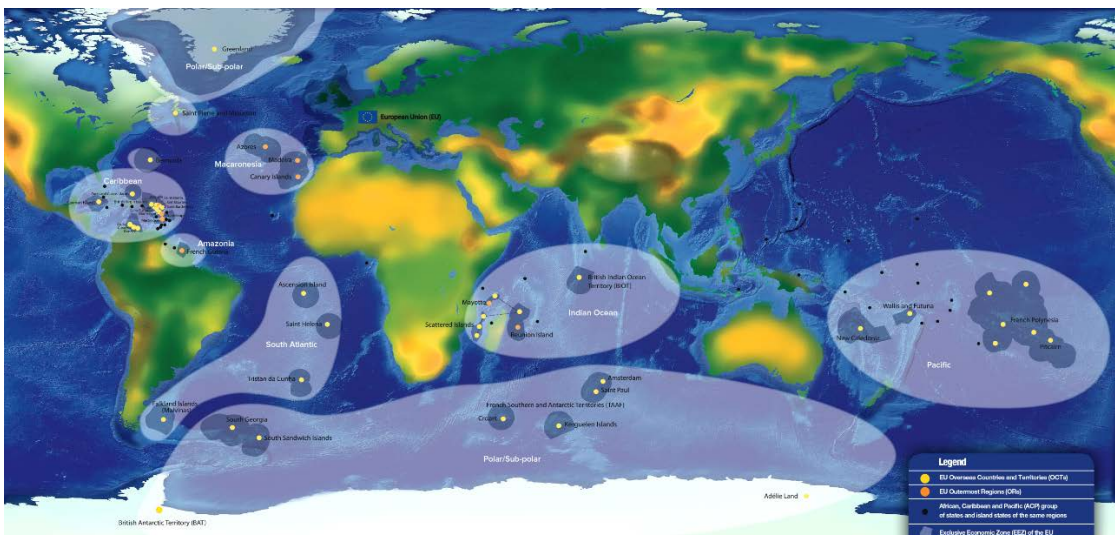


Figure 1. Map showing the 34 Overseas entities of the European Union, located in the 7 regions of the world with a zoom in the Caribbean region (Credit: Imre Sebestyén/UNITgraphics© IUCN).

² Meyers, D., Quétier, F. (2014). Final Report: Options for the Future BEST Facility for Europe Overseas Biodiversity and Ecosystem Services.

The BEST Initiative

During the first conference on biodiversity and climate change in the EU overseas entities that took place on Reunion Island in July 2008, the need for a specific initiative to promote conservation of EU Overseas' biodiversity and ecosystems as well as to develop a political strategy has been recognized. The European Union's [BEST Initiative](#) (Voluntary scheme for Biodiversity and Ecosystem Services in Territories of European Overseas) is a tangible follow-up to concluding [Message from Reunion Island \(2008\)](#), stressing the urgency for the European Union and its Overseas Entities to counter climate change and biodiversity loss.

Above all, the BEST initiative aims to strengthen biodiversity conservation and climate change adaptation in Europe overseas by raising the Europe overseas' profile, generating support for action on the ground, and proposing mechanisms to enhance biodiversity and climate change policies as well as programmes targeted at Europe overseas.

Following-up to the recommendations of the Message from Reunion Island, the European Parliament adopted the BEST Preparatory Action in 2010 to address these challenges by promoting conservation and sustainable use of biodiversity and ecosystem services in EU ORs and OCTs and supporting local actors committing to relevant conservation measures on the ground.

Implementing the **BEST Preparatory Action (2011-2013)**, the European Commission had launched two open calls for proposals in 2011 and 2012, respectively, and selected 16 of the 84 submitted projects in the EU Overseas regions for funding. A first partnership with the French Agency for Development (Afd) allowed financing of two additional projects. The overwhelming demand for financial support – exceeding six times the available budget – and the high quality of project proposals demonstrated the need for funding directed to projects aimed at protecting EU Overseas biodiversity.

In 2013, the European Commission decided to invest the funds available for the third and last year of the BEST Preparatory Action in a project aiming to ensure the sustainability of the BEST voluntary scheme. IUCN (International Union for Conservation of Nature) and partners won the open call for tender for “Measures towards sustaining the BEST preparatory action to promote the conservation and sustainable use of biodiversity and ecosystem services in EU outermost regions and overseas countries and territories”.

The ultimate objective of the project is to build milestones and to enable measures to allow sustaining BEST activities beyond the lifetime of the Preparatory Action by setting up a platform for the conservation needs of the EU Overseas entities that allows information sharing and addressing challenges collaboratively and through the development of the regional ecosystem profiles to inform biodiversity strategies and to trigger investment through dedicated regional investment strategies.

Seven knowledge hubs coordinated by project partners (IUCN France, TAAF, SAERI, WWF France, SPAW-RAC and FRCT) that are anchored and well established in the respective regions developed regional ecosystem profiles and investment strategies in cooperation with local actors. These regional ecosystem profiles and strategies provide a comprehensive overview of the threats to biodiversity and ecosystem services as well as current conservation activities and investment but also outline the challenges and needs in the ORs and OCTs.

Ecosystem profiles

The Ecosystem profiling process follows a methodology, established by the **Critical Ecosystem Partnership Fund (CEPF)**, adapted to the particular situation and needs of the EU Overseas.

At the heart of this profiling process is a field-based, participatory and scientific approach: using a combination of desktop review of existing information and a series of consultations with local actors and authorities each ecosystem profile is developed to efficiently guide actions on the ground as well as to identify thematic conservation priorities and future projects to be considered for funding. The regional participation process assures that the final outcome is owned and used by stakeholders in the region to allow focussing research and management efforts and directing future funds to where their application can have the highest positive impact.

This ecosystem profile, coordinated by the **Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region (SPAW-RAC)** and the **Natural National Reserve of St Martin (RNSM)**, presents an overview of the Caribbean region in terms of its biodiversity conservation importance, major threats to and root causes of biodiversity loss, and the socio-economic, policy and civil society context in which conservation takes place. The profile also presents assessments of patterns of conservation investment in the Caribbean region over the last decade. It defines a comprehensive suite of measurable conservation outcomes at species, site and corridor scales and identifies conservation priorities.

The Regional Investment Strategy

Based on the ecosystem profile, a **Regional Investment Strategy (RIS)** is elaborated in collaboration with the regional and local stakeholders for donors interested in supporting civil-society-led conservation efforts in the region. Each investment strategy provides a clear picture of what the conservation priorities are and identifies niches, in which investment can provide the greatest incremental value for conservation, enabling donors and programmes to effectively target their efforts. It comprises strategic directions over the next 5 years and proposes projects in line with the conservation priorities, taking into account current and past investments as well as the capacity of the region to implement proposed project ideas.

The accompanying investment strategy for the Caribbean region will present potential projects to be funded, which were proposed by and discussed with civil society organizations (CSOs), local authorities, individuals and other entities in order to help implement the strategy by addressing the identified investment priorities. The investment strategy will not define concrete project concepts or specific project activities, which will have to be developed in accordance with future funding opportunities.

2. BACKGROUND

Caribbean Hub and Ecosystem profile methodology

In the Caribbean Region, the SPAW RAC (Regional Activity Center for Specially Protected Areas and Wildlife) in partnership with the Natural National Reserve of St Martin is in charge of the coordination of the Caribbean regional Hub and of the development of the Caribbean ecosystem profile for the 15 European Overseas entities in close partnership with the existing networks and stakeholders.



The **Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region** (SPAW-RAC) aims to assist with the implementation of the SPAW Protocol of the Cartagena Convention. This Protocol, signed in 1990, constitutes a legally binding regional environmental agreement protecting marine, coastal and terrestrial ecosystems and wildlife in the Caribbean region.

Its objectives are (i) the protection, preservation and sustainable management of areas of particular ecological interest; (ii) the protection and preservation of threatened species; and (iii) the prevention from becoming endangered species in a particular region.

SPAW RAC's main activities focus on the community of countries interested in environment of the Wider Caribbean, it acts as a technical tool facilitating the dissemination of information and knowledge on the biodiversity in the region and improving regional cooperation. Its missions are decided in close collaboration with the United Nation Environment Programme (UNEP). SPAW RAC has been hosted by National Park of Guadeloupe since 2009.






The **Natural National Reserve of St Martin** (RNSM) is located in the north-eastern part of the island and covers about 3,000 ha of marine, terrestrial and wetlands habitats. Since its creation in 1998, the RNSM protects and preserves the main ecosystems present on the island: coral reefs, seagrass beds, mangroves, ponds, dry forests and shrublands. Due to its close vicinity with other EU OCTs of the northern Lesser Antilles (i.e., St. Maarten, Anguilla, St. Barthélemy, Saba, St.Eustatius), the RNSM has developed a significant network of regional partners and is involved in a variety of programmes focusing on terrestrial and marine biodiversity.

The Ecosystem profile for the Caribbean region was coordinated by the Caribbean Hub team in collaboration with the BEST Central team, CEPF experts and with a huge process of stakeholders and local actors consultation. At a regional scale, the Caribbean Hub provides information on the BEST initiative, is in charge of the elaboration of the regional EP and acts as a strong link between the local actors of the EU Overseas entities and the EC. The purpose of this EP was to analyse existing data and highlight data gaps for investment (not to generate new data), based on available data sources and consultation of local actors during workshops.

The profiling process was prepared between 2014 and 2016, the main stages of development of the profile are described in Table 1.

Table 1. Main steps in the development of the Ecosystem profile for the Caribbean region.

<p>June to August 2014</p>	<ul style="list-style-type: none"> - Desk review of data information for the 15 European Overseas entities. Preparation of work plans and reference lists for the profiling process. - Information on the BEST III initiative sent to local actors ("BEST message")
<p>1st year of the EP (June 2014-2015)</p>	<ul style="list-style-type: none"> - Elaboration of <i>Ecosystem profile drafts</i> for the 15 European Overseas entities detailing the list of endemic and threatened species, important habitats and ecosystems, ecological corridors, list of local actors, threats affecting biodiversity, and funding resources dedicated to biodiversity and conservation. - Ecosystem profile drafts and KBAs identification and mapping reviewed with local actors. - Consultation process (cf. details in Table 2). <div style="text-align: center;">  <p>Consultation with the local actors of the 6 Dutch OCTs in Saba (March 2015)</p> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Consultation with the local actors of Guadeloupe (April 2015)</p> </div> <div style="text-align: center;">  <p>Consultation with the local actors of the Virgin Islands (Sept. 2015)</p> </div> </div>
<p>October 2015</p>	<ul style="list-style-type: none"> - Presentation of the Regional Ecosystem profile draft for the Caribbean region at the European Commission in Brussels. - Internship (October 19-31) at the European Commission and IUCN in Brussels. Technical sessions on the EP methodology.

		<p>Presentation of the Ecosystem profile at the Committee of the Region (Oct. 2015)</p>
<p>December 2015 - May 2016</p>	<ul style="list-style-type: none"> - Consultation process (cf. details in Table 2). - Final validation of the Ecosystem profiles with local actors and stakeholders. <div style="display: flex; justify-content: space-around;"> <div>  </div> <div> <p>Consultation with the local actors of Montserrat (Nov. 2015)</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div>  </div> <div> <p>Consultation with the local actors of St.Maarten (May 2015)</p> </div> </div>	
<p>June 2016</p>	<ul style="list-style-type: none"> - Final Regional Ecosystem profile for the Caribbean region. 	

Between 2014 and 2016, the Caribbean Hub organized **24 BEST III workshops** with the local Governments and network of local actors and stakeholders and participated to **9 regional and international meetings** (Table 2, App.1).

The consultation process that informed this ecosystem profile involved **about 250 individual stakeholders and experts** from about **145 local governments, local and regional institutions and organisations** (41 from Dutch OCTs, 51 from French ORs and OT and 43 from UK OCTs). About 70 representatives of overseas islands local governments have participated to these workshops (Table 2, see list of contributors pages ii to iv and contact details in App. 1).

Most of the BEST meetings have been chaired by high level representatives from the overseas local governments: his Excellency Governor Johnson of Saba; his Excellency Governor Holiday of St.Maarten; Mr Leeuwenburg advisor of the Royal House of the Kingdom of the Netherlands; his Excellency Governor Duncan of the Virgin Islands; Mr Guillaume Arnell vice-president of the overseas collectivity of St-Martin; Honourable Minister

Claude Hogan, Ministry of Agriculture, Trade, Lands, Housing and Environment of Montserrat; Mrs. Cynthia Farrell, Premiers Office of Montserrat.

These consultations were supplemented by local actors and experts interviews and consultancies held by the profiling team. Regular consortium meetings and bilateral meetings were conducted between the BEST central team, CEPF experts and the regional hubs to provide information and support on regional workplans, EP methodology and progress.

In addition, a webpage³ on the SPAW-RAC website was created to promote BEST III project and to facilitate information sharing and communication with stakeholders.

Table 2. Consultation process with local actors and stakeholders organized by the Caribbean hub.

Meeting	EU Overseas entities / Date	Number of participants
BEST meetings	- Dutch OCTs: Sint-Maarten (Aug.-Nov. 2014; May-Oct. 2015), Saba (Oct. 2014, March-Oct. 2015), Sint-Eustatius (Oct. 2014, March-Oct. 2015), Aruba (March-Oct. 2015), Bonaire (Oct 2014, March-Oct. 2015), Curaçao (Oct 2014, March-Oct. 2015)	35
	- French ORs and OT: Guadeloupe (June 2014, April 2015) , Martinique (Oct. 2014, July 2015) , St-Martin (July-Sept. 2014, Sept. 2015), St-Barthélemy (Janv. 2015)	46
	- UK OTs: Anguilla (March 2015), British Virgin Islands (Sept. 2015), Montserrat (Nov. 2015), Turks and Caicos Islands (Nov. 2015), Cayman Islands (Feb. 2016)	74
Regional workshops	- Dutch OCTs: DCNA Board meetings (Oct. 2014, March 2015, Oct. 2015)	48
	- French ORs and OT: MPA managers workshop (Oct. 2014)	25
	- UK OTs: UK OCTs Forum - Participants of the UK OCTF Wider Caribbean Working Group (July 2015)	37
	- CEPF final assessment workshop in the Caribbean region (Haiti, Dominican Republic) (Oct. 2015)	30
International workshop and conferences	Workshops and conferences with a presentation of the BEST III Initiative: - ICRI workshop (Sept. 2014) - Guadeloupe conference on Biodiversity and Climate Change (Oct. 2014) - Gulf and Caribbean Fisheries Institute conference (Nov. 2014) - COP Cartagena Convention (Dec. 2014) - UKOTCF Forum (July 2015)	> 200

Drafts of Ecosystem profile factsheets performed for each EU islands were sent to the network of local actors and stakeholders for validation. A second draft of the Ecosystem profile was circulated to all stakeholders in April-May 2016. This led to a local actor-approved pre-final draft of the Ecosystem profile that has been sent to the BEST Consortium and the EC by June 2016.

The development of the EP considered international and regional databases with data information from the Caribbean region, such as: Important Plant Areas (IPA, Plantlife), Important Bird Areas (IBA) identified by BirdLife International, Fish Aggregation Database of

³ <http://www.car-spaw-rac.org/?The-context,599>

the Science and Conservation of Fish Aggregation (SCRFA), FishBase (Froese and Pauly 2015), Global Coral Reef Monitoring Network (GCRMN), The Reptile Database (Uetz and Hošek 2015) and Caribherp for the Amphibians and Reptiles of Caribbean Islands (Hedges 2015) (the list is not exhaustive, see the References for more details).

Additional information on bird populations was obtained from BirdLife International and databases dedicated to some EU Overseas entities were also considered, such as : Dutch Caribbean Biodiversity database (DCNA, Wageningen University), Dutch Caribbean Biodiversity Explorer (CARMABI Foundation), Joint Nature Conversation Committee database for UK OTs (JNCC), Kew Royal Botanic Gardens database for UKOTs, Overseas Territories Environment Programme (OTEP-for UKOTs), UKOTCF Forum, Royal Society for the Protection of Birds (RSPB- for UKOTs).

The different chapters and sections of the EP were performed following a desk review and a consultation process with local actors and stakeholders:

- Biological importance of the area (Chapter 3) and Conservation outcomes (Chapter 4);
- Assessment of the socioeconomic context (Chapter 5), the political and institutional context (Chapter 6) and the current status of the conservation community (Chapter 7);
- Evaluation of threats and their root causes affecting biodiversity and ecosystems (Chapter 8);
- Assessment of current investments (Chapter 9);
- Priority areas for action (Chapter 10).

The elaboration of the regional Ecosystem profile for the Caribbean region has been performed in close conjunction with the network of local governments and local actors and stakeholders to ensure that the final outcomes are owned and shared by local actors and to promote crossborder cooperation between islands and countries. Moreover, the Ecosystem profile Factsheets (App. 5) have been used by the local actors to implement their local policy in terms of land planning or biodiversity outcomes.

Previous profiling work in the Caribbean region

The BEST initiative allows an important assessment of priorities in biodiversity conservation for the 15 EUoverseas entities and provides a geographical focus for future investment through the identification of KBAs.

The CEPF previously invested in the **Caribbean Islands Biodiversity Hotspot** with the development of an **Ecosystem profile** in 2010 coordinated by BirdLife International in collaboration with CEPF, Durrell Wildlife Conservation Trust, Bath University and the New York Botanical Garden (Wege et al. 2010). A five-year investment strategy was launched by the CEPF in 2010 with a budget of \$6.9 million. The Caribbean Natural Resources Institute (CANARI) is the CEPF regional implementation team in charge of managing the fund. The profile and the investment phase mainly focused on 11 independent nations within the Caribbean Islands Hotspot that are eligible to this grant fund: Antigua and Barbuda, Barbados, The Bahamas, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Lucia, St. Kitts & Nevis and St. Vincent and the Grenadines. The 15 European Overseas entities were not eligible for funding through CEPF.

The CEPF investment strategy in the Caribbean region (2010-2015) has been evaluated at the end of 2015 in terms of conservation goals and strategic directions and are provided in the section *Priority Areas for action* (Chapter 10) in order to highlight synergies with the priority of actions identified for the EU overseas entities.

In 2015, the European Commission developed **Regional Environmental profiles for the 25 European Overseas Countries and Territories (OCTs)**, including the 12 OCTs in the Caribbean region (European Commission 2015ab). The purpose of these profiles was to feed discussions on the environment and possible consequences environmental trends may have on OCTs socio-economic development, and more specifically, to assist the EU in programming its European Development Fund (EDF) assistance to the OCTs through the EU 2014-2020 cooperation programming. These profiles, published in 2007 and revised in 2015, were performed at the request of the European Commission in collaboration with OCTA (Association of the Overseas Countries and Territories of the European Union). It was conducted primarily by means of desk research, drawing on data in the public domain - data collection visits were not made to the territories themselves. These public domain data were supplemented by a questionnaire sent to all the territories dealing with environmental and sustainable development issues, institutions, human resources, policies, budgets for the environment, and international cooperation. Feedback from the administrations of the OCTs, Member States, the Commission services and some nature conservation NGOs helped drafting these profiles (European Commission 2015ab).

Information from these two former profiles that concerned European Overseas entities has been highly considered for the elaboration of this ecosystem profile.

3. BIOLOGICAL IMPORTANCE OF THE AREA

Biological hotspots constitute biogeographic units that feature exceptional concentrations of endemic species and experience high rates of habitat loss and degradation (Myers et al. 2000). Following the criteria of Myers et al. (2000), an area qualifies as a hotspot if it holds at least 1,500 endemic plant species and has already lost 70% of its primary native vegetation. An updated analysis identified 34 biodiversity hotspots worldwide which hold together 50% of the world's plant species and 42% of terrestrial vertebrates as endemics (Mittermeier et al. 2004).

The concept of biodiversity hotspots constitutes an approach to define priorities among the world most diverse regions in terms of biodiversity that are also the most threatened (Myers et al. 2000).

The Caribbean region qualifies as a hotspot due to its high levels of endemism: about 7,500 plant species and 880 vertebrates are endemic to this region. In terms of endemism at the genus level, it ranks third among the world's hotspots with 205 plants and 65 vertebrate genera endemic to the Caribbean islands (Smith et al. 2004, Anadón-Irizarry et al. 2012). This hotspot also suffers high level of threats affecting biodiversity: it retains only 11% of its primary vegetation and about 755 plants and vertebrate species are considered as globally threatened (Myers et al. 2000, Anadón-Irizarry et al. 2012). The Hotspot features an exceptional array of ecosystems, from coral reefs, seagrass beds, mangroves to tropical rainforests, dry seasonal forests or cactus scrublands.

The **Caribbean Islands Hotspot** is a diverse region, both biologically and culturally, composed by 12 independent nations and several U.S., British, Dutch and French overseas territories. Independent nations comprise: Cuba, Haiti, the Dominican Republic, Jamaica, Barbados, the Bahamas, Dominica, Grenada, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, and Antigua and Barbuda. The Hotspot consists mainly of three large groups of islands: the Bahamas, the Greater Antilles (from Puerto-Rico to Cuba) and the Lesser Antilles (Figure 2).



Figure 2. Map of the Caribbean Islands Hotspot.

Within the Caribbean region, 15 islands are part of the European Union (Figure 3):

- 6 Overseas Countries and Territories (OCTs) politically attached to the Kingdom of the Netherlands : Aruba, Bonaire, Curaçao, Sint-Maarten, Saba, Sint-Eustatius;
- 3 Outermost Regions (ORs) and 1 OCT linked to France: Guadeloupe, Martinique, Saint-Martin, Saint-Barthélemy;
- 5 OCTs linked to the United Kingdom (UK): Anguilla, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos Islands.



Figure 3. Map of the 15 European ORs and OCTs occurring in the Caribbean region.

3.1. Geography, Geology and Climate

The entire Caribbean Islands Hotspot spans over 4 millions km² of sea and 230,000 km² of land areas, with the four islands of Cuba, Jamaica, Haiti-Dominican Republic and Puerto Rico making about 90% of the land area (Wege et al. 2010).

The 15 EU ORs and OCTs cover about 4880 km² of land areas and their Exclusive Economic Zone (EEZ) span over 674,840 km² (Table 3, Figure 3).

Geography

Twelve out of the 15 EU islands are located within the Lesser Antilles and Leeward islands off the coast of Venezuela. Three islands, linked to the UK, are situated in the Greater Antilles: Cayman Islands, Turks and Caicos Islands and British Virgin Islands (Figure 3).

Table 3. Key geographic facts and statistics for EU ORs and OCTs in the Caribbean region.

EU ORs & OCTs	Land area (km ²)	EEZ (km ²)	Population	Inhab./km ²	GDP/capita (€)
Dutch islands					
Aruba	193	25,287	107,394 (2014)	556	23,000 (2011)
Bonaire	288	13,188	18,250 (2014)	63	19,940 (2013)
Curaçao	444	30,398	156,971 (2015)	354	16,700 (2012)
St-Maarten	39	489	38,247 (2015)	980	15,259 (2014)
Saba	13	8,033	1,990 (2012)	153	14,600 (2012)
St-Eustatius	21	1,107	3,897 (2012)	186	22,500 (2012)
French islands					
Guadeloupe	1628	90,528	405,739 (2013)	250	19,810 (2012)
Martinique	1128	47,640	386,486 (2014)	343	21,527 (2013)
St-Martin	54	5,088	36,992 (2014)	698	14,700 (2014)
St-Barthélemy	25		8,938 (2010)	370	26,000 (2013)
UK islands					
Anguilla	102 ¹	92,178	15,754 (2013)	170	18,200 (2011)
British Virgin Islands	153	80,117	31,912 (2013)	208	26,600 (2012)
Cayman Islands	262	119,137	55,036 (2014)	210	38,600 (2012)
Montserrat	102 (44 km ² inhabitable)	7,582	4,922 (2011)	113	8,400 (2012)
Turks and Caicos Islands	430	154,068	31,458 (2012)	73	21,000 (2012)

¹including islets

(References: Central Bureau Statistics of the Caribbean Netherlands, IEDOM, INSEE, European OCTs Environmental profile 2015b - Caribbean region, Pelembe and Cooper 2011)

Dutch Caribbean Islands

Since October 10th 2010, Bonaire, St. Eustatius and Saba (also known as BES islands) are special municipalities of the Kingdom of the Netherlands and recognized as European Oversea Territories. Sint-Maarten, Aruba and Curaçao became independent countries within the Kingdom of the Netherlands and EU Overseas Countries.

The Dutch Caribbean EEZ concerns two discontinuous areas, separated by a minimum of 550 km. One zone is located around the southern Leeward islands of Aruba, Bonaire and Curaçao (also known as ABC islands) and the other zone is situated around the northeastern Windward islands of St.Maarten, Saba and St.Eustatius (SSS islands) (Figure 4).

The **ABC islands** off the coast of Venezuela are the westernmost islands of the Lesser Antilles. Aruba (12°31' N, 70°10' W) is the nearest Dutch island to mainland Venezuela and is located 27 km north from Paraguaná peninsula. The maximum depth between Aruba and the Venezuelan coast does not exceed 135 m, whereas BC islands are separated from South American mainland by a deep water trench (c. 1000 m, Figure 4). Leeward islands are relatively flat with the highest peak reaching 378 m at Mount Christoffel (Curaçao). Curaçao is the largest of the 3 ABC islands and hosts the largest population of the Leeward Islands with about 160,000 inhabitants. Bonaire is the least densely populated island of European overseas entities in the region, with about 63 inhab./ km². The islands of Curaçao (12°10' N,

68°59' W) and Bonaire (12°10' N, 69°16' W) are characterized by the presence of several inland bays surrounded by mangroves (Table 3, Figure 5).

The ABC islands with the Venezuelan islands form an island archipelago that constitutes a biogeographical sub-region with most of their flora and fauna from South America and the western Caribbean region.

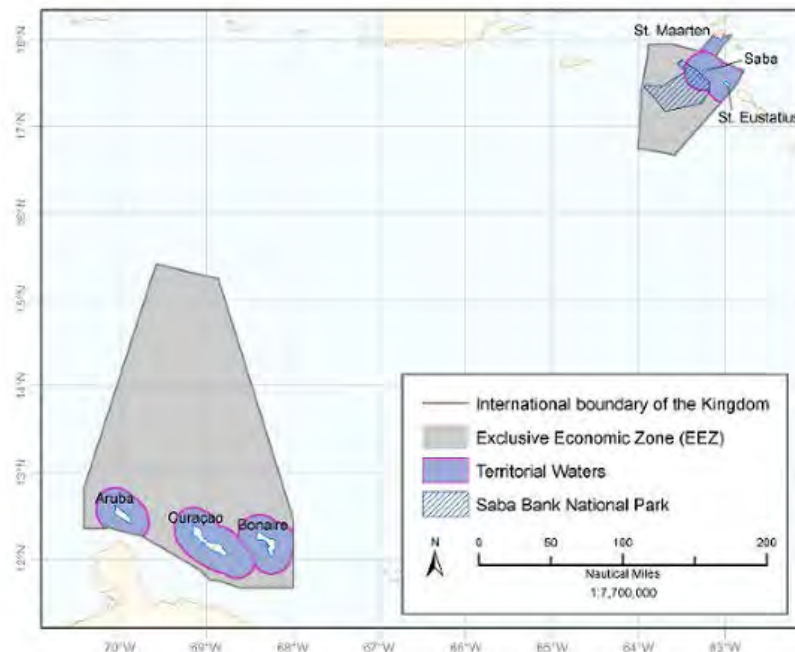


Figure 4. EEZ and Territorial Waters of the 6 Dutch OCTs. The maritime limits of the Saba Bank are also indicated (Royal Netherlands Navy Hydrographic Service, ©DCNA).

Sint-Maarten (12°40' N, 63°50' W) is located in northern Lesser Antilles, close to Anguilla (8 km), St-Barthélemy (20 km) and Saba (48 km). It is the smallest island divided between two nations: France on the north side (Saint-Martin, 54 km²) and a country of the Kingdom of the Netherlands in the south (Sint-Maarten, 39 km²). St-Maarten/St-Martin is the most densely populated island of the Lesser Antilles with about 1,030 inhabitant/km² (Table 3, Figure 5).

Saba (17°37' N, 63°14' W) is an extinct volcanic peak rising steeply to 887m at the top of Mount Scenery, the highest peak of the Kingdom of the Netherlands. Saba is the smallest special municipality of the Netherlands and is characterized by abrupt slopes to the sea (Table 3, Figure 5).

The Saba Bank is located 4 km offshore from Saba island and is considered as a coral atoll, though wholly submerged. It is the 3rd largest atoll in the world and is spectacularly rich in biodiversity, including extensive coral reefs that cover about 150 km² (Figure 4).

St. Eustatius (17°28' N, 62°58' W), together with the islands of St. Kitts and Nevis, constitute the St. Kitts Bank that lies on a sub-marine bank with a maximum of 180 m. The Quill is a dormant volcano of 602 m located in the southern part of the island (Figure 5).

Yarari marine mammals and sharks Sanctuary has been officially established in 2015 over the EEZ of the Dutch OTs of Saba and Bonaire (Figure 7).

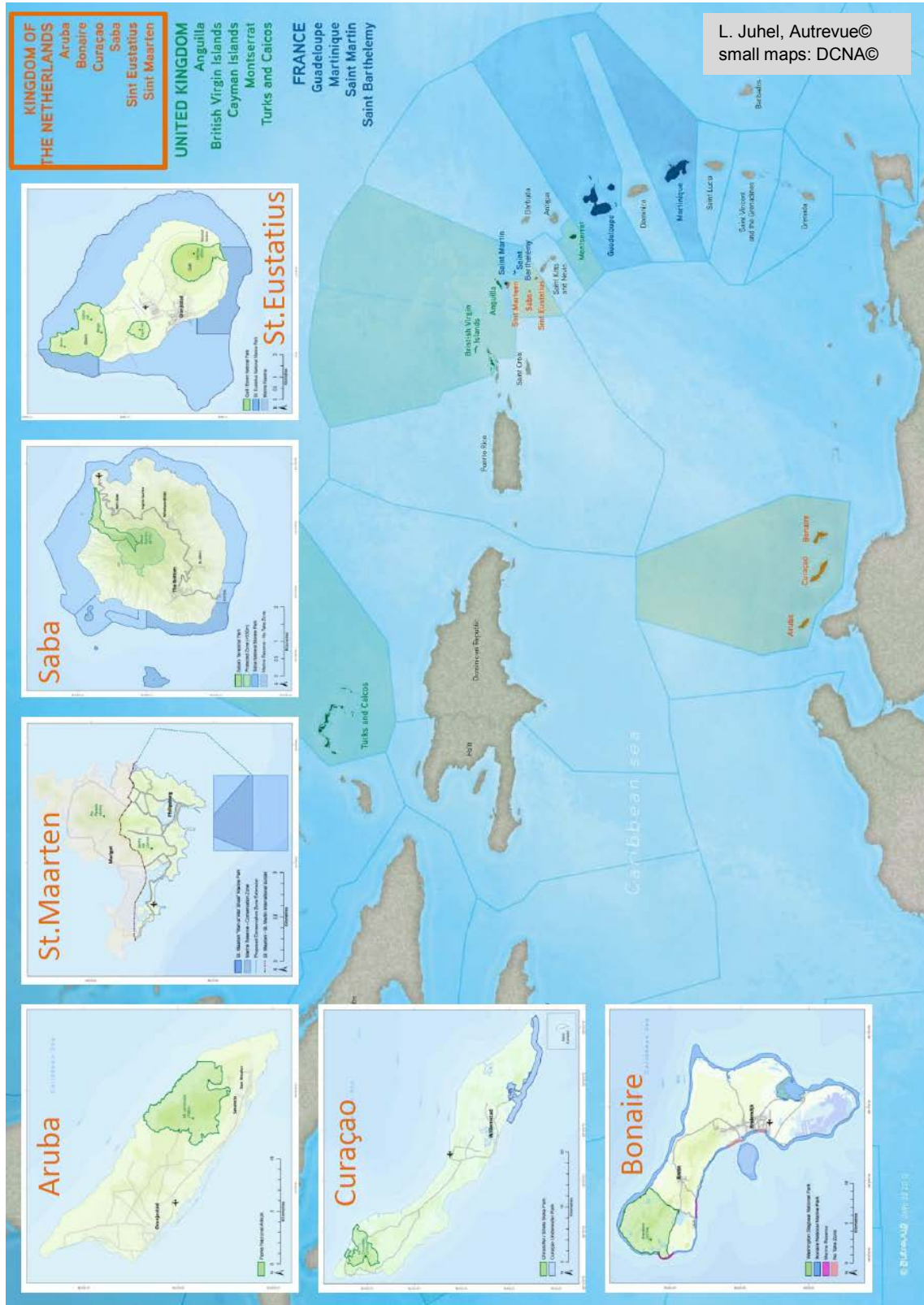


Figure 5. Map of the 6 Dutch OCTs in the Caribbean region.

French Lesser Antilles

Among the French West Indies (FWI), Guadeloupe, Martinique and St-Martin are recognized as European ORs, whereas St-Barthélemy is an European OT.

Guadeloupe (16°16' N, 61°28' W) is composed by two main islands, Grande-Terre (570 km²) and Basse-Terre (944 km²), separated by a narrow channel called Rivière Salée. Basse-Terre is mountainous and volcanic, with the highest peak reaching 1467 m on La Soufrière, whereas Grande-Terre is a limestone flat island that emerged following tectonic activities.

Guadeloupe archipelago also encompasses several islands and islets, such as: Désirade (22 km²), Petite-Terre (2 km²), Marie-Galante (152 km²) and Les Saintes (19 km²) (Figure 6).

Martinique (14°40' N, 61°00' W) has a volcanic origin, with the highest peak Montagne Pelée reaching 1379 m. The northern part of the island is mountainous with several former volcanoes covered by tropical humid forests, whereas the southern part is less elevated and encompasses most of the island beaches and bays (Figure 6).

Martinique and Guadeloupe gather an important network of rivers.

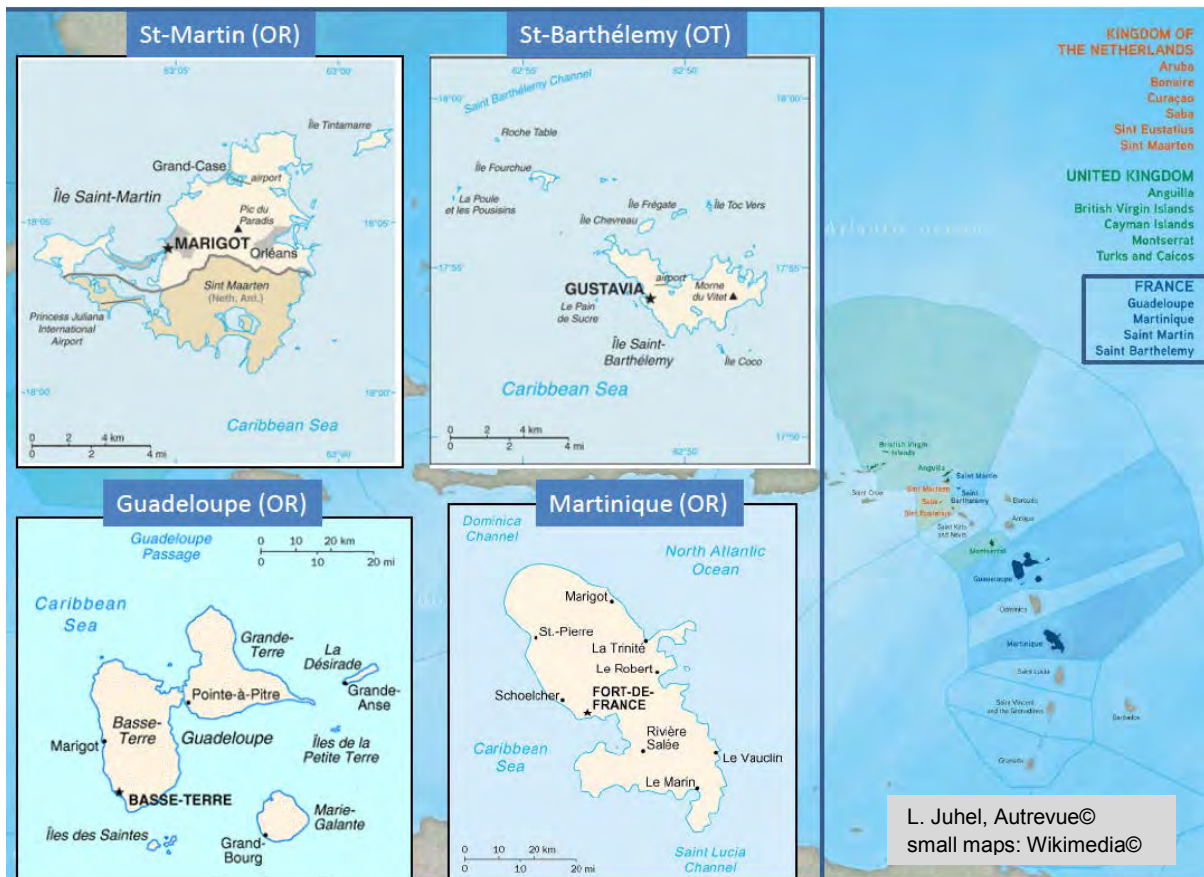


Figure 6. Map of the French Eu OT and ORs in the Caribbean region.

St-Martin and St-Barthélemy used to be Guadeloupe communes and became overseas collectivities (COM) of France in 2007.

The french side of **Saint-Martin** (18°50' N, 63°50' W) is located on the northern half of the island and gathers the highest hilltop, Pic Paradis (424 m). This island is relatively hilly with a mountainous spine, whereas shorelines are either sandy or rocky beaches with interspersed

cliffs. Simpson Bay Lagoon, one of the largest lagoon of the Lesser Antilles, is located between the French and Dutch sides.

Saint-Barthélemy (18°50' N, 62°49' W) is the smallest island of the FWI with an area of 25 km². This territory is relatively hilly, with the highest peak at 286 m (hill Vitet), and the main island is surrounded by 22 islets (Figure 6). On both islands, the vegetation is mostly dry and there is no permanent river. Saint-Martin, St-Barthélemy and Anguilla shelves form the Anguilla Bank, a shallow marine platform of 3400 km² with less than 30 m in depth.

The overall EEZ of the French Lesser Antilles constitute the AGOA Sanctuary, an area of 143,256 km² that was designated in 2012 to protect marine mammals. AGOA is the second largest French marine protected area (MPA) (Figure 7).

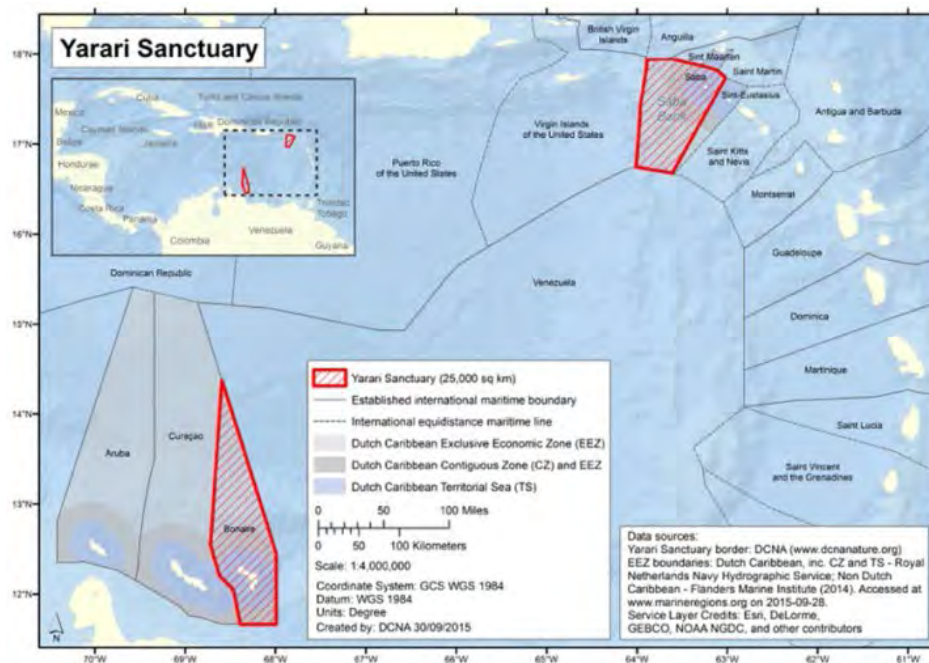


Figure 7. Map of marine mammal Sanctuaries in the French and Dutch overseas entities (DCNA©, AGOA Sanctuary-AAMP©).

UK Caribbean Islands

Five European OTs are politically attached to the UK, 2 OTs are located within the Lesser Antilles (Montserrat and Anguilla) and 3 OTs are part of the Greater Antilles (Cayman Islands, Turks and Caicos Islands and British Virgin Islands) (Figure 8).

Anguilla is located in the northern part of the Lesser Antilles (18°15'N, 63°10'W) and is separated from the British Virgin Islands by the Anegada Passage (166 km wide, 600 m deep). Anguilla territory consists of one main island (26 km long, 5 km wide) surrounding by 21 islands and cays. Most of these uninhabited islets and cays are rocky with limestone, corals and sandstones. Sombrero island is located 65 km north-west of Anguilla's main island and constitute the most northern land area of the Lesser Antilles. Anguilla is a low-lying limestone island with the highest peak (Crocus Hill) at about 65 m above sea level. The islands' shelves of Anguilla, St-Martin/St-Maarten and St-Barthélemy constitute the Anguilla Bank (3400 km²).

Montserrat (16°40'N, 62°90'W) is located at the south-west of Antigua (43 km) and north-west of Guadeloupe (92 km). This volcanic island is 17 km long and 11 km wide and is mountainous with three main areas reaching altitudes higher than 740 m. Its active volcano, Soufrière Hills, began erupting in 1995 after more than 400 years of relative inactivity. In 1997, an eruption destroyed the southern half of the island, including the capital Plymouth. This area is now an exclusion zone (58 km²) to minimize risk for the population and the northern part of the island (44 km²) has a permanent population. No one is allowed in most areas of the exclusion zone unless it is under strict supervision of the local authorities.

The **Virgin Islands**, also known as the British Virgin Islands (BVI), consist of approximately 60 islands, small islets and cays and are located in the northeastern part of the Caribbean, about 60 miles east of Puerto Rico (between 18°26'N, 18°44'N and 64°20'W, 64°37'W). The BVI are located on the Puerto Rican Bank and are separated from the Lesser Antilles by the Anegada passage. Tortola is the largest island (54 km²) and supports 80% of the population. Most islands are hilly with steep slopes (uplifted submerged volcanoes) except for Anegada, the northernmost island of the BVI, which is a coral limestone platform.

The **Turks and Caicos Islands** (TCI) are situated south to the Bahamas in the northern part of the West Indies (21°45'N, 71°31'W). This UK OT comprises 8 main and 30 smaller islands that are separated in two groups by the Turk Island Passage (i.e. the Turks Islands and Caicos Islands). The TCI consist of 9 inhabited islands and 40 uninhabited cays. TCI are relatively flat, with Providenciales island that rises to a high point of 50m above sea level.

Cayman Islands are located at the western end of the Greater Antilles (between 19°20'N, 19°43'N and 79°50'W, 81°21'W), about 240 km south of Cuba. The territory consists of three limestone islands, Grand Cayman (197 km²), Cayman Brac (38 km²) and Little Cayman (28 km²). Little Cayman is separated from Cayman Brac by a 7-km wide channel and with Grand Cayman located some 140 km to the south-west. Cayman Brac and Little Cayman form the Sister Islands. 'The Bluff' on Grand Cayman at 43m is the highest point.

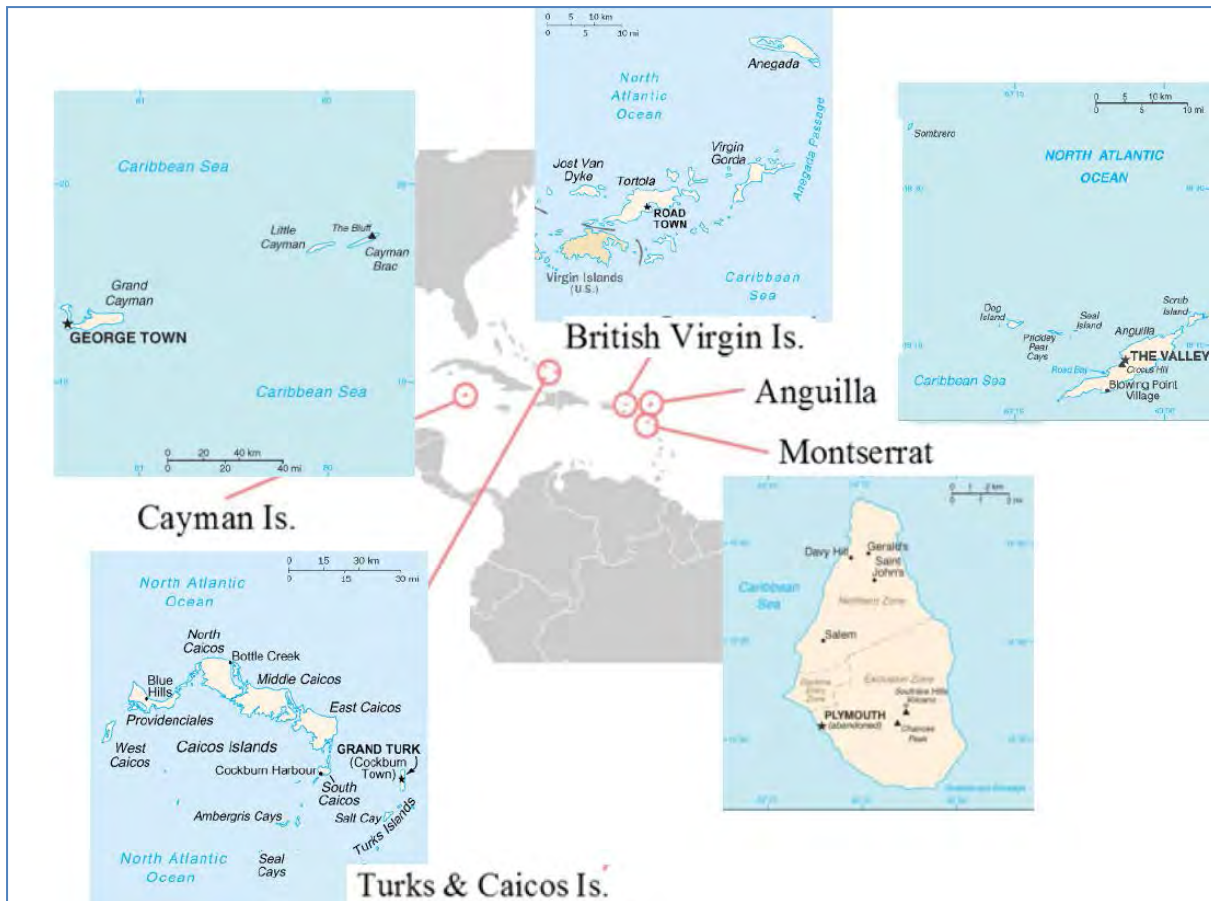


Figure 8. Map of the 5 UK OTs in the Caribbean region (small maps: Wikimedia©).

Geology

The Caribbean tectonic plate is located between the North and South Atlantic plates and Cocos plate and its eastern boundary corresponds to the subduction zone of the Lesser Antilles islands. The Antilles were formed by andesitic volcanism resulting from the subduction of the North Atlantic plate beneath the Caribbean plate.

The proto-Antillean islands began to emerge during the Cretaceous (145 million years B.P.) and **Greater Antilles** achieved their present position by the Eocene (55 million years B.P.). The Cayman Islands are sited on the Cayman Ridge which stretches from Cuba to Honduras. Turks and Caicos and Bahamas Banks over lie continental crust that was rifted from the North American continental land mass when it separated from Northwest Africa during the break up of Pangea during the Triassic. These remnants of the continental crust are buried beneath Jurassic, Cretaceous and Tertiary carbonate sediments (Jones 1994). The Puerto Rican-Virgin Islands platform have a volcanic origin and the British Virgin Islands (except Anegada island) formed about 80 million years ago. Anegada formed as part of a massive coral reef system during an interglacial period (130,000-119,000 years B.P.) (Gore 2013a).

The islands of the **Lesser Antilles** define a 850-km long curve from Anguilla (Sombrero Island) in the north to Grenada and the Leeward Antilles off the coast of Venezuela (Dutch ABC islands, Aruba). The Anegada Passage between Anguilla and the Virgin Islands marks

the separation between the Lesser Antilles and the eastern tip of the Greater Antilles (Puerto-Rico and Virgin Islands Bank).

The northern part of Lesser Antilles comprises two island-arcs differing in their geological origin. The outer calcareous arc, also known as "Limestone Caribbees", stretches from Anguilla, St-Martin, St-Barthélemy, Antigua, Barbuda to Grande-Terre, Désirade and Marie-Galante in Guadeloupe. This eastern and older arc (Eocene and Oligocene: 55 to 23 million years B.P.) encompasses islands with no volcanic activity that are partially or totally composed by carbonate deposits.

The inner volcanic arc of the Lesser Antilles, or "Volcanic Caribbees", consists of high volcanic islands and extends from Saba to Grenada (Pliocene, 5 to 2 million years B.P.) (Bouysse et al. 1990, Hedges 2001, Cambers 2010).

Larger islands (area > 750 km²) are located in the middle of the Lesser Antilles where the two island arcs converge: Martinique (1128 km²), Basse-Terre of Guadeloupe (944 km²), Dominica (790 km²).

Many of the Lesser Antilles islands experienced recent volcanic eruptions, such as: Mount Pelée in Martinique (1902, 1932), Soufrière in Guadeloupe (1976-77), Soufrière in St.Vincent (1979), Soufrière Hills in Montserrat (continuing activity since 1995) (Bouysse et al. 1990, Cambers 2010). The submarine volcano Kick'em Jenny is located 8 km-north of Grenada and 140 m below the sea level and may emerge as the next island of the Lesser Antilles due to recent signs of seismic activity (2015) (Cambers 2010).

ABC islands are situated at the boundary of the South American and Caribbean tectonic plates. Islands' basement is formed by a succession of volcanic and sediment deposits of Cretaceous and Early Tertiary origin. Islands igneous rocks indicate that they formed as part of a volcanic arc that was situated on the leading edge of a plate moving from the west (Pacific Ocean) into the Caribbean plate. Variation of sea level that occurred during the Quaternary, combined with a slow tectonic rise of the islands, caused the formation of limestone terraces in coastal areas. These terraces can be found along almost the entire coastline of Bonaire and Curaçao and occur in rather small and isolated patches on Aruba. (Dutch Caribbean Biodiversity Explorer database).

The succession of geological events occurring in the Caribbean region leads to the formation of numerous islands with different size, various landscapes (from flat to rugged and mountainous islands) and separated by large or narrow stretches of sea.

Climate and marine currents

Climate in the Caribbean region results from the encounter of northeast and southeast trade winds in the Inter Tropical Convergence Zone (ITCZ). Locally, climate and rainfall are directly related to island topography.

Winds and marine currents exert a major influence on species distribution and migration in the Caribbean region. Two main currents flow from the western Atlantic towards the Caribbean Sea: the **North Equatorial current** that comes directly through the Lesser Antilles and the **Guyana current**. This latter current flows along the coastal regions of South America, receiving waters enriched in nutrients from Amazon and Orinoco river systems

before reaching the southern part of the Lesser Antilles (Trinidad and Tobago islands) (Figure 9A).

The resulting flow of these two main currents in the Caribbean Sea becomes the Caribbean current. This current transports significant amounts of water northwestward into the Gulf of Mexico via the Yucatan current (Figure 9B-C) (Spalding 2004, Rowe et al. 2015, RSMAS Miami database).

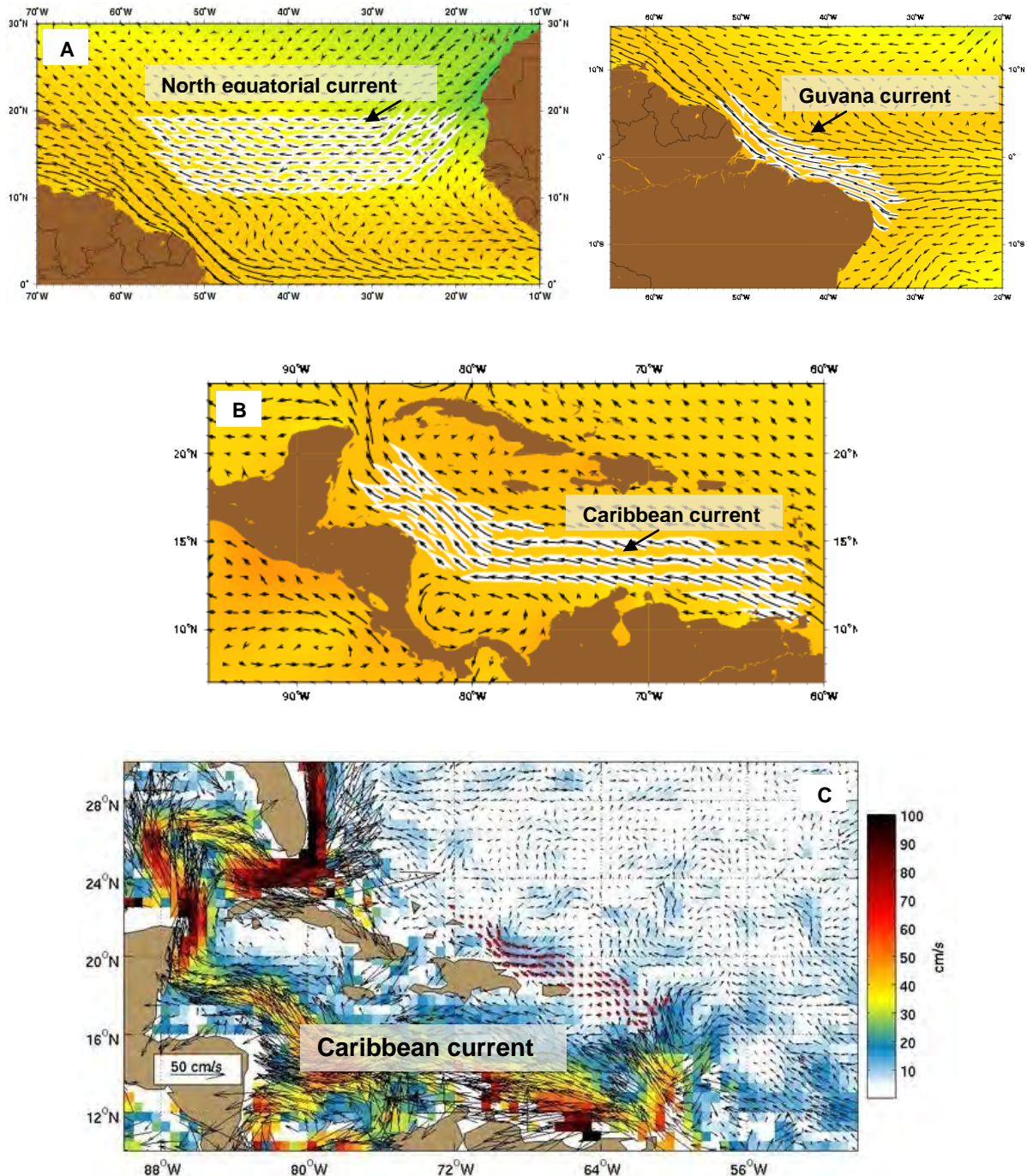


Figure 9. Sea currents Western Atlantic and Caribbean region: North Equatorial and Guyana currents (A), Caribbean current (B), Sea surface velocities recorded in the Caribbean region (C) (<http://oceancurrents.rsmas.miami.edu/caribbean/caribbean.html>)

A part of the North Equatorial current, known as the Antilles current, transports water northward of the Antilles and joins the Florida current after passing the Turks and Caicos and Bahamas archipelago (Figure 10).

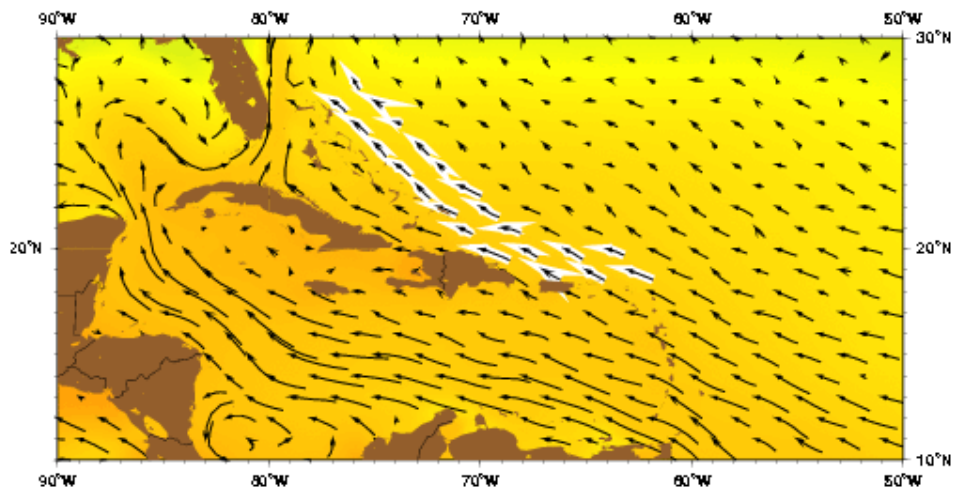


Figure 10. The Antilles current (white arrows) occurring on the eastern part of the Caribbean Sea (<http://oceancurrents.rsmas.miami.edu/atlantic/antilles.html>)

The **Caribbean climate** is tropical humid, with high temperature (between 24°C and 32°C) and mean annual rainfalls ranging from less than 600 mm along the Leeward coast (ABC islands) to over 5000 mm on mountainous Windward islands (i.e. average annual rainfall of about 10 m on the Soufrière volcano in Guadeloupe and 6 m on Montagne Pelée in Martinique) (Taylor and Alfaro 2005, MétéoFrance database).

ABC islands have a semi-arid climate compared to other islands, with mean annual rainfall between 400 and 550 mm and mean temperature of about 28°C (Meteorological Service of Netherlands Antilles, average 1971-2000). In general, eastern and windward sides of islands receive more rainfall.

Climate in the region varies between a **dry season** (January-June, with at least one dry month with rainfall < 100 mm) and a **wet season** (August-December). A slightly different rainfall regime characterizes the flat ABC islands, which have their main rainy season from October to January and small rain events from June to September. These islands experience their driest months between February and May with several drought events per century (Taylor and Alfaro 2005).

Temperature in Caribbean islands remain fairly constant throughout the year, with small annual variation of only 2-7°C. Mean temperatures increase from May and peak in August-September during the rainy season (from 27°C to 32°C). Coolest temperature occur during the boreal winter and early spring (December to March) with values that generally not fall below 18°C (Taylor and Alfaro 2005).

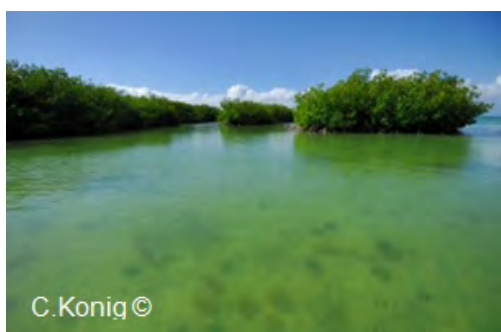
Tropical storms and hurricanes can occur during the rainy season. Hurricanes develop over the Atlantic ocean during the summer months when the sea surface temperature is over 27°C and the air pressure falls below 950 millibars.

3.2. Ecosystems and biomes

The 15 EU islands are part of the Caribbean islands hotspot and encompass highly diverse ecosystems and biomes, resulting from various climate, topography, geology and biogeography patterns (Petit and Prudent 2010): wetlands (including mangroves); seagrass beds; coral reefs; beaches; rivers and streams; tropical grassland, savannas and shrublands; tropical dry forests; tropical rainforests.

Some features related to these ecosystems/biomes are described hereafter in order to understand islands characteristics and biogeography but are not exhaustive to all the habitats/ecosystems occurring in these islands.

Wetlands and marine ecosystems



C. Konig ©

Wetlands gather a variety of habitats and ecosystems such as mangroves, lagoons, ponds, bays, estuaries, river mouths, or marshes. These habitats are particularly important due to the high biodiversity that they host (plants, invertebrates, amphibians, fishes, birds, mammals...), the presence of endemic species and the ecosystem services they provide: water drainage and filtration, food resources, important nurseries and foraging

grounds for species of commercial importance (fish, crustaceans...), shoreline stabilisation, protection from storms, recreation. The destruction or fragmentation of wetlands is a global concern as they represent one of the most productive habitat.

Large extent of wetlands, mainly represented by mangroves, occur around bays and lagoons in the **TCI** (Pienkowski 2005): about half of TCI land area (26,700 ha) are represented by wetlands, including intertidal creeks, lagoons, flats, salinas and marshes. In the **Cayman**



A. Vaslet ©

Islands, mangroves cover an important area within the Central Mangrove Wetland on Grand Cayman (about 3500 ha) (Pienkowski 2005). **Anguilla** has an important network of ponds, mostly bordered by mangroves, with 30 natural and artificial wetland ponds distributed mostly on the mainland (25 out of 30) and on some offshore cays (Lloyd and Mukhida 2013).

Relatively large wetland areas occur in Guadeloupe (> 4020 ha) and **Martinique** (about 2330 ha) (ONF 2007, Roussel et al. 2010). **Guadeloupe** encompasses the largest continuous areas of mangroves (2780 ha) and *Pterocarpus officinalis* swamp forests (2100 ha) of the Lesser Antilles, most of them situated in the lagoon of the Grand Cul-de-Sac Marin (Imbert et al. 1988, ONF 2007).

St-Martin has 16 ponds covering about 3.6% of the land area on the french side, whereas **St-Maarten's** ponds have been progressively filled in and only 4 ponds remain on the Dutch side out of the 19 ponds present in the 1950s. Simpson Bay Lagoon, located in the south-western part of St-Martin/St-Maarten, is one of the largest inland lagoon in the Lesser Antilles and is partly bordered by mangroves (EcoVision 1996, Roussel et al. 2010).

Several inland bays bordered by mangroves occur in **ABC islands**. Bonaire and Curaçao has extensive hypersaline lakes, or salinas, that constitute an important stop-over habitat for many migratory bird species. In Bonaire, Lay Bay is a shallow lagoon of 700 ha that supports the only significant mangrove woodland (c. 80 ha). This mangrove system is unique in the Caribbean region due to seawater influence and no freshwater input into the system, besides limited seasonal inflow of freshwater from rainfall and runoff (Debrot et al. 2010, Dilrosun et al. 2012).



Since 1971, the **international RAMSAR Convention** aims to conserve and protect wetlands worldwide. About 98,758 ha of wetlands are officially recognized as RAMSAR sites among the 15 EU Caribbean islands: 16 sites covering 32,704 ha in the French islands (including 14 ponds in St-Martin), 3 areas in UK islands over an area of 59,770 ha and 9 sites covering 6,284 ha in the ABC islands. The TCI encompasses the largest

RAMSAR site of the 15 islands: North, Middle and East Caicos islands (58,617 ha) (Pienkowski 2005, Ramsar International).

The official designation of 2 RAMSAR sites in Anguilla (Sombrero island) and in St-Maarten (Mullet Pond in the Simpson Bay Lagoon) is under progress.

Seagrass beds are submerged flowering plants growing in shallow marine and estuarine



environments worldwide. Generally, seagrasses grow over shallow and soft substrate (sand, mud...). The complex physical structure (due to leaves and roots) and high productivity of this ecosystem enable this habitat to support a considerable biomass and species diversity.

Seagrass meadows play significant services such as stabilising the substratum, limiting coastal erosion by attenuating the effects of currents and storms, enhancing fisheries production, providing shelters, nursery grounds and foraging areas for many marine organisms (invertebrates, fishes, sea turtles, manatees...). This ecosystem improves water quality by slowing down current and helping fine particles to sediment. Therefore, seagrass beds play an important ecological role by limiting sedimentation on coral reefs (Hily et al. 2010).



The physical structure of **coral reefs** is built reef-building polyps (Cnidaria, stony corals) that live in colony and secrete hard calcium carbonate skeleton forming the substrate of the coral colony. Reef-building corals occur in the photic zone (0-50 m deep) of subtropical and tropical latitudes due to their intra-cellular symbiotic relationship with algae called zooxanthellae. This is one of the most biodiversity-rich ecosystems hosting about 25% of marine

species and covering less than 0.2% of ocean's surface (Roberts 2003, Petit and Prudent 2010).

Coral reefs create complex structures serving as habitats, shelters, nurseries and foraging grounds for diverse fauna and flora communities encompassing almost all marine taxa (algae, invertebrates, fishes, sea turtles). This ecosystem plays important ecosystem services such as: coastline protection by reducing waves and storms, sand supply, nitrogen fixing, fisheries, recreation and tourism (Jackson et al. 2014).

Caribbean reefs suffer significant decline since the 1970s from mass mortality due to *Diadema* urchin epizootic disease, coral diseases, over-fishing, nutrient and sediment pollution, habitat destruction, hurricane and storm impacts (Jackson et al. 2014).

The majority of Caribbean reefs are fringing coral reefs that grow near the coastline and are separated from the shore by narrow-shallow lagoons. Fringing coral reefs occur around most of the 15 EU islands.

In **Anguilla**, a relative continuous bank reef extends east from Prickly Pear Cay and runs almost parallel to the mainland north coast (Wynne 2013). More than 300-km of coral reefs surround **TCI** with a clear differentiation between the windward side and the calmer leeward side (Logan et al. 2013).

Shallow patch reefs occur around most of the islands and numerous cays. **BVI** has 380km² of coral reefs ranging from small fragments of few m² to The Anegada reef which



encompasses 77km² of coral reefs. Anegada Horseshoe Reef around Anegada Island is the 3rd largest continuous reef in the Eastern Caribbean (63 km long) (Gore 2013ab).

Two barrier reefs occur along the east coast of **Martinique** and the north coast of **Guadeloupe**, with the last one constituting the longest barrier reef (c. 30 km) delimiting the widest lagoon (c. 11,000 ha, the Grand Cul-de-Sac Marin lagoon) of the Lesser Antilles (DEAL Guadeloupe 2012, DEAL Martinique 2009).

Continuous fringing reefs occur around **Bonaire** and **Curaçao** islands and remain among the healthiest reefs in the Caribbean (>30% of live coral cover) (Bak et al. 2005, Jackson et al. 2014).



The **Saba Bank** is located 4 km southwest from Saba and is separated from Saba island by a channel of more than 500 m deep. The Bank covers an area of 185,000 ha (above the 50m isobath) and rises to an average depth of 24 m below the sea surface. Saba Bank forms a submerged seamount with important coral reefs and is considered as the largest submerged atoll in the Atlantic Ocean and the 3rd largest atoll in the world (Lundvall 2008, Meesters 2010).

Beaches



The beach ecosystem is particularly important as it supports the nesting activity of globally threatened sea turtles. In the profile, **key nesting areas for sea turtles** have been identified as KBAs following the threshold of Bass et al. 2011 with at least 10 nesting tracks per year and per sea turtle species. The nesting areas that do not meet this threshold are designated as candidate KBAs.

Among its numerous ecological functions, the beach ecosystem also acts as a buffer against waves, recycles nutrients and provides habitat for a diversity of organisms.

Rivers and streams

Besides the importance of this ecosystem as a freshwater source, this habitat hosts endemic and threatened freshwater species. Many freshwater fauna in tropical islands (crustaceans, molluscs, fishes) have an amphidromous life-cycle with life stages shifting between marine and freshwater conditions.



If rivers are particularly abundant and permanent in some mountainous windward islands, such as **Guadeloupe** (55 permanent rivers in Basse-Terre), **Martinique** (70 main rivers among the 300 streams reported) and **Montserrat** (numerous streams and ghauts) (DEAL Guadeloupe 2012, DEAL Martinique 2009, Pienkowski 2005), freshwater is lacking on several dry islands, such as: St-Martin/St-

Maarten, St-Barthélemy, Anguilla, BVI, Cayman Islands, ABC islands. These small islands with restricted elevation ranges lack orographic rainfall and mainly depend on seasonal precipitations and weather events.

Dry stream beds (also known as "guts" or "gullies") occurring in the dry islands and are intermittently flowing streams due to rainfall events and can be seasonally dry (Scalley 2012).

Terrestrial ecosystems

Tropical (and subtropical) grassland, savannas and shrublands are grassland terrestrial biomes located in semi-arid to semi-humid climate regions in tropical and subtropical latitudes. This biome experiences highly seasonal rainfall events with average rainfalls between 300 and 1300 mm/year. Vegetation consists of perennial grass cover (1-2 m) with scattered drought-resistant trees and shrubs that in general do not exceed 10 m tall (Kew Royal Botanic Gardens, WWF Terrestrial ecoregions).



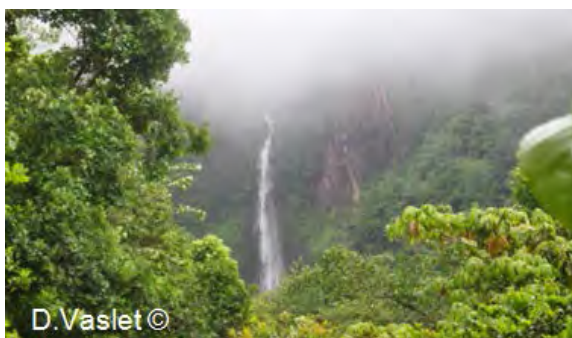
This dry vegetation is particularly present on St-Martin/St-Maarten, St-Barthélemy, Anguilla and in ABC islands. These dry Leeward islands have mean annual rainfall of 400-550 mm/year and their vegetation is mainly xerophytic with areas dominated by candelabra cacti intermixed with low scrubs and acacias (DCNA 2012, Kew Royal Botanic Gardens, Sastre and Breuil 2007).

Tropical dry forests occur in climate that are warm year-round and receive few hundred cm of rain per year. This ecosystem can experience relative long dry seasons lasting several months and mainly occurs in lowland areas and windward island slopes. Deciduous trees predominate in most of these forests and leafless periods occur during drought events (Kew Royal Botanic Gardens, WWF Terrestrial ecoregions).



Tropical dry forests and grassland-shrubland forests constitute the common vegetation type on islands with low elevation range, such as St-Maarten, Anguilla, Cayman islands, BVI, TCI, ABC islands, low lands of Montserrat, St-Eustatius, Saba, FWI (DCNA 2012, Kew Royal Botanic Gardens, Sastre and Breuil 2007). Historically, dry forests were cleared for sugarcane plantations and livestock grazing (cattle and goats).

Tropical rainforests (or tropical moist broadleaf forest) experience high average temperature (> 20°C) and significant rainfall (> 2000 mm/ year) throughout the year. This biome occurs between the equatorial zone and the tropics (Lat. 30°NS) and exhibits high levels of biodiversity. Rainforests are home to half of all living animal and plant species described on the planet. Several forest types are part of the tropical forest biome, such as: moist deciduous and semi-evergreen seasonal forests and montane forests (Kew Royal Botanic Gardens, WWF Terrestrial ecoregions).



Tropical rainforests particularly occur on islands volcano slopes that benefit from abundant rainfalls: Soufrière in **Guadeloupe**, Montagne Pelée in **Martinique** and Soufrière Hill in **Montserrat** (DEAL Guadeloupe 2012, DEAL Martinique 2009, Sastre and Breuil 2007, Young 2008).

Patches of rainforest also occur in upper slopes of the **BVI** (Tortola, Virgin Gorda) (Kew Royal Botanic Gardens). In **Saba**, secondary rainforest and tree-fern brake formations occur above 450 m. At 750 m, the top of Mount Scenery consists of a unique type of elfin woodlands (mountain forest formations) that are composed by Mountain Mahogany (*Freziera undulata*) growing higher than on any other island (DCNA 2012, Rojer 1997).

3.3. Endemic species

This section focuses on **endemic species** (both terrestrial and marine), their threatened status is described in Section 4.2 "**Species Outcomes: Threatened species**". Information on endemic species that are also assessed as globally threatened against the IUCN RedList is provided in this chapter (Table 5).

It is important to notice that this assessment of endemism is based on the current level of knowledge and that new species are often described after most species inventories. It is also essential to underline that several species (particularly for some invertebrate taxa) are considered as potential endemics to an island due to lack of biodiversity assessment in other areas.

Endemism outcome focuses on the **species taxonomic level** as it is considered as the most prominent and readily recognizable form of biodiversity (Myers et al. 2000). Therefore, more than 1,000 restricted-range species trigger the identification of KBAs in this ecosystem profile and endemic subspecies are considered as additional criteria (see Chapter 4).

The 15 EU islands are part of the Caribbean Islands hotspot and feature high levels of species endemism making the region biologically unique (Myers et al. 2000, Wege et al. 2010). Island biogeography triggers the isolation of flora and fauna populations that eventually leads to speciation. Caribbean islands biogeography explains the high levels of endemism for terrestrial species observed in the region (Hedges 2001).

The profile considers either species that are **strictly endemic** to an island as well as species having a **distribution range restricted to several islands** of the Caribbean region such as: the Lesser Antilles, Puerto Rico-Virgin Islands-Lesser Antilles; Dutch Leeward islands; Dutch Leeward islands-northern Venezuela and Colombia region; few islands of the Greater Antilles (i.e. TCI-Bahamas archipelago; Cayman Islands-Jamaica-Cuba).

A total of **1094 restricted-range species** are considered in the profile and are endemic to one or several islands of the EU overseas. The species list is provided in App.2 and includes 173 vertebrate species, more than 430 invertebrates and 488 plant species (Tables 4, 5).

Table 4. Number of restricted-range species per taxa occurring in the 15 EU overseas entities in the Caribbean region.

Taxa	Island endemic	Endemic to several islands or to the Eastern Caribbean Islands	Total
Plants	120	368	488
Invertebrates	306	127	433
Fishes	5	3	8
Amphibians	5	7	12
Reptiles	70	35	105
Birds	4	31	35
Mammals	2	11	13

The **Caribbean Islands shallow marine environment** is part of the large marine ecosystem (LME) of the Caribbean Sea, in which at least 12,046 marine species from 31 animal and 2 plant phylum have been reported (Miloslavich et al. 2010).

At the island level, relatively low rates of endemism are observed for marine taxa due to high degree of connectivity resulting from currents influence and species migration. The Caribbean and Antilles currents ensure larvae transportation among islands thus enhancing genetic exchanges and limiting isolation of populations.

Large ranging and highly migratory marine species, such as fishes and sharks, sea turtles, marine mammals and seabirds, occur throughout the Caribbean region at different stages of their life cycle.

Among the marine fauna, 61 marine gastropods are restricted to islands of the Lesser Antilles or the Dutch Leeward islands, one marine crinoid (*Nemaster grandis*, Echinoderm) is endemic to ABC islands and northern Venezuela and Colombia area and two marine fishes, *Starksia williamsi* and *Starksia springeri*, are restricted to Saba Bank and Curaçao, respectively (App. 2).

Table 5 provides the details of restricted-range species per taxa considered for each of the 15 EU overseas entities. **Species list** for each island is indicated in App. 2 and in islands' **Ecosystem profile Factsheets** (App. 5).

Winthin the Wider Caribbean region (WCR), the Saba Bank, in particular, and the Lesser Antilles, in general, have been recognized by the Parties to the Convention on Biological Diversity as **Ecologically or Biologically Significant Marine Areas** (EBSAs) that serves important purposes to support healthy functioning oceans.

Plants

The Caribbean islands hotspot encompasses about 11,000 plant species, including more than 7,800 species endemic to the hotspot (70% of the plant diversity) (Wege et al. 2010).

A total of 488 plant species have a restricted-range encompassing one or several EU overseas islands and 120 of these species are strictly endemic to one island (Tables 4-5).

Two plant species have been reported as endemics of St-Martin/St-Maarten but have not been observed since the 1980s. A total of 30 and 40 plant species are strictly endemic to Guadeloupe and Martinique, respectively (DEAL Guadeloupe 2012, DEAL Martinique 2009, Sastre and Breuil 2007) (Table 5).

About 30 plant species are restricted to ABC islands and northern Venezuela-Colombia region, among these plants 13 are strictly endemic to ABC islands. Three of these plants are strictly endemic to Aruba, including the endangered *Melocactus stramineus* which is mostly distributed within the Arikok National Park (Debrot 2006, Dutch Caribbean Biodiversity database) (Table 5).

Seven plant species are endemic to the 3 UK territories in the Lesser Antilles. Two vascular plants and one lichen are strictly endemic to St-Eustatius, including the Statia Morning Glory (*Ipomoea sphenophylla*) (Bush and Madden 2012, Dutch Caribbean Biodiversity database).

One plant species is endemic to Anguilla (*Anguilla* Bush, *Rondeletia anguillensis*) and 3 species to Montserrat, including the threatened Montserrat orchid (*Epidendrum montserratense*-CR) and Pribby (*Rondeletia buxifolia*-CR) (Churchyard et al. 2014, Young 2008).

About 37 plant species are restricted to one of the 3 UK territories of the Greater Antilles (Turks and Caicos, British Virgin Islands, Cayman Islands): 5 plants species are endemic to BVI, 23 to Cayman islands and 9 are restricted to TCI archipelago (Table 5).

Table 5. Endemic species (terrestrial, freshwater, marine species) occurring in the 15 EU islands. Information on threatened endemic species is also indicated#.

	Plants	Invertebrates	Fishes	Amphibians	Reptiles	Birds	Mammals	Endemic and threatened species
Dutch islands								
Aruba	3 (1 EN)	28 (1 VU)			3			
ABC endemics	5	21			1			3
Regional end. ¹	13	19	2				3 (1 VU)	
Bonaire		16			1			
ABC endemics	10	26			2			2
Regional end. ¹	13	9	2		1	1 (1 VU)	3 (1 VU)	
Curaçao		33	1		1			
ABC endemics	10	32 (1VU)			3			3
Regional end. ¹	16	13	2		1	1 (1 VU)	3 (1 VU)	
St-Maarten	2 esp*	2			3 (1 VU)			
Regional end. ²	> 20				4 (+3*)	6	3	1
Saba			1 (1EN)		1			
Regional end. ²	24	2			2 (1 EN)	9	1	2
St-Eustatius	3	2						
Regional end. ²	18	14			6 (2 EN)	9	2	2
French islands								
Guadeloupe	30 (6CR, 1EN, 3VU)	24 (1CR, 1EN, 1VU)		2 (2EN)	16 (1EN)	1	1 (VU)	
Regional end. ²	300-350 (2EN, 1VU)	4	1	1	4 (2EN)	25 (1VU)	7 (3VU)	26
Martinique	40 (9CR, 3EN, 2VU)	50 (2VU)	1	1(VU)	4 (1 CR*)	1 (VU)	1	
Regional end. ²	> 120	14	1	2	4 (2 EN)	15 (1EN)	4 (1VU)	23
St-Martin	2 *	2			3 (1VU)			
Regional end. ²	> 15	13			4	6	1	1
St-Barthélemy		6			1			
Regional end. ²	> 10	18			7 (2EN)	4	2	2

UK islands								
Anguilla	1				2 (2 VU)			4
Regional end. ²	(not full list)				7 (2 EN)	5	2	
BVI	5 (3 CR)	5		2 (2EN)	8 (2 CR)			19
Regional end. ³	45 (3CR, 4EN)	3		4 (1CR*)	9 (2CR, 1EN)	9	2 (1 VU)	
Cayman Islands	23 (12 CR, 4 EN, 2 VU)	36 (1CR)	2		14 (1 EN)			24
Regional end. ⁴	17 (1 EN, 2 VU)				1 (1 VU)	5		
Montserrat	3 (2 CR)	120			6 (1 CR)	1 (1 CR)		8
Regional end. ²	70			2 (1CR)	1	9 (1VU)	6 (2 VU)	
TCI	9 (1CR - 5EN)	13			8			11
Regional end. ⁴	50 (2VU)	3 (1 CR)			4 (1 CR)	5 (1 EN)		

The level of threats is reported for vulnerable (VU), endangered (EN) and critically endangered (CR) species (IUCN RedList 2015).

* potentially extirpated from the territory (occurrence to be confirmed).

¹ species endemic to ABC islands and northern Venezuela-Colombia region.

² species endemic to the Lesser Antilles and Puerto Rico Bank (including species restricted to few islands).

³ species endemic to the Puerto Rico-Virgin Islands Bank.

⁴ species occurring in the Cayman Islands, TCI or Puerto-Rican Bank.

Among these endemic species, 27 species are globally threatened, such as: *Vachellia anegadensis* (CR) and *Calyptanthes kiaerskovii* (CR) in the BVI; *Myrmecophila thomsoniana* (EN) and *Hohenbergia caymanensis* (CR) in Cayman Islands; Caroline's pink flower (*Stenandrium carolinae*-CR) and Silvery silverbush (*Argythamnia argentea*-EN) in TCI (the species list is provided in App. 2) (Churchyard et al. 2014, Kew Royal Botanic Gardens database, Pelembe and Cooper 2011).

Invertebrates

Invertebrate diversity and endemism are not fully known in the 15 EU islands and in the Caribbean region in general and species richness fluctuates a lot among islands (Table 5). New species and endemics are often described following species inventories. A recent biodiversity assessment performed on Montserrat described about 120 new terrestrial species for the island (mainly represented by beetles) that are potentially endemic to the island (Young 2008).

On the basis of the current knowledge, about 371 terrestrial and 62 marine invertebrate species have a distribution restricted to the Eastern Caribbean islands, from the Cayman Islands, the TCI, the Puerto Rican Bank, to the Lesser Antilles and the Dutch Leeward Islands (App. 2). These invertebrate species belong to the following taxa: Molluscs,

Annelids, Echinoderms and Arthropods (Tables 4-5, App. 2). Note that the species list in App. 2 is not exhaustive.

Among those species, 5 invertebrates are strictly endemic to the Puerto Rican Bank, 36 and 13 species are restricted to the Cayman Islands and TCI respectively, 239 species are endemic to the Lesser Antilles (to one or several islands), 109 invertebrates are endemic to ABC islands and 21 are restricted to ABC islands and northern Venezuela -Colombia region (Churchyard et al. 2014, DaCosta-Cottam et al. 2009, Debrot 2006, Dutch Caribbean Biodiversity database, Pelembe and Cooper 2011, Cayman Islands National Conservation Law 2013).

Terrestrial invertebrates

About 300 terrestrial invertebrate species are described as **strictly endemic to one of the 15 EU islands**, with some of them also assessed as globally threatened (IUCN 2013, IUCN Red List, see the species list in **App.2**):

- **endemic to Guadeloupe:** 8 land snails (including *Amphicyclotulus perplexus*-VU), 1 spider (*Holothele sulfurensis*), 18 insects (including the endemic and threatened dragonflies *Protoneura romanae*-CR, *Macrothemis meurgeyi*-EN) ;
- **endemic to Martinique:** 16 land snails, including *Amphicyclotulus liratus* (VU), 1 spider (*Avicularia versicolor*), 1 scorpion (*Tityus marechali*), 25 insects; 20 terrestrial molluscs;
- **endemic to St-Barthélemy:** 3 arachnids (including the scorpion *Oiclus questeli*), 3 insects;
- **endemic to St-Martin/St-Maartin:** 1 pseudoscorpion (*Amblyolpium martinensis*), 2 insects;
- **endemic to St-Eustatius:** 1 pseudoscorpion, 1 insect Orthoptera (*Lactista eustatia*);
- **endemic to Montserrat:** 1 land snail, 3 arachnids, 120 insects potentially endemic to the island (including about 50 beetles);
- **endemic to Aruba:** 1 land snail, 2 pseudoscorpions, 4 insects, 4 crustaceans (including the vulnerable Aruban isopod *Arubolana imula*);
- **endemic to Curaçao:** 4 annelids, 2 land snails, 4 arachnids (including the spider *Camillina jeris*), 8 insects, 7 crustaceans;
- **endemic to Bonaire:** 1 annelid, 3 land snails, 1 arachnid (*Garypus bonairiensis*), 2 insects, 9 crustaceans;
- **endemic to Cayman Islands:** Little Cayman land snail (*Cerion nanus*- CR), 2 molluscs, 30 land snails, 3 arthropods;
- **endemic to the BVI:** 3 butterflies (including *Calisto anegadensis*), 2 arthropods, 1 land snail;
- **endemic to the TCI:** 13 arthropods (including the butterfly *Anaea intermedia* and the remipede *Godzillius robustus*).

Marine invertebrates

Recent species inventory of marine biodiversity occurred in the Lesser Antilles and enabled to describe new species with some of them potentially endemic to one or few islands. The increasing use of genetic analyses give new insights in connectivity among populations and enable to discover new species.

During the past years, several marine species inventories have been conducted in the Lesser Antilles.

In Guadeloupe, the inventory of Sponge species (Porifera) has been performed in 2010 by the Université des Antilles (UA), the Instituto de Oceanologia de Cuba, the Parc National de la Guadeloupe (PNG) and DEAL Guadeloupe (Alcolado and Busutil 2010) and 2 marine invertebrates inventories (Molluscs, Crustaceans, Echinoderms) have been conducted with Karubenthos Expedition 2012 in shallow marine habitats and Karudeep 2015 in deep marine ecosystems off Guadeloupe. These Karubenthos and Karudeep inventories were a joint initiative of the Parc National de la Guadeloupe, the Muséum National d'Histoire Naturelle (MNHN), the Université des Antilles and the Université Pierre et Marie-Curie (UMPC).

In Saint-Martin, an inventory of Crustaceans, Echinoderms and Molluscs has been conducted in 2012 in shallow marine habitats within and outside the Réserve Naturelle Nationale of St-Martin. This research expedition was coordinated by the Réserve Naturelle Nationale of St-Martin, the Observatoire du Milieu Marin Martiniquais (OMMM) and the Florida Museum of Natural History (Maréchal and Paulay 2013).



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These recent species inventories conducted in Guadeloupe enabled to sample about 1200-1500 species of Molluscs, 350-400 species of Crustaceans Decapods and at least 300 species of algae and to describe 1 new Crustacean species and 94 new species and 3 new genus of Molluscs (Karubenthos 2012).

In Saint-Martin, the inventory of marine invertebrates highlighted a total of 585 species including 305 new species that have been added to the species list for Saint-Martin (with 196 Molluscs, 90 Arthropods and 17 Echinoderms) (Maréchal and Paulay 2013).

With the current level of knowledge, several **marine molluscs** are described as endemic to Puerto Rico and Lesser Antilles area (*Conus mazei*, *Conus roberti*, *Timbellus phyllopterus*), with some of them strictly endemic to one island of the Lesser Antilles (AAMP-PNG-UAG 2013, AAMP 2010a, IUCN RedList) (App. 2):

- Guadeloupe: *Muricopsis schrammi*, *Conus magellanicus*, *Triphora guadaloupensis* and 7 mollusc species potentially endemic to the deep waters of Guadeloupe archipelago.
- Martinique: *Conus norai*, *C.riosi*, *C. burryae* and the vulnerable *Conus hennequini*.

About 68 marine **mollusc and crustacean** species (isopods) are restricted to ABC islands and northern Venezuela-Colombia region, with 45 species strictly endemic to one of the Dutch Leeward islands.

This marine species inventory includes the vulnerable Hieroglyphic Cone (*Conus hieroglyphus*) which is observed in the marine habitats of Aruba and Curaçao (Debrot 2006).

One **crinoid** species (*Nemaster grandis*, Echinoderma) is endemic to ABC islands and northern Venezuela-Colombia region (Debrot 2006, Dutch Caribbean Biodiversity database).

Freshwater fishes

The Caribbean Islands hotspot has more than 165 freshwater fish species with 65 of which endemic to one or few islands.

Among the 15 EU islands, 6 endemic freshwater fishes are reported (Tables 4-5):

- The Smallscaled spinycheek sleeper (*Eleotris perniger*) is endemic to several islands of the Antilles with a distribution range reported from St-Martin to Trinidad (Froese and Pauly 2015). It is an amphidromous species with a larval stage drifting in the sea with currents (Tabouret 2012). This species is observed in the rivers of Guadeloupe and Martinique (Monti et al. 2010, Tabouret 2012).
- The killifish *Anablepsoides cryptocallus* is endemic to Martinique but it is relatively rare and has been reported in the upper part of few streams (Tabouret 2012).
- Two freshwater Molly fishes are endemic of ABC islands, northern Venezuela and Columbia region (*Cyprinodon dearborni*, *Poecilia vandepolli*) and occur in the ponds of the dry Leeward islands (Dutch Caribbean Biodiversity database, Hulsman et al. 2008).
- Two Moquitofishes fishes are restricted to Grand Cayman's ponds: Cayman gambusia (*Gambusia xanthosoma*), Grand Cayman limia (*Limia caymanensis*) (Pelembé and Cooper 2011).

Marine fishes

Two threatened blennies of the genus *Starksia* are reported as strictly endemic: *Starksia williamsi* (EN) is endemic to Saba Bank (distributed over the rim of the submerged atoll) and *S. springeri* is restricted to Curaçao (Baldwin et al. 2011). These species have been recently described and were originally known as a single species, the blenny *S. atlantica* (Baldwin et al. 2011, IUCN RedList).

Numerous individuals of Red Hind (*Epinephelus guttatus*) gather to form spawning aggregations, particularly over the Saba Bank (Lundvall 2008).

Amphibians

About 190 amphibian species are reported in the Caribbean Islands hotspot (Wege et al. 2010). In the 15 EU overseas entities, twelve species are considered as trigger species due to their endemism and vulnerability (App. 2).

Six amphibians are restricted to the Lesser Antilles including two frogs endemic to the southern part of the Lesser Antilles (from Antigua and Barbuda to Grenada): the Martinique whistling Frog (*Eleutherodactylus martinicensis*) and Johnstone's whistling frog (*E. johnstonei*). These species also occur in the northern LA but are considered as non natives (IUCN 2013).

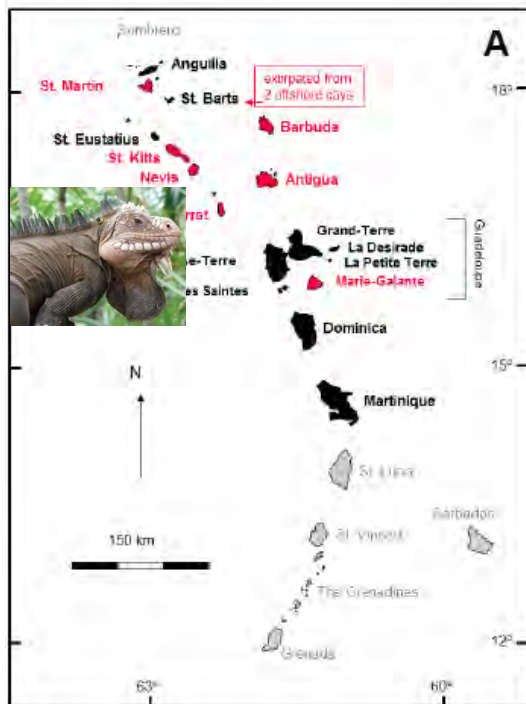
The Mountain Chicken (*Leptodactylus fallax*-CR) is the second largest frog in the world and is restricted to Montserrat and Dominica islands (Corry et al. 2010). Two endangered frogs are strictly endemic to the forests of Basse-Terre (Guadeloupe): Barlagne Frog (*Eleutherodactylus barlagnei*-EN) and Pinchon's piping frog (*E. pinchoni*-EN). The Martinique Volcano Frog (*Allobates chalcopis* -VU) is restricted to Martinique (DEAL Guadeloupe 2012, DEAL Martinique 2009).

Two frogs are endemic to the Virgin islands: Virgin Islands whistling frog (*Eleutherodactylus lentus* -EN) and Virgin Islands Coqui (*E. schwartzi*-EN). Four species are restricted to the Puerto Rican Bank: the Puerto Rican Crested Toad (*Peltophryne lemur*-CR) that is potentially extirpated from the BVI (Pelembé and Cooper 2011), the Red-eyed whistling Frog (*Eleutherodactylus antillensis*), the Cochran's whistling Frog (*E. cochranae*) and the Günther's White-lipped Frog (*Leptodactylus albilabris*).

Reptiles

About 105 terrestrial reptiles species have a distribution range restricted to one or several islands of the EU overseas (App. 2, Tables 5-6).

A total of 52 reptile species are endemic to the **Lesser Antilles area**, including : the Lesser Antilles Iguana (*Iguana delicatissima*), Least Island Gecko (*Sphaerodactylus sputator*), *Sphaerodactylus vincenti*, *S. festus*, *S. fantasticus*, Rough-scaled Worm Lizard (*Gymnophthalmus plei*ii -EN), Julia's Ground Snake (*Erythrolamprus juliae*) (Tables 4 and 5, App. 2 for the species list).



The **endangered Lesser Antillean Iguana** (*Iguana delicatissima*) has a very small distribution range limited to only few islands within the Lesser Antilles (Fig.11) : Anguilla, St-Barthélemy, St-Eustatius, Guadeloupe, Dominica and Martinique (Legouez 2010, Knapp et al. 2014).

Across the Lesser Antilles, island populations of *I. delicatissima* exceed the size of 5,000 individuals (estimated as the size of long-term minimum viable population) in only 2 islands, Guadeloupe (Petite-Terre and Désirade islands) and Dominica. Important populations also occur in Chancel islet (about 1,000 ind.), in Martinique, St-Eustatius (about 500 ind.) and St-Barthélemy (at least 450 ind.) (Fogarty et al. 2004, Legouez 2010, Agence Territoriale de l'Environnement de St-Barthélemy, pers. com. 2016).

Figure 11. Distribution of the Lesser Antilles Iguana in the Lesser Antilles (Map and photo from Knapp et al. 2014 - Photo © C. Knapp).

This iconic endemic species has been gradually extirpated throughout its native range due to habitat loss, negative impact of exotic invasive species and hybridization with invasive Green Iguana (*Iguana iguana*).

A subspecies of the exotic Green iguana (*I. iguana*) is potentially endemic to Saba (Saban Black iguana, Paul Hoetjes and Kai Wulf pers. com. 2015).

About 11 reptiles are endemic to one or several islands of the **Anguilla Bank** (Anguilla, St-Martin/St-Maarten, St-Barthélemy), including: Anguilla Bank ground lizard (*Ameiva plei*), Anguilla Bank Tree Lizard (*Anolis gingivinus*), Dwarf Gecko (*Sphaerodactylus parvus*), Anguilla Bank Skink (*S.powellii*), Leeward Island Racer (*Alsophis rijgersmaei*-EN).

Four reptile species are endemic to **Saba and St Kitts Bank**:

- the endangered Red-bellied racer (*Alsophis rufiventris*) restricted to Saba and St.Eustatius;
- the Saba dwarf gecko (*Sphaerodactylus sabanus*), the Green Tree Lizard (*Anolis bimaculatus*) and Red-faced ground lizard (*Ameiva erythrocephala*) endemic to St Kitts bank (Powell et al. 2005, Dutch Caribbean Biodiversity database).

On the basis of the current knowledge, about 70 reptiles species are reported as strictly endemic to one island of the EU overseas (Tables 4, 6, App. 2) (Breuil 2002, 2009, Churchyard et al. 2014, Debrot 2006, Powell et al. 2005, IUCN Red List, Pelembe and Cooper 2011,).

The Montserrat galliwasp (*Diploglossus montisserrati*) is the only member of the family Anguidae to occur in the Lesser Antilles. This species is very rare and has been observed only in the Woodlands Spring area in Montserrat (i.e. western boundary of the Centre Hills reserve) (Ogrodowczyk et al. 2006).

A total of 30 reptiles are strictly endemic to the BVI, TCI and Cayman islands. In these UK OTs, iguanas are represented by the genus *Cyclura* with 3 threatened species restricted to each of these 3 entities (Table 6). The Turks and Caicos rock iguana (*Cyclura carinata*-CR) mainly occurs in the TCI with a small subpopulation in the Bahamas archipelago.

Table 6. Reptile species strictly endemic to one of the 15 EU overseas entities in the Caribbean region.

Islands	Reptile species
Cayman islands	<ul style="list-style-type: none"> - Little Cayman Green Anole (<i>Anolis maynardi</i>), Cayman Blue-Throated anole (<i>Anolis conspersus</i>), <i>Sphaerodactylus argivus</i>, <i>Anolis luteosignifer</i> - Blind snake (<i>Typhlops caymanensis</i>) - Cayman Brac Blind Snake (<i>Typhlops epactius</i>) - Cayman Ground Boas (<i>Tropidophis caymanensis</i>, <i>Tropidophis parkeri</i>, <i>Tropidophis schwartzi</i>) - Galliwasp (<i>Celestus maculates</i>) - Grand Cayman Blue Iguana (<i>Cyclura lewisi</i>-EN) - Grand Cayman Racer (<i>Alsophis caymanus</i>), Cayman Brac racer (<i>Alsophis fuscicauda</i>), Little Cayman racer (<i>Alsophis rutyi</i>)
Turks and Caicos	<ul style="list-style-type: none"> - TCI skinks: <i>Spondylurus caicosae</i>, <i>S. turksae</i> - Turks and Caicos curlytail lizard (<i>Leiocephallus psamodrommus</i>) - <i>Aristelliger hechti</i>, <i>Sphaerodactylus caicosensis</i>, <i>S. underwoodi</i> - Turks and Caicos rock iguana (<i>Cyclura carinata</i>-CR) (a small subpopulation occurs in the Bahamas) - Caicos Islands dwarf boa (<i>Tropidophis greenwayi</i>)
British Virgin islands	<ul style="list-style-type: none"> - Anegada anole (<i>Anolis ernestwilliamsii</i>) - Virgin Islands dwarf gecko (<i>Sphaerodactylus parthenopion</i>) - Virgin Islands Bronze Skink (<i>Spondylurus sloanii</i>-CR), Carrot Rock

Islands	Reptile species
	Skink (<i>Spondylurus macleani</i>), Aneгада Skink (<i>Spondylurus anegadae</i>) - Worm snakes (<i>Typhlops catapontus</i> , <i>T. naugus</i>) - Aneгада Rock Iguana (<i>Cyclura pinguis</i> -CR) restricted to the island of Aneгада (translocation of populations to several islands within the BVI)
Anguilla	- Anguilla Black Ameiva (<i>Ameiva corax</i> , VU) on Little Scrub island - Sombrero ameiva (<i>A. corvina</i> , VU) on Sombrero Island - One new species potentially endemic to Sombrero: <i>Sphaerodactylus sp. nov.</i>
St-Martin/St-Maarten	- St-Martin Skink (<i>Spondylurus cf. martinae</i>) - Spotted Woodslave (<i>Thecadactylus oskrobapreinorum</i>) - The vulnerable Anguilla bank bush anole (<i>Ctenonotus pogus</i>) was reported as endemic to St-Martin/St-Maarten and Anguilla but is probably extirpated from Anguilla.
St-Barthélemy	- Blind snake (<i>Antillotyphlops annae</i>)
Saba	- Saban anole (<i>Anolis sabanus</i>)
Montserrat	- Montserrat anole (<i>Anolis lividus</i>) - Montserrat galliwasp (<i>Diploglossus montisserrati</i> , CR) - Montserrat skink (<i>Mabuya montserratae</i>), - Montserrat Ameiva (<i>Ameiva pluvianotata</i>) - Blind snake (<i>Antillotyphlops monastus</i>) - Montserrat black snake (<i>Alsophis manselli</i>)
Guadeloupe	- 5 Anoles of the genus <i>Anolis</i> : <i>Anolis terraekaltae</i> , <i>A. marmoratus</i> , <i>A. desiradei</i> , <i>A. chrysops</i> , <i>A. ferreus</i> - 5 Skinks of the genus <i>Mabuya</i> : <i>Mabuya desiradae</i> , <i>Mabuya parviterrae</i> sp. nov., <i>M. cochonae</i> *, <i>M. grandisterrae</i> *, <i>M. guadeloupae</i> * (* presence to confirm) - Sphérodactyle des Saintes (<i>Sphaerodactylus physacinus</i>) - 1 blind snake (<i>Typhlops guadeloupensis</i>) - 2 racers (<i>Alsophis sanctonum</i> -EN, <i>A. antillensis</i>)
Martinique	- 3 lizards: <i>Dactyloa roquet</i> , <i>Tetracheilostoma bilineatum</i> , Lesser Martinique Skink (<i>Capitellum metallicum</i> -potentially extirpated) - 2 snakes: Trigonocéphale (<i>Bothrops lanceolatus</i>) and 1 racer (<i>Erythrolamprus cursor</i> -CR, potentially extirpated)
Aruba	- Aruban Whiptail Lizard (<i>Cnemidophorus arubensis</i>) - Aruba Leaf-toed Gecko (<i>Phyllodactylus julieni</i>) - Aruban Rattlesnake (<i>Crotalus unicolor</i>)
Bonaire	- Anole lizard (<i>Anolis bonairensis</i>)
Curaçao	- Three scales ground snake (<i>Liophis triscalis</i>)

Eight reptiles are restricted to **ABC islands and northern Venezuela and Colombia region**, including 3 lizards and 2 snakes strictly endemic to one of the ABC islands (Table 6). The 2 endemic snakes (*Crotalus unicolor*, *Liophis triscalis*) are iconic species of Aruba and Curaçao and are mostly distributed within the terrestrial protected areas (Debrot 2006, van Buurt 2006, Dutch Caribbean Biodiversity database).

The remaining 3 reptiles are restricted to the ABC islands and northern Venezuela and Colombia region:

- the Whiptail lizard (*Cnemidophorus murinus*) is endemic to Bonaire and Curaçao and mainly occurred in the islets of Klein Bonaire and Klein Curaçao (van Buurt 2006);
- the Anole lizard (*Anolis lineatus*) is restricted to Aruba and Bonaire;
- the Antilles Gecko (*Gonatodes antillensis*) is endemic to Bonaire, Curaçao and Venezuela islands.

About 13 reptiles are **restricted to several islands of the Greater Antilles area**, including at least one of the **3 UK OTs** (Cayman Islands, TCI or BVI), such as the following threatened species (Churchyard et al. 2014, IUCN Red List, Pelembe and Cooper 2011):

- restricted to the Bank of Puerto Rico (Puerto Rico-Virgin Islands area): the Lesser Virgin Islands Skink (*Spondylurus semitaeniatus* -CR), Puerto Rican Racer (*Borikenophis portoricensis*), the Blind Snake (*Typhlops richardi*), the Worm lizard (*Amphisbaena fenestrata*), 3 lizards (*Ameiva exsul*, *Anolis pulchellus*, *A. stratulus*) and 2 boas (*Chilabothrus granti*-EN, *C. chrysogaster*);
- the Cuban rock iguana (*Cyclura nubila*-VU) is restricted to the Cayman Islands and Cuba;
- the *Anolis scriptus* and *Sphaerodactylus mariguanae* are restricted to the archipelago of the TCI and Bahamas;
- the Culebra Island Giant Anole (*Anolis roosevelti*-CR) is endemic to the Virgin islands but presumed extinct in the BVI (Edgar 2010).

Recently, two West Indian Boas have been separated at the species level: the Virgin Island tree boa (*Chilabothrus granti*) that is restricted to several islands and cays of the Puerto Rican Bank and the Caribbean boa (*C. monensis*) endemic to Mona Island (Rodriguez-Robles et al. 2015).

This separation also occurs for the Cayman Racers that are recognized as distinct endemic species: Grand Cayman Racer (*Alsophis caymanus*), Cayman Brac racer (*Alsophis fuscicauda*), Little Cayman racer (*Alsophis ruttii*) (Hedges et al. 2009).

Birds

More than 560 bird species are reported in the Caribbean islands hotspot with 148 species endemic to one or few islands (Wege et al. 2010).

Within the 15 EU islands, a total of **33 bird species have a restricted distribution** or are strictly endemic to one island (Table 7, App. 2 for the complete species list) (BirdLife International, IUCN Red List, Churchyard et al. 2014, Devenish et al. 2009).

About 29 species have a restricted range encompassing the Eastern Caribbean Islands (from the Puerto Rican Bank to the Lesser Antilles), the northern Caribbean region (Cayman Islands, Cuba, Bahamas and TCI archipelago) or the South-eastern Caribbean region (including ABC islands and northern Venezuela and Colombia region) (Table 7).

The 4 remaining bird species have a larger distribution and occur in several islands of the Greater and Lesser Antilles: *Myadestes genibarbis*, *Elaenia martinica*, *Margarops fuscatus*, *Euphonia musica* (App. 2).

These bird species are identified by BirdLife International as key species within **Endemic Bird Areas (EBAs)** and enable to trigger the delimitation of **Important Bird Areas (IBAs)** in the eastern Caribbean region (BirdLife International, Devenish et al. 2009, Table 4, Table 7, App. 2).

Table 7. List of some bird species with a restricted distribution encompassing the 15 EU overseas entities.

Area / Islands	Bird species
Restricted to Northern Caribbean islands (Cayman Islands, Cuba, Bahamas and TCI archipelago) and some of the Greater Antilles	<ul style="list-style-type: none"> - Giant Kingbird (<i>Tyrannus cubensis</i> - EN - very rare and potentially extirpated from the territory), Cuban Crow (<i>Corvus nasicus</i>): distribution restricted to Cuba and TCI - Cuban Bullfinch (<i>Melopyrrha nigra</i>): restricted to Cuba and Grand Cayman - Thick-billed Vireo (<i>Vireo crassirostris</i>) and Cuban Amazon (<i>Amazona leucocephala</i>): end. to Cayman Islands, Bahamas and TCI - Bahama Woodstar (<i>Calliphlox evelynae</i>) and Bahama Mockingbird (<i>Mimus gundlachi</i>): end. to Bahamas and TCI - Antillean mango (<i>Anthracothorax dominicus</i>)
Restricted to the Puerto Rican Bank and the Lesser Antilles	<ul style="list-style-type: none"> - Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>): end. to the Puerto Rican Bank - Bridled Quail-dove (<i>Geotrygon mystacea</i>) - Green-throated Carib (<i>Eulampis holosericeus</i>) - Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>) - Lesser Antillean Pewee (<i>Contopus latirostris</i>) - Antillean Crested Hummingbird (<i>Orthorhyncus cristatus</i>)
Restricted to the Lesser Antilles (including island endemic)	<p>Distribution restricted to few islands of the LA</p> <ul style="list-style-type: none"> - Blue-headed Hummingbird (<i>Cyanophaia bicolor</i>) - suggested to be designated as an EN species (Dewynter et al. 2014b) - White-breasted Thrasher (<i>Ramphocinclus brachyurus</i> - EN) - Forest Thrush (<i>Turdus lherminieri</i> - VU) - Lesser Antillean Flycatcher (<i>Myiarchus oberi</i>) - Lesser Antillean Swift (<i>Chaetura martinica</i>) - Purple-throated Carib (<i>Eulampis jugularis</i>) - Plumbeous Warbler (<i>Setophaga plumbea</i>) - Lesser Antillean Saltator (<i>Saltator albicollis</i>) - Grey Trembler (<i>Cinlocerthia guttularis</i>) - Scaly-breasted Thrasher (<i>Alenia fusca</i>) - Brown Trembler (<i>Cinlocerthia ruficauda</i>) <p>Island endemics</p> <ul style="list-style-type: none"> - Guadeloupe Woodpecker (<i>Melanerpes herminieri</i>): end. to Guadeloupe - Martinique Oriole (<i>Icterus bonana</i> - VU): end. to Martinique - Montserrat Oriole (<i>Icterus oberi</i> - CR): end. to Montserrat
Restricted to the South-Eastern Caribbean (ABC islands and northern Venezuela and Colombia)	<ul style="list-style-type: none"> - Yellow-shouldered Amazon (<i>Amazona barbadensis</i> - VU)

Among the 12 birds endemic to the Lesser Antilles, 5 are restricted to only few islands (Arnoux et al. 2013, BirdLife International, Eraud et al. 2009, raigné 2012):

- the Forest Thrush (*Turdus lherminieri*-VU) occurs in Dominica, Montserrat, Guadeloupe, St Lucia;
- the Plumbeous Warbler (*Setophaga plumbea*) in Guadeloupe and Dominica;
- the Blue-headed Hummingbird (*Cyanophaea bicolor*) in Martinique and Dominica;
- the White-breasted Thrasher (*Ramphocinclus brachyurus*-EN) and the Grey Trembler (*Cinclocerthia guttularis*) are endemic to Martinique and St-Lucia.

In the Dutch Leeward islands, the vulnerable Yellow-shouldered Amazon (*Amazona barbadensis*) is an emblematic endemic bird species which has a disjunct distribution in BC islands and patchy areas in northern Venezuela. The population in Bonaire (about 1,000 ind.) represents more than 10% of the global population (less than 10,000 ind.) however 60% of the island population occur outside protected areas. The species is now extinct on Aruba and not present in the wild in Curaçao (Williams 2012, BirdLife).

Numerous bird subspecies are endemic to one of the 15 EU entities, with some of them recognized as threatened locally, and will be considered as additional criteria in the KBA identification.

Congregatory bird species

Several bird species (mostly seabirds and shorebirds) are identified as congregatory birds by BirdLife International and are therefore considered as trigger species for the identification of IBAs.

In this profile, about 40 bird species are considered in the KBAs identification process as they congregate in numerous individuals or occur in large populations to reproduce, rest or feed (Table 8).

Table 8. Congregatory bird species occurring in the EU islands of the Caribbean region (BirdLife International).

Bird species	Common name	Bird species	Common name
Seabird species			
<i>Fregata magnificens</i>	Magnificent Frigatebird	<i>Onychoprion fuscatus</i>	Sooty Tern
<i>Pelecanus occidentalis</i>	Brown pelican	<i>Onychoprion anaethetus</i>	Bridled Tern
<i>Phaethon aethereus</i>	Red-billed Tropicbird	<i>Leucophaeus atricilla</i>	Laughing Gull
<i>Phaethon lepturus</i>	White-tailed Tropicbird	<i>Phoenicopterus ruber</i>	Caribbean flamingo
<i>Sula leucogaster</i>	Brown Booby	<i>Anas bahamensis</i>	White-cheeked Pintail
<i>Sula sula</i>	Red-footed Booby	<i>Sterna dougallii</i>	Roseate Tern
<i>Sula dactylatra</i>	Masked Booby	<i>Sterna anaethetus</i>	Bridled Tern
<i>Anous stolidus</i>	Brown Noddy	<i>Sterna hirundo</i>	Common Tern
<i>Puffinus lherminieri</i>	Audubon's Shearwater	<i>Thalasseus sandvicensis</i>	Sandwich Tern
<i>Thalasseus maximus</i>	Royal tern	<i>Sternula antillarum</i>	Least Tern
Ducks, Shorebirds and ponds species			
<i>Fulica americana</i>	American Coot	<i>Charadrius semipalmatus</i>	Semipalmated plover
<i>Fulica caribaea</i>	Caribbean Coot	<i>Calidris pusilla</i>	Semipalmated Sandpiper

Bird species	Common name	Bird species	Common name
<i>Nomonyx dominicus</i>	Masked Duck	<i>Calidris minutilla</i>	Least Sandpiper
<i>Tringa flavipes</i>	Lesser Yellowlegs	<i>Calidris fuscicollis</i>	White-rumped Sandpiper
<i>Anas discors</i>	Blue-winged teal	<i>Dendrocygna arborea</i>	West Indian Whistling-duck
<i>Himantopus mexicanus</i>	Black-necked Stilt	<i>Charadrius wilsonia</i>	Wilson's plover
<i>Egretta rufescens</i>	Reddish Egret	<i>Pluvialis squatarola</i>	Grey Plover
<i>Tringa melanoleuca</i>	Greater Yellowlegs	<i>Ardea alba</i>	Great Egret
<i>Oxyura jamaicensis</i>	Ruddy Duck	<i>Anas bahamensis</i>	White-cheeked Pintail

The Caribbean islands constitute important stop over for migratory bird species (including shorebirds and seabirds) this connectivity between habitats is underlined with the mapping of ecological corridors (Chapter 4.4).

Mammals

A total of 13 mammal species out of the 70 species reported in the Caribbean islands hotspot are considered as endemics to the 15 EU overseas entities (Wege et al. 2010). It concerns only terrestrial mammals (12 bats and 1 mouse species).

Marine mammals are considered as trigger species due to their migration patterns and aggregation for foraging, breeding and/or nursing (see the Conservation corridors section for the species list).

Terrestrial mammals

A total of 12 bat species are considered in this profile due to their restricted range in the Eastern Caribbean. Some of these species congregate in important numbers in roosts mainly located in caves.

Five bat species are endemic to the **Puerto Rican Bank and Lesser Antilles area**: the Tree bat (*Ardops nichollsi*), Red Fruit Bat (*Stenoderma rufum-VU*), the Antillean Fruit-eating bat (*Brachyphylla cavernarum*), the Insular Single-leaf bat (*Monophyllus plethodon*), the Mexican Funnel-eared bat (*Natalus stramineus*).

Five additional bat species are **endemic to one or several islands of the Lesser Antilles** (Barataud et al. 2013, Ib  n   et al. 2007, Larsen et al. 2012):

- The vulnerables Thomas's Yellow-shouldered bat (*Sturnira thomasi-VU*) and Guadeloupean Big-eyed Bat (*Chiroderma improvisum-VU*) are endemic to Guadeloupe and Montserrat islands, with the last one probably extincted from Montserrat following volcano eruptions.
- The Dominican Myotis (*Myotis dominicensis-VU*) is endemic to Guadeloupe and Dominica and the Guadeloupean Big Brown Bat (*Eptesicus guadeloupensis-VU*) is strictly endemic to Basse-Terre (Guadeloupe).
- The Schwartz's Myotis (*Myotis martiniquensis-VU*) is restricted to Martinique.

Two bat species are endemic to **ABC islands and northern Venezuela and Colombia region**: the vulnerable nectarivorous Curaçaoan Long-nosed Bat (*Leptonycteris curasoae-VU*) and the insectivorous Curacao Myotis (*Myotis nesopolus*). Bats' roosts mainly occur in the cave systems of the Leeward islands (Petit et al. 2006, Smith et al. 2012, Nassar and Simal 2014).

One **mouse species**, the Hummelinck's Vesper Mouse (*Calomys hummelincki*), is restricted to Leeward islands and northern Venezuela and Colombia region. This mouse mostly occurs in non-urban areas with high grass coverage (Dilrosun et al. 2012).

The White Tailed Deer (WTD) (*Odocoileus virginianus curassavicus*) is a deer sub-species endemic to Curaçao. It is reported as the only population of deer occurring in a Caribbean island since the pre-Columbian times. The population of WTD is estimated around 250 individuals and occurs in Christoffel National park (both sides), SheteBoka park, Malpais, former plantation areas along the leeward coast (including San Juan-Sta Cruz), hills pf Knip, San Hironimo, Westpunt, Wacao, Patrick, Ascencion. It is not clear if it still occurs in San Sebastian as a result of urban development.

4. CONSERVATION OUTCOMES

4.1. Introduction

This ecosystem profile is developed using a methodology established by the Critical Ecosystem Partnership Fund (CEPF), adapted to the needs of the particular situation in the EU Overseas. The methodology builds around the concepts of conservation outcomes and key biodiversity areas (KBAs), based on an approach by Langhammer et al. (2007).

Conservation outcomes are the whole justifiable conservation targets that need to be achieved to prevent biodiversity loss and can be defined at three levels: **species, sites (or KBAs)** and **corridors** (landscapes that maintain ecological processes). These levels are logically interconnected as if species have to be conserved then the habitats in which they occur must be preserved as well. At the landscape level, corridor outcomes ensure ecosystem services on which both species and sites depend.

Conservation outcomes are used to ensure a global conservation interest and to identify biological targets against which the success of investments can be measured. These biological outcomes constitute the scientific framework for determining geographic and taxonomic focus for future investment and for identifying investment niches for biodiversity conservation actions in EU Overseas.

Defining conservation outcomes is a bottom-up process, with species outcomes being assessed first, then site outcomes and finally the ecological corridors.

4.2. Species Outcomes: Threatened species

Species outcomes relate to **globally threatened species** following the global IUCN Red List. Three IUCN categories are considered due to the high probability of species extinction in the medium-term future: Critically Endangered (CR), Endangered (EN) and Vulnerable (VU). This definition excludes Data-Deficient species (DD) that are considered to be priorities for further research but not necessarily for conservation action. The categories Least Concern (LC) and Near Threatened (NT) are also excluded as it concerned species at a lower risk of extinction (NT) and species assessed as not globally threatened (LC) (Langhammer et al. 2007).

Species that are locally threatened (regional/national Red Lists) (but not strictly endemic to an overseas entity) and those having national or regional priorities or patrimonial importance are not considered as trigger species as they don't matched global priorities.

Following CEPF methodology, endemic species that have been evaluated against IUCN criteria and appear to be CR, EN or VU are considered in the species outcomes list. Indeed, if a species strictly endemic to a territory is assessed as threatened in this territory (regional/national Red Lists) then it can be considered as globally threatened, it is only a matter of transcription if this species is not yet reported in the global Red List (CEPF 2014, Langhammer et al. 2007).

The **IUCN Caribbean Initiative Programme** (2009-2012) aimed to assess a **Regional Red List of threatened species** at the scale of the Caribbean insular region. The Caribbean Red List project strengthened regional expert networks and enabled to establish baseline measures of biodiversity status using IUCN criteria. A large number of species, belonging to diverse taxa (Plants, Fishes...), were assessed within this insular Caribbean Red List with a level of threat that can be different from the global Red List. As global outcomes are the ones to be considered in the profile regarding the methodology adopted, the evaluation of these Regional threatened species is indicated as supplemental information when species status differed from the one reported in the global Red List (Appendix 2).

Although information on threatened species has been collected for about 50 years for the global Red List of Threatened species, data on the status of some taxa that are particularly at risk or not yet evaluated and are still missing (especially for plants and invertebrates and endemic species). Some knowledge gaps exist among the 15 EU entities as several taxa have not been evaluated yet. Therefore some caution should be taken when analyzing threatened species data due to these taxonomic and geographical gaps.

Defining the outcomes is thus an on-going process and the species outcomes can be updated following data availability on globally threatened and threatened endemic species.

Table 9. Summary of the globally threatened species and endemic species occurring in the 15 EU entities in the Caribbean region.

Taxa	VU	EN	CR	Total of threatened species	Total of threatened and endemic species ¹	Total of threatened and/or endemic species ²
PLANTS	20	28	40	88	79	490
CNIDARIANS	6	3	2	11		11
ANNELIDS	0	0	0	0		5
ARTHROPODS	1	1	2	4	4	274
MOLLUSCS	4	0	1	5	5	138
ECHINODERMS	0	0	0	0		1
FISHES	14	3	3	20	1	28
SHARKS - RAYS	11	3	2	16		16
AMPHIBIANS	1	4	2	7	7	12
REPTILES	7	8	9	24	18	110
BIRDS	4	3	2	9	5	38
MAMMALS	9	1	0	10	7	16
TOTAL	77	54	63	194	126	1139

¹ Number of globally threatened species that are also endemic.

² Number of species that are either globally threatened or endemic.

The full list of threatened species is indicated **Appendix 2**. Threatened endemic species are also described in the previous paragraphs detailing endemism (paragraph 3.3 and 3.4).

The 15 EU entities in the Caribbean region include **158 species that are globally threatened according to the IUCN Red List 2016** (App. 2).

In addition, 36 threatened endemic species assessed against local or regional Red Lists following IUCN criteria were listed in the species outcomes as they are also endemic species. These local/regional Red Lists refer to assessment of: threatened endemic plants in Guadeloupe and Martinique (IUCN et al. 2013a), threatened endemic plants in the Cayman Islands (Burton 2008), endemic insects in Guadeloupe (Meurgey et al. 2012) and assessment of plant species against the Caribbean Red List (IUCN Caribbean Red List).

A total of 194 globally threatened species are considered in this profile (Table 9).

Plants

A total of 88 globally threatened plant species (status CR-EN-VU) are reported in the 15 EU entities, including 62 species endemic to a single island (cf Paragraph 3.3 on endemic species).

Plant species in the French Lesser Antilles and the Cayman Islands have been evaluated against local RedLists and 26 of them are considered as globally threatened due to their restricted distribution to one island (11 species in Guadeloupe, 14 in Martinique and 1 species in Little Cayman) (Burton 2008, DEAL Guadeloupe 2012, DEAL Martinique 2009, IUCN France 2013a).

Regarding the level of threats, about 45% of the threatened plant species are CR and 32% are EN, which correspond to highly threatened species (Langhammer et al. 2007).

For several endemic plant species, their status vary between the local and global Red Lists. The Sebulan (*Leptocereus quadricostatus*) is a cactus plant endemic to Puerto Rico and the British Virgin Islands that is reported as CR in the Caribbean Red List. This species is assessed as EN in the Global IUCN Red List but as it is an endemic species the status from the Caribbean Red List prevails in this case. About 90% of the world population of this cactus species is observed on Anegada Island (BVI) (Linsky 2014).

The Euphorbia plant *Chamaesyce bruntii* is strictly endemic to Little Cayman and assessed against the local Red List as a CR species (Burton 2008), whereas it is listed as Data Deficient on the global Red List. A different status is also observed for the Araliacea *Schefflera urbaniana* which is strictly endemic to Martinique and has been evaluated on the global Red List as vulnerable and more recently on the local Red List as critically endangered (IUCN et al. 2013a).

The probability of extinction of some endemic species can also be less critical in local Red Lists. For instance, the Corato (*Agave caymanensis*) and *Phyllanthus caymanensis* are assessed as VU in the local Red List (Burton 2008) and considered as EN species in the Global IUCN Red List. To use a consistent methodology these two species are thus considered as VU plant species in the profile.

It is interesting to notice that several plant subspecies have been assessed as globally threatened against the IUCN RedList and have a different status compared to the related species (IUCN RedList):

- a variety of the Caicos Pine *Pinus caribaea* var. *bahamensis*, that is restricted to the TCI and Bahamas archipelago, has been assessed as vulnerable whereas the species *Pinus caribaea* is reported as Least Concern (LC) due to its widespread abundance in the Caribbean;

- a variety of the Tea Banker *Pectis caymanensis* var. *robusta*, a variety endemic to Grand Cayman, is assessed as critically endangered whereas *P. Caymanensis* is LC;
- a variety of the Geiger Tree, *Cordia sebestena* var. *caymanensis* (endemic to the Cayman Islands) is vulnerable and the species *C. sebestena* is listed as LC.

The local Red List of plant species of the Cayman Islands also reported 9 local plant varieties (4CR-4EN-1VU) that are endemic and assessed as threatened (Burton 2008) (App.2 and 4 - Island's Ecosystem profile factsheets).

The list of threatened species also includes emblematic plants such as: the Lignum Vitae or Guaiac Trees (*Guaiacum officinale*-EN, *G.sanctum*-EN) or the Red cedar (*Cedrela odorata* - VU) (full plant species list in App. 2).

Among the endemic and/or threatened plant species, 55 plants are listed in the Appendices of the SPAW Protocol of the Cartagena Convention and CITES (App. 2):

- 2 species of coastal flora strictly protected under the SPAW Protocol (App.I): *Zanthoxylum thomasianum*, *Ipomoea walpersiana*.
- 3 species of wild flora listed in the App. III of the SPAW Protocol which aims to regulate the exploitation of species: *Guaiacum officinale*, *Melocactus intortus*, *Epidendrum mutelianum*.
- about 50 species listed in the App. II (all Orchidaceae and Cactacea species, *Swietenia mahagoni*, *Swietenia macrophylla*, *Guaiacum officinale*, *Guaiacum sanctum*) and App. III of CITES (*Cedrela odorata*), an International Convention regulating the species trade.

Invertebrates

A total of 20 invertebrates (7 terrestrial and 13 marine species) are globally threatened in the 15 EU entities (App. 2, Table 9).

Coral species

In total, 11 threatened coral species (2CR - 3 EN - 6VU) occur in the coral reefs of the 15 EU entities. These coral species are all listed SPAW (A.II or A.III) and CITES (A.II) (App. 2).

The Elkhorn (*Acropora palmata*) and Staghorn corals (*A.cervicornis*), that were once the primary coral species and main reef builders in Caribbean shallow reefs, have been listed since 2008 as critically endangered on the IUCN and Caribbean Red Lists.

Acroporid species began to decline in the 1970s due to a coral disease (white band disease) and were further affected, such as most of coral species, by the mass mortality of the sea urchin *Diadema antillarum* (in the 1980s), overfishing of herbivorous fishes, coastal pollution and global environmental changes (Jackson et al. 2014).

Acropora palmata and *A. cervicornis* can form viable offsprings described as *A. prolifera* (with an intermediate - but characteristic - morphology to both parental species) which forms isolated colonies over the Caribbean region (Japaud et al. 2014, Fogarty et al. 2012). The hybrid abundance varies across geographical locations with some sites having higher *A. prolifera* densities compared to the parental species. This change in acroporid population densities may be a result of an increase of hybrid fragmentation or a greater resistance of hybrids to stress than either parental species (Fogarty et al. 2012).

A. prolifera is a hybrid with un-determined status as a distinct species. Given the critical status of both its parent species on the IUCN RedList, it could be viewed as a threatened population. But because it has not been officially designated as species, it has not been assessed on the Red List, and cannot be included in the threatened species list in this report. Nevertheless, given the critical status of its parent species, and its apparent higher resistance to stress, this hybrid does deserve further attention for conservation (Bert Hoeksema and David Obura, pers.com. 2016).

Molluscs and Arthropods

Three land snails (*Amphicyclotulus perplexus*-VU, *A. liratus*-VU, *Cerion nanus*-CR), two marine molluscs (*Conus hennequini*-VU, *C. hieroglyphus*-VU), two dragonfly species (*Macrothemis meurgeyi*-EN, *Protoneura romanae*-CR, assessed against the local RedList of Guadeloupe), one cave prawn (*Barbouria cubensis*-CR) and one isopod (*Arubolana imula*-VU) are globally threatened and are also island endemics (App. 2).

Fishes

Among the 20 fishes assessed as threatened on the IUCN RedList, 7 are commonly observed on Caribbean reefs and coastal waters: the Hogfish (*Lachnolaimus maximus*), the Nassau Grouper (*Epinephelus striatus*), the Queen Triggerfish (*Balistes vetula*), the Lined Seahorse (*Hippocampus erectus*), Mutton Snapper (*Lutjanus analis*), Cubera Snapper (*L. cyanopterus*), Tarpon (*Megalops atlanticus*) (App. 2).

One Labrisomid fish is only observed over the Saba Bank (*Starksia williamsi*- EN).

Some Grouper species, such as the Goliath Grouper (*Epinephelus itajara*-CR) and the Crossband Rockfish (*Mycteroperca interstitialis*-VU), become relatively rare in the Caribbean region.

Several threatened species are pelagic fishes: Atlantic blue marlin (*Makaira nigricans*), White marlin (*Kajikia albida*), Bigeye tuna (*Thunnus obesus*), Atlantic Bluefin Tuna (*T. thynnus*).

The remaining 6 fishes are rarely observed in the waters of the 15 EU overseas entities (App. 2).

Two fishes have been **assessed in the Caribbean Redlist** and have a different status compared to the global Redlist: the Atlantic blue marlin (*Makaira nigricans*) is reported as VU on the global Redlist and EN in the Caribbean Redlist; Atlantic Bluefin Tuna (*Thunnus thynnus*) is EN on the global Redlist and CR in the Caribbean Redlist.

The **International Commission for the Conservation of Atlantic Tunas** (ICCAT) is an inter-governmental fishery organization responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas. Within this International Commission, the EU represents the EU Member States.

Sharks and Rays

Sharks are top predators that play a critical role in maintaining the structure and function of marine ecosystems.

At least 28 elasmobranch species have been documented in the Eastern Caribbean region (van Beek et al. 2014, IUCN Shark Specialist Group, ReguaR - Réseau Requin des Antilles françaises). Among those species, 16 are globally threatened (11VU, 3EN, 2CR) (App. 2), including iconic species such as the Manta Ray (*Manta birostris*-VU), the Great Hammerhead (*Sphyrna mokarran*-EN), the Great White Shark (*Carcharodon carcharias*-VU) or the Oceanic Whitetip Shark (*Carcharhinus longimanus*-VU). Seven sharks and rays are also listed in CITES (A.II) (App.2).

In the Atlantic Ocean and the Caribbean region, another manta ray species referred as *Manta sp. cf. birostris* may be distinct from *M.birostris*, however further examination of specimens is necessary to assess the taxonomic status of this variant manta ray (Marshall A.D. et al. 2009, Océane Beaufort, ReguaR pers. com. 2016).

The Whale Shark (*Rhincodon typus*-VU) has been more frequently observed in the waters of the Dutch Leeward islands, these records are more likely associated with seasonal upwelling-driven productivity occurring in this area (Debrot et al. 2013, van Beek et al. 2014).

Sharks are target species of commercial and recreational fisheries, and are moreover common bycatch in the pelagic longline fishery. Low reproduction rate and high bycatch mortality make these species very vulnerable to overfishing. In the Caribbean region, catch statistics are largely lacking and very few documentation exists on shark

populations. The conservation status of shark species is thus poorly known and numerous species are listed as Data Deficient.

Several shark species (not globally threatened) gather to breed in shallow and coastal waters, such as the Nurse shark (*Ginglymostoma cirratum*), the Lemon shark (*Negaprion brevirostris*) and the Blacknose shark (*Carcharhinus acronotus*), thus enabling the identification of reproductive and nursery areas among the 15 EU overseas entities.

Two sharks have been **assessed in the Caribbean Redlist** and have a different status compared to the global Redlist: the Oceanic Whitetip Shark (*Carcharhinus longimanus*) and the Bigeye Thresher Shark (*Alopias superciliosus*) both reported as VU in the global Redlist are respectively assessed as CR and EN in the Caribbean Redlist.

About 6 shark and ray species observed in the Eastern Caribbean are assessed as Data Deficient due to insufficient information to determine their threatened status (IUCN RedList).

Shark Sanctuary

In 2015, the YARARI Shark and Marine Mammal Sanctuary has been established over the entire EEZ of Saba and Bonaire (Dutch OTs).

Amphibians

In the Caribbean region, 7 species of Amphibians are assessed as globally threatened:

- 2 CR species: the Puerto Rican Crested Toad (*Peltophryne lemur*) endemic to the Puerto Rican Bank and the Mountain Chicken (*Leptodactylus fallax*) that is restricted to the islands of Montserrat and Dominica;
- 4 EN species, including amphibians endemic to Guadeloupe (*Eleutherodactylus barlagnei*, *E. pinchoni*) and the Virgin Islands (*Eleutherodactylus lentus*, *E. schwartzi*);
- 1 VU species endemic to Martinique: the Martinique Volcano Frog (*Allobates chalcopis*).

Saving the Mountain Chicken

In 2009, a chytrid fungus appeared amongst Montserrat's Mountain Chicken (*Leptodactylus fallax*) and has almost decimated the frog population on the island. In an effort to save the frog, a Darwin programme enabled to collect healthy frogs and to send them to zoos in Europe for a captive breeding programme. In 2013 a number of healthy specimens were flown back to Montserrat to increase the local population.

Reptiles

A total of 24 reptile species are globally threatened (7VU - 8EN - 9CR), including the 6 sea turtle species that occur in the Caribbean region (IUCN RedList) (Table 10).

Among these species, 18 are also endemic to one island (Table 10, see section 3.3 for the description of endemic reptile species).

Table 10. Threatened reptile species occurring in the 15 EU overseas entities of the Caribbean region.

Status	Common name	Species name	Endemicity
CR	Anegada Rock Iguana	<i>Cyclura pinguis</i>	Endemic to BVI
CR	Turks and Caicos rock iguana	<i>Cyclura carinata</i>	Endemic to TCI and the Bahamas
CR	Culebra Island Giant Anole	<i>Anolis roosevelti</i>	Endemic to VI
CR	Lesser Virgin Islands Skink	<i>Spondylurus semitaeniatus</i>	Endemic to the Puerto Rican Bank
CR	Virgin Islands Bronze Skink	<i>Spondylurus sloanii</i>	Endemic to BVI
CR	Couresse de la Martinique (Lacépède's Ground Snake)	<i>Erythrolamprus cursor</i>	Endemic to Martinique
CR	Montserrat galliwasp	<i>Diploglossus montisserrati</i>	Endemic to Montserrat
CR	Hawksbill turtle	<i>Eretmochelys imbricata</i>	
CR	Kemp's ridley	<i>Lepidochelys kempii</i>	
EN	Lesser Antillean iguana	<i>Iguana delicatissima</i>	Endemic to the LA
EN	Blue Iguana	<i>Cyclura lewisi</i>	Endemic to Cayman Islands
EN	Gymnophthalme de Plée (Rough-scaled Worm Lizard)	<i>Gymnophthalmus pleii</i>	Endemic to the LA
EN	Leeward Island Racer	<i>Alsophis rijgersmaei</i>	Endemic to the Anguilla Bank
EN	Red-bellied Racer, Blach Racer	<i>Alsophis rufiventris</i>	Endemic to Statia and Saba
EN	Couresse des Saintes	<i>Alsophis sanctonum</i>	Endemic to Guadeloupe

Status	Common name	Species name	Endemicity
EN	Virgin Islands tree boa	<i>Chilabothrus granti</i>	Endemic to the Puerto Rican Bank
EN	Green turtle	<i>Chelonia mydas</i>	
VU	Cuban rock iguana	<i>Cyclura nubila</i>	Endemic to Cayman Islands and Cuba
VU	Anguilla Black Ameiva	<i>Ameiva corax</i>	Endemic to Anguilla
VU	Sombrero ameiva	<i>Ameiva corvina</i>	Endemic to Anguilla
VU	Anguilla bank bush anole	<i>Anolis pogus</i>	Endemic to Saint-Martin/Sint-Maarten
VU	Leatherback turtle	<i>Dermochelys coriacea</i>	
VU	Loggerhead turtle	<i>Caretta caretta</i>	
VU	Olive ridley	<i>Lepidochelys olivacea</i>	

Reptiles - Sea turtles

All the sea turtles occurring in the Caribbean region are assessed as globally threatened against the IUCN RedList and listed in SPAW App. II.



Three out of the 6 species that live in the region are frequently observed and use the Caribbean islands' beaches as nesting areas: the Hawksbill (*Eretmochelys imbricata*-CR), the Green turtle (*Chelonia mydas*-EN) and the Leatherback (*Dermochelys coriacea*-VU) (Figure 12).

The Loggerhead (*Caretta caretta*-VU) is observed more occasionally in the 15 EU overseas entities and the Kemp's ridley (*Lepidochelys kempii*-CR) and the Olive ridley (*L. olivacea*-VU) are considered as rare species (App. 2).

Figure 12. The three sea turtles nesting on Caribbean's beaches.

As the strict application of the vulnerability criteria for KBA identification leads to an excessively high number of key nesting sites for sea turtles, Bass et al. (2011) estimated that the threshold of at least 10 nesting tracks/year/site represents major nesting areas and enables to exclude vagrant individuals.

Due to the variety of sea turtle nesting surveys performed among the islands, indication of key nesting areas is provided when data are available over the 5 past years.

Birds

Among the 9 threatened bird species occurring in the Eastern Caribbean region, 6 species (1 CR - 2 EN - 3VU) are commonly observed and also restricted to one or several islands (Table 11).

Table 11. Threatened bird species occurring in the 15 EU overseas entities of the Caribbean region.

Status	Common name	Species name	Distribution / Endemicity
CR	Jamaica Petrel	<i>Pterodroma caribbaea</i>	Very rare
CR	Montserrat Oriole	<i>Icterus oberi</i>	Endemic to Montserrat
EN	Black-capped Petrel	<i>Pterodroma hasitata</i>	Rare
EN	Giant Kingbird	<i>Tyrannus cubensis</i>	Endemic to Cuba and the TCI (potentially extirpated from the TCI)
EN	White-breasted Thrasher	<i>Ramphocinclus brachyurus</i>	Endemic to Martinique and St Lucia
VU	West Indian Whistling-duck	<i>Dendrocygna arborea</i>	Rare
VU	Yellow-shouldered Amazon	<i>Amazona barbadensis</i>	Restricted to BC islands and northern Venezuela
VU	Forest Thrush	<i>Turdus lherminieri</i>	Endemic to few islands of the LA
VU	Martinique Oriole	<i>Icterus bonana</i>	Endemic to Martinique

The Martinique Oriole (*Icterus bonana*), strictly endemic to the island, is suggested to be designated as endangered species (Dewynter et al. 2014).

A total of 89 Important Bird Areas (IBAs) covering 418,194 ha have been identified by BirdLife International among the 15 EU overseas entities (App. 3).

Terrestrial mammals

Six vulnerable bat species are recognized as threatened species due to their small distribution range and their relative small populations (Table 12).

Table 12. Threatened bat species occurring in the 15 EU overseas entities of the Caribbean region.

Status	Common name	Species name	Distribution / Endemicity
VU	Guadeloupean Big-eyed Bat	<i>Chiroderma improvisum</i>	Endemic to Guadeloupe and Montserrat
VU	Guadeloupean Big Brown Bat	<i>Eptesicus guadeloupensis</i>	Endemic to Guadeloupe
VU	Lesser Long-Nosed Bat	<i>Leptonycteris curasoae</i>	Endemic to ABC islands - northern Venezuela-Colombia
VU	Schwartz's Myotis	<i>Myotis martiniquensis</i>	Endemic to Martinique
VU	Dominican Myotis	<i>Myotis dominicensis</i>	Endemic to LA (few islands)
VU	Thomas's Yellow-shouldered Bat	<i>Sturnira thomasi</i>	Endemic to Guadeloupe and Montserrat
VU	Red Fruit Bat	<i>Stenoderma rufum</i>	Endemic to the Puerto Rican Bank

Marine mammals

Two species out of the 25 marine mammal species reported in the Lesser Antilles and Dutch Leeward islands are considered as vulnerable against the IUCN Red List: the **Sperm Whale**

Since 2008, the National Park of Guadeloupe led a project of reintroduction of the **Endangered Antillean subspecies** (*Trichechus manatus manatus*) in the Grand Cul-de-Sac Marin Bay (Guadeloupe).

(*Physeter macrocephalus*) that is generally observed in deeper waters and the **West indian manatee** (*Trichechus manatus*).

This last species has been extirpated from the Lesser Antilles in the beginning of the 20th century due to intense hunting. Sparse specimens have been observed in 1988 in St. Martin and in 2014 in Grand Turk (TCI). Nearest populations of

manatees are located in the Greater Antilles (i.e. Puerto Rico, Dominican Republic).

All marine mammals observed in the Lesser Antilles and Leeward Islands are listed in Annex II of the SPAW Protocol of the Cartagena Convention, Appendix I or II of CITES (Convention on International Trade in Endangered Species) as species in danger of extinction that are or may be threatened by trade, and in the CMS list (Convention on the Conservation of Migratory Species of Wild Animals).

4.3. Site Outcomes: KBAs

Key Biodiversity Areas (KBAs) constitute sites of global significance for biodiversity conservation. These sites are identified using globally standard criteria and thresholds, based on the needs of biodiversity requiring safeguards at the site scale. These criteria are based on the framework of vulnerability and irreplaceability widely used in systematic conservation planning (Table 13) (CEPF 2014, Langhammer et al. 2007).

A site meets the **irreplaceability criterion** (or uniqueness) for a KBA if it maintains a globally significant proportion of a species' total population at some point in that species' lifecycle. This criterion considers species that are geographically restricted to an area or species that congregate in large numbers at least during a part of their lifecycles (to feed or reproduce). With this criterion, a species is considered having a restricted-range if its distribution is no larger than 50,000 km² (Tab. 13).

The **vulnerability** (or threat) refers to the likelihood that a site's biodiversity will be lost in the future.

Following these criteria, KBAs are identified based on the presence of restricted-range and globally threatened species which particularly require site-scale conservation (Tab. 13, see sections 3.3 and 4.2 for the species outcomes). These criteria are particularly important for small size islands due to strong ecological relationships between their ecosystems.

Table 13. Summary of KBA criteria and thresholds (from Langhammer et al. 2007).

Criterion	Sub-criteria	Provisional thresholds for triggering KBA status
<i>Vulnerability</i> Regular occurrence of a globally threatened species (according to the IUCN Red List) at the site	N/A	Critically Endangered (CR) and Endangered (EN) species – presence of a single individual Vulnerable species (VU) – 30 individuals or 10 pairs
<i>Irreplaceability</i> Site holds X% of a species' global population at any stage of the species' lifecycle	a) Restricted-range species	Species with a global range less than 50,000 km ² 5% of global population at site
	b) Species with large but clumped distributions	5% of global population at site
	c) Globally significant congregations	1% of global population seasonally at the site
	d) Globally significant source populations	Site is responsible for maintaining 1% of global population
	e) Bioregionally restricted assemblages	To be defined

For the threatened sea turtles, key nesting areas are identified as KBAs when they meet the threshold of at least 10 nesting tracks per year and per sea turtle species (Bass et al. 2011).

If the criteria of vulnerability and irreplaceability are not met or if the existence of a trigger species is suspected but not confirmed, the site should be designated as a **Candidate KBA**. These sites do have an importance locally in terms of biodiversity conservation but do not meet the criteria at a global scale (Langhammer et al. 2007). The Candidate KBAs can be used as important scientific background information to guide territorial biodiversity conservation strategy.

The KBAs are an overlapping subset of areas recognized or proposed as **Important Birds Areas (IBAs)**, **Important Plant Areas (IPAs)**, sites of the Alliance for Zero Extinction (AZE) (Langhammer et al. 2007).

A total of 89 Important Bird Areas (IBAs) covering 418,194 ha are identified within the 15 EU overseas entities (App.3), with 23 IBAs in the Dutch OCTs, 41 IBAs for the UKOTs and 25 IBAs in the French ORs and OT. Following the list of trigger species that enable the identification of these IBAs, these sites are either considered as **KBAs** or **Candidate KBAs**. Important Plant Areas (IPAs) are under designation in several islands of the UKOTs and enable to identify areas of botanical importance.

EU overseas entities in the Caribbean region host 2 sites identified by the **Alliance for Zero Extinction (AZE)**, assessment of 2010), a joint initiative of biodiversity conservation organizations that aims to prevent species extinctions by identifying and safeguarding key sites (<http://www.zeroextinction.org/>): the Centre Hills in Montserrat due to the presence of the endemic and threatened Montserrat Oriole and the Forest ecosystem in Basse-Terre (Guadeloupe) due to the presence of endemic and threatened amphibian species.

As AZE objective is to highlight sites with at least 95% of the known population of one or more CR or EN species, the list of trigger species considered in this profile can be used to review the sites considered by AZE in the Caribbean region.

Several existing **protected areas** (both terrestrial and marine) are directly equivalent to KBAs. Some (or parts) of the protected areas do not meet the criteria for global biodiversity significance although these sites are important for other reasons, including local natural or cultural significance (Langhammer et al. 2007). However, if these protected areas do not meet the vulnerability and irreplaceability criteria they can't qualify as KBAs. They could qualify as Candidate KBAs due to the presence of trigger species important locally.

A total of 92 KBAs, covering an area of **8090 km²**, have been identified and mapped for the 15 EU overseas entities in the Caribbean region: 31 for the Dutch OCTs, 24 for the French ORs and OT and 37 for the UKOTs (Tab. 14).

Table 14. Summary of the KBAs identified for the 15 ORs and OCTs in the Caribbean region.

	KBAs		Maps & criteria	
	Total of KBAs	Total area (km ²)	Tables & Figures	Factsheets - Appendices
6 Dutch OCTs	31	3427		
Aruba	7	71.1	Tab.15 - Fig.13	App. 5 - NL
Curaçao	6	272.1	Tab.15 - Fig.13	
Bonaire	6	288.9	Tab.15 - Fig.14	
Saba	4	2703.7	Tab.16 - Fig.15	
St.Eustatius	3	39.7	Tab.16 - Fig.16	
St.Maarten	5	51.5	Tab.17 - Fig.18	
4 French ORs & OT	24	2057		
St.Martin	3	41.4	Tab.18 - Fig.19	App. 5 - FR
St.Barthélemy	3	30.7	Tab.18 - Fig.20	
Martinique	8	709.2	Tab.18 - Fig.21	
Guadeloupe	10	1275.6	Tab.18 - Fig.22	
5 UK OTs	37	2607		
Anguilla	5	97.4	Tab.19 - Fig.23	App. 5 - UK
Cayman Isl.	8	270.6	Tab.19 - Fig.25- 26	
Turks Caicos Isl.	11	2016.8	Tab.19 - Fig.28	
BVI	7	139.8	Tab.19 - Fig.27	
Montserrat	6	82.3	Tab.19 - Fig.24	
Total	92	8091		

These sites concern freshwater, coastal, marine and terrestrial environments. The delineation of KBAs follows the actual distribution of target species, considers the habitats of these trigger species and KBAs boundaries have to constitute management units to encompass an area that might be manageable for conservation (Langhammer et al. 2007). The delineation of KBAS has been submitted and discussed during the different consultative

workshops held on the territories in order to validate these sites with local actors and stakeholders.

Drafts of Ecosystem profile factsheets performed for each EU islands were sent to the network of local actors and stakeholders for validation. A second draft of the Ecosystem profile was circulated to all stakeholders in April-May 2016. This led to a local actor-approved pre-final draft of the Ecosystem profile that has been sent to the BEST Consortium and the EC by June 2016.

Some sites that shared the same list of trigger species and have been identified as KBAs for the same criteria can be gathered as **disconnected KBAs**, these scattered sites can be considered as management units especially for small size islands. It is the case for 34 KBAs in this profile, such as: the network of ponds or MPAs accross Anguilla, the mangroves, ponds and proposed MPAs for Aruba, the terrestrial habitats accross Tortola and Virgin Gorda in the BVI, the terrestrial and marine ecosystems of the Cayman Islands, terrestrial and marine sites in Guadeloupe, St-Martin, St-Maarten, TCI and St Barthélemy, the dry forests of Martinique, ghauts and dry forest areas in Montserrat, Saba's ans St Eustatius' forests.

The **main criteria for the identification of KBAs** are indicated in Tables 15 to 19. The full species list and biodiversity outcomes for each KBA is detailed in Appendix 5 synthesizing **Ecosystem profile factsheets** for each of the 15 EU overseas entities.

The site outcomes, maps and appendices are listed Table 14 for the 15 EU overseas entities.

4.3.1. KBAs for the 6 Dutch OCTs

- Aruba - Bonaire - Curaçao

Table 15. Key Biodiversity Areas (KBAs) for Aruba, Bonaire and Curaçao.

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Aruba				
ABW-1 - Parke Nacional Arikok	<ul style="list-style-type: none"> - Plants: 2 threatened (2 EN: <i>Melocactus stramineus</i>, <i>Guaiaacum sanctum</i>) and 5 endemic species, including 3 species strictly endemic to Aruba. - Reptiles: 3 reptiles strictly endemic to Aruba and 1 species restricted to AC islands. Half of the distribution range of the endemic Aruban Rattlesnake (<i>Crotalus unicolor</i>) is located within Parke Nacional Arikok. - Birds: 2 endemic subspecies. - Mammals: 1 endemic and threatened (VU) bat species (<i>Leptonycteris curasoae</i>). 5 bat roosts within the Park. 1 regional endemic mouse species (<i>Calomys hummelincki</i>). - Terrestrial National Protected Area 	3	11	34
ABW-2 - Marine areas and coastal bays	<ul style="list-style-type: none"> - 4 marine areas proposed as MPAs (34.5 km²) - Connectivity between mangroves, seagrass beds and coral reefs. - One marine area along the eastern side of Aruba is contiguous to the Terrestrial Park. - Fishes: 18 threatened species (2CR-3EN-13VU) - Invertebrates: 9 threatened coral species (2CR-2EN-5VU), 1 threatened and endemic mollusc species (1VU: <i>Conus hieroglyphus</i>) - Reptiles: 4 threatened sea turtles (1CR-2EN-1VU) 	31	1	34.5
	<ul style="list-style-type: none"> - Terrestrial and coastal areas - Wetlands (mangroves) around Oranjestad Reef Islands - Birds: 2 IBAs: San Nicolas Bay & Oranjestad Reef Islands. These 2 IBAs are part of the 16 terrestrial areas proposed to be included in the PA network. - congregation of 10 Tern species - Reptiles: 1 reptile endemic to Aruba (<i>Cnemidophorus arubensis</i>) 		1	
ABW-3 - Spaans Lagoen and mangrove areas	<ul style="list-style-type: none"> - Spaans Lagoen (0.29 km²): Ramsar site bordered by dense saltmarshes and mangroves. - Mangrove areas along the western part of the island. - Mangroves (1.35 km²): Important foraging and breeding habitat for waterbird and fish species (including 4 threatened fishes - 4VU) 	4		1.4

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>- These sites are included in the 16 terrestrial areas proposed to be included in the PA network. Connectivity between mangroves, seagrass beds and coral reefs</p>			
<p>ABW-4 - Sea turtle nesting sites</p>	<p>- Reptiles: 4 nesting beaches for sea turtles: - Boca Grandi-Grapefield (4 km): for Leatherbacks, Loggerheads, Green turtles (2EN-1VU) - Fishermen's Huts: for Loggerheads, - Dos Playa: Green turtles, Leatherbacks - Eagle Beach: Leatherbacks</p> <p>2 nesting sites located within the Parke Nacional Arikok.</p>	<p>3</p>		<p>51 ha</p>
<p>ABW-5 - Bubali and inland ponds of Tanki Sabana & Lake Noord Ponds</p>	<p>- Birds: IBA of Bubali area. Congregation of bird species. Area to be included in the 16 terrestrial areas proposed to be included in the PA network. - Fishes: 1 restricted-range euryhaline fish (<i>Poecilia vandepolli</i>) (Tanki Sabana - Lake Noord Ponds) - Reptiles: 1 reptile endemic to Aruba (<i>Cnemidophorus arubensis</i>)</p>		<p>2</p>	<p>52.1 ha</p>
<p>ABW-6 - Lago Cave</p>	<p>- Mammals: bat roosts of Lago Colony Cave located outside the terrestrial park. 1 endemic and threatened (VU) bat species (<i>Leptonycteris curasoae</i>).</p>	<p>1</p>	<p>1</p>	<p>0.06 ha</p>
<p>ABW-7 - Tierra del Sol Saliña</p>	<p>- Birds: IBA of Tierra del Sol Saliña. Congregation of bird species. This site is included in the 16 terrestrial areas proposed to be included in the PA network. - Reptiles: 1 reptile endemic to Aruba (<i>Cnemidophorus arubensis</i>)</p>		<p>1</p>	<p>0.05 ha</p>

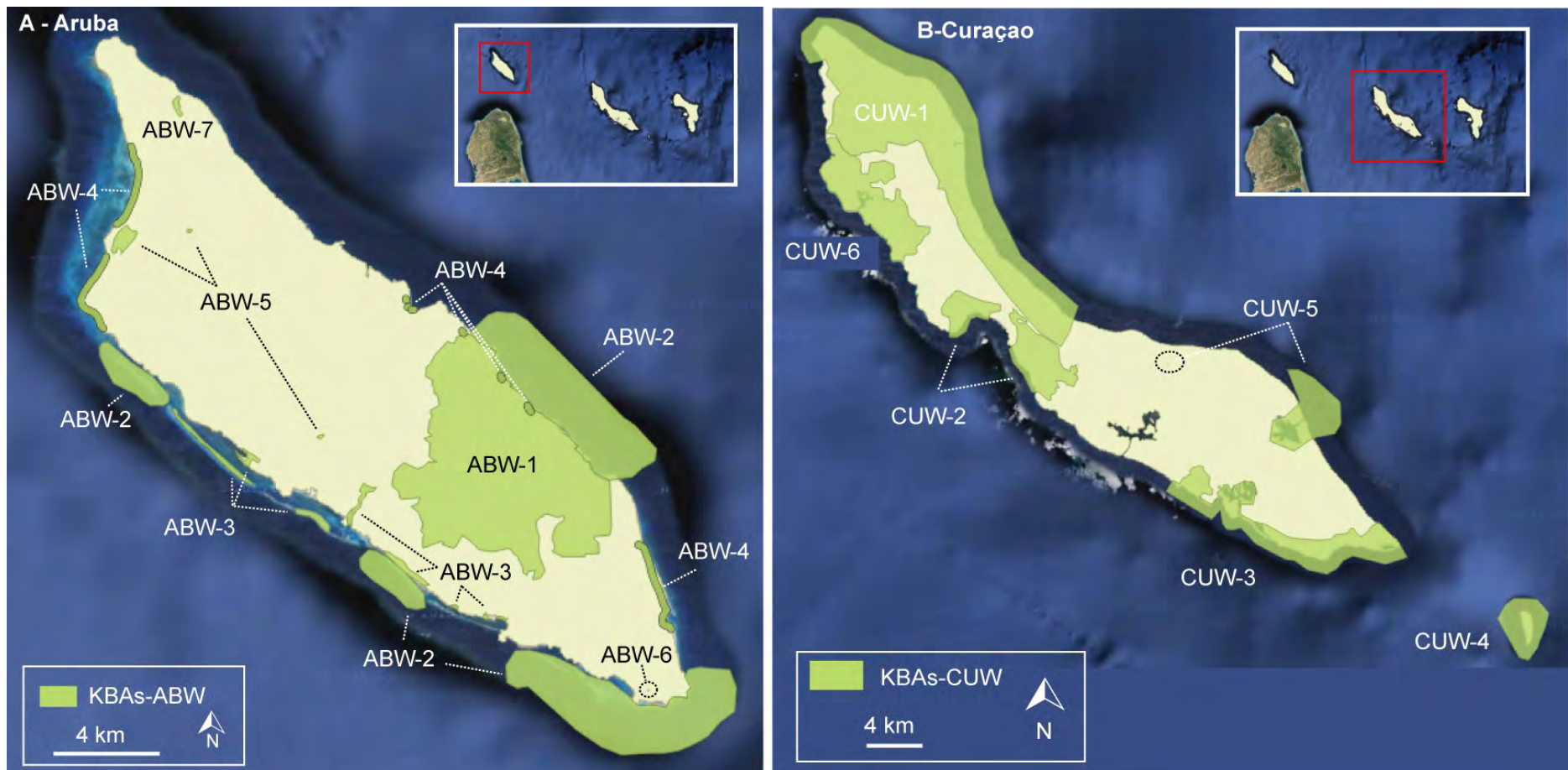


Figure 13. Maps of the Key Biodiversity Areas (KBAs) in Aruba (a) and Curaçao (b) (Dutch OCs).

Table 15 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Bonaire				
BON-1 - Bonaire Marine Park	<p>- Bonaire National Marine Park (from high waters to 60m deep) and Lac Bay</p> <p>- Healthy coral reef ecosystems with high coral coverage and 5 threatened coral species (2CR-2EN-1VU)</p> <p>- Lac Bay: Connectivity between mangroves, seagrass beds and coral reefs.</p> <p>Ramsar site.</p> <p>Birds - IBA: Congregatory bird populations and 3 restricted-range bird species (1VU).</p> <p>- Fishes: 5 threatened fish species (5VU)</p> <p>- Reptiles: important foraging area for Green Turtles (Lac Bay) (1EN)</p>	12	3	27
BON-2 - Washington-Slagbaai & Dos Pos	<p>Washington-Slagbaai National Park</p> <p>- 1 Ramsar site (Slagbaai lagoon)</p> <p>- Plants: 3 threatened species (2EN-1VU) and 15 restricted-range species, including <i>Maytenus versluisii</i> that is strictly endemic to BC islands</p> <p>- Invertebrates: 3 land snails strictly endemic to Bonaire</p> <p>- Fishes: 2 regional endemic freshwater fishes in ponds</p> <p>- Reptiles: 3 endemic species, including <i>Anolis bonairensis</i> strictly endemic to Bonaire and 2 reptiles endemic to BC islands.</p> <p>Playa Chikitu: 1 key nesting beach for Green turtles (1EN)</p> <p>- Birds: IBA with at least 1% of the global population of the endemic and threatened <i>Amazona barbadensis</i> (1VU)</p> <p>- Mammals: caves with 1 endemic and threatened bat species (1VU- <i>Leptonycteris curasoae</i>)</p> <hr/> <p>Dos Pos area:</p> <p>- Birds: IBA with about 60% of the population of the Yellow-shouldered Amazon (<i>Amazona barbadensis</i>) (1VU)</p> <p>- In total, 3 restricted-range bird species</p>	6	27	79.4
BON-3 - Terrace Landscape Middle Bonaire	<p>- Plants: 1 threatened (1EN- <i>Guaiacum sanctum</i>) and 2 endemic plant species</p> <p>- Mammals: caves with 1 endemic and threatened bat species (1VU)</p>	2	3	22.0
BON-4 Klein Bonaire	<p>Ramsar site</p> <p>- Plants: 1 threatened plant (1VU- <i>Zanthoxylum flavum</i>)</p> <p>- Reptiles: 2 endemic species.</p> <p>Key nesting area for Hawksbill and Loggerhead sea turtles</p>	3	4	19.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	(1CR-1EN) - Birds - IBA. Congregation of Least Terns (<i>Sternula antillarum</i>), presence of 2 restricted-range species.			
BON-5 - Pekelmeer Saltworks	- Ramsar site - Birds - IBA: Congregation of bird species and presence of 2 restricted-range species. - Reptiles: key nesting area for Loggerhead sea turtles (EN)	1	2	62.5
BON-6 - Washikemba- Onima & Bolivia area	- Birds - IBA: Congregation of bird species and 2 restricted-range species. - Mangroves around Washikemba/Bakuna: important foraging and nursery area for threatened and endemic species (including fishes). - Mammals: caves of Bolivia area with 1 endemic and threatened bat species (1VU)	1	3	78.0
Curaçao				
CUW-1 - Christoffel- Shete Boka Terrestrial Parks & North-east coast	Christoffel-Shete Boka Terrestrial Parks: supports one of the largest contiguous areas of woodland vegetations remaining on the island. Presence of plant species very rare on the island. Area included within a Ramsar site and IBA . - Plants: 8 restricted-range species, including 4 species strictly endemic to BC islands -18 rare plant species - Invertebrates: 6 endemic land snails, including 2 snails strictly endemic to Curaçao (<i>Guppya molengraaffi</i> , <i>Tudora rupis</i>) - Reptiles: 5 endemic species, including the Three-scaled ground snake (<i>Liophis triscalis</i>) strictly endemic to Curaçao Shete National Park: key nesting area for Green, Hawksbill and Loggerhead sea turtles (1CR-2EN). - Mammals: 1 regional endemic mouse species (<i>Calomys hummelincki</i>), 1 endemic hare subspecies, 1 endemic White tailed deer subspecies (<i>Odocoileus virginianus curassavicus</i>) IBA north-east area & Knip-Jeremi-St-Hironymus and adjacent fringing reefs (proposed as a no-fishing zone) Area included within a Ramsar site and IBA . Plants: 1 plant endemic to BC island (<i>Myrcia curassavica</i>) and rare species. Invertebrates: 4 threatened coral species (1CR-2EN)	8	23	143.8

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Fishes: 1 blenny endemic (<i>Starksia springeri</i>) to Curaçao and 1 threatened marine fish (1VU- <i>Lutjanus cyanopterus</i>)</p> <p>Birds: IBA - Congregatory bird species with over 10% of the regional population of Least Terns (<i>Sternula antillarum</i>) and 1 bird species with a restricted distribution.</p> <p>Reptiles: Boka Mansalina, Boka Braun - key nesting areas for Green and Hawksbill sea turtles (1CR-1EN)</p> <p>Mammals: Cave KuebaBosa, Kueba Raton and Kueba di Jetchi - 3 caves are home to one threatened and regional endemic bat species (1VU- <i>Leptonycteris curasoae</i>)</p>			
CUW-2 - Malpais-St Michiel & Rif-Marie	<p>Malpais-St Michiel area: Ramsar site & 1 IBA</p> <p>Plants: 2 threatened plants (2EN- <i>Guaiacum sanctum</i>, <i>G. officinale</i>) and 1 species (<i>Chloris suringari</i>) endemic to BC islands</p> <p>Invertebrates: 6 endemic land snails</p> <p>Birds: IBA - Congregatory bird species. 2 endemic bird species and 2 endemic subspecies.</p> <p>Fishes: 1 regional endemic freshwater fish</p> <hr/> <p>Rif-Marie and adjacent fringing reefs (proposed as a no-fishing zone): 1 Ramsar site</p> <p>Plants: 3 endemic plant species, including 1 plant endemic to BC islands (<i>Agave boldinghiana</i>)</p> <p>Invertebrates: 5 threatened coral species (2CR-2EN-1VU)</p> <p>Fishes: 1 blenny endemic (<i>Starksia springeri</i>) to Curaçao and 1 freshwater fish regionally endemic (<i>Cyprinodon dearborni</i>)</p>	7	13	25.0
CUW-3 - Curaçao Underwater Park to Eastpoint	<p>- Marine Park: occurrence of the healthiest coral reefs of the island and threatened marine species</p> <p>- Oostpunt and Spanish Water Bay: Inter-connected mangroves-seagrass beds-coral reefs ecosystems. Area proposed as a no-fishing zone.</p> <p>- Terrestrial areas of Fuikbaai - Punt Kanon, Jan Thiel Bay and Spanish Water Bay (proposed as a Ramsar sites)</p> <p>Plants: 2 threatened plant species (1 EN-1VU) and 3 rare plant species</p> <p>Invertebrates: 8 threatened coral species (2CR-2EN-4VU)</p> <p>- Threatened Hieroglyphic Cone (<i>Conus hieroglyphus</i>-VU) endemic to ABC islands</p> <p>- 1 land snail endemic to Curaçao</p> <p>Fishes: 9 threatened fish species (1CR-1EN-7VU) and 1 blenny endemic (<i>Starksia springeri</i>) to Curaçao.</p> <p>-1 freshwater fish regionally endemic (<i>Cyprinodon</i>)</p>	22	8	40.8

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p><i>dearborni</i>)</p> <p>Birds: IBA of Jan Thiel Bay - 3 congregatory bird species. endemic subspecies (<i>Tyto alba bargei</i>)</p> <p>Reptiles: 5 endemic reptiles, including the Three-scaled ground snake (<i>Liophis triscalis</i>) strictly endemic to Curaçao</p> <p>Marine Park and Spanish Water Bay: foraging area for threatened sea turtles: Hawksbill, Green turtle, Loggerhead, Leatherback (1CR-2EN-1VU)</p>			
CUW-4 - Klein Curaçao	<p>Invertebrates: 8 threatened coral species (2CR-2EN-4VU) - Threatened and endemic <i>Conus hieroglyphus</i> (VU)</p> <p>Fishes: 9 threatened fish species (1CR-1EN-7VU) and 1 blenny (<i>Starksia springeri</i>) endemic to Curaçao.</p> <p>Birds: IBA - congregatory bird species (<i>Sternula antillarum</i>)</p> <p>Reptiles: 1 species endemic to BC islands (<i>Cnemidophorus murinus</i>)</p> <p>Sea turtle foraging and nesting areas (<i>Chelonia mydas</i>, <i>Eretmochelys imbricata</i>) (1CR - 1EN)</p> <p>Proposed as a Ramsar site.</p>	20	3	12.2
CUW-5 - St Jorisbaai and Kueba di Noordkant	<p>St Jorisbaai (proposed as a Ramsar site) and adjacent reefs: inter connectivity between mangroves, seagrass beds and coral reefs</p> <p>Invertebrates: 8 threatened coral species (2CR-2EN-4VU)</p> <p>Fishes: 1 threatened fish species (1VU) and 1 blenny (<i>Starksia springeri</i>) endemic to Curaçao.</p> <p>Reptiles: important foraging area for Green turtles (EN)</p> <p>Mammals: Kueba di Noordkant - cave hosting the vulnerable and endemic populations of <i>Leptonycteris curasoae</i> (VU) and <i>Myotis nesopolus</i>.</p>	10	3	19.3
CUW-6 - San Juan - Santa Cruz & Pos Spaño	<p>Plants: 10 endemic species, including 4 plants strictly endemic to ABC islands</p> <p>8 rare plant species</p> <p>Invertebrates: 3 endemic land snails</p> <p>Fishes: 2 regional endemic freshwater fishes (<i>Poecilia vandepolli</i>, <i>Cyprinodon dearborni</i>)</p> <p>Birds: 1 restricted-range bird species, 1 endemic owl subspecies.</p> <p>Mammals: occurrence of the endemic subspecies of White Tailed Deer (<i>Odocoileus virginianus curassavicus</i>), and the endemic hare subspecies</p>		16	30.7

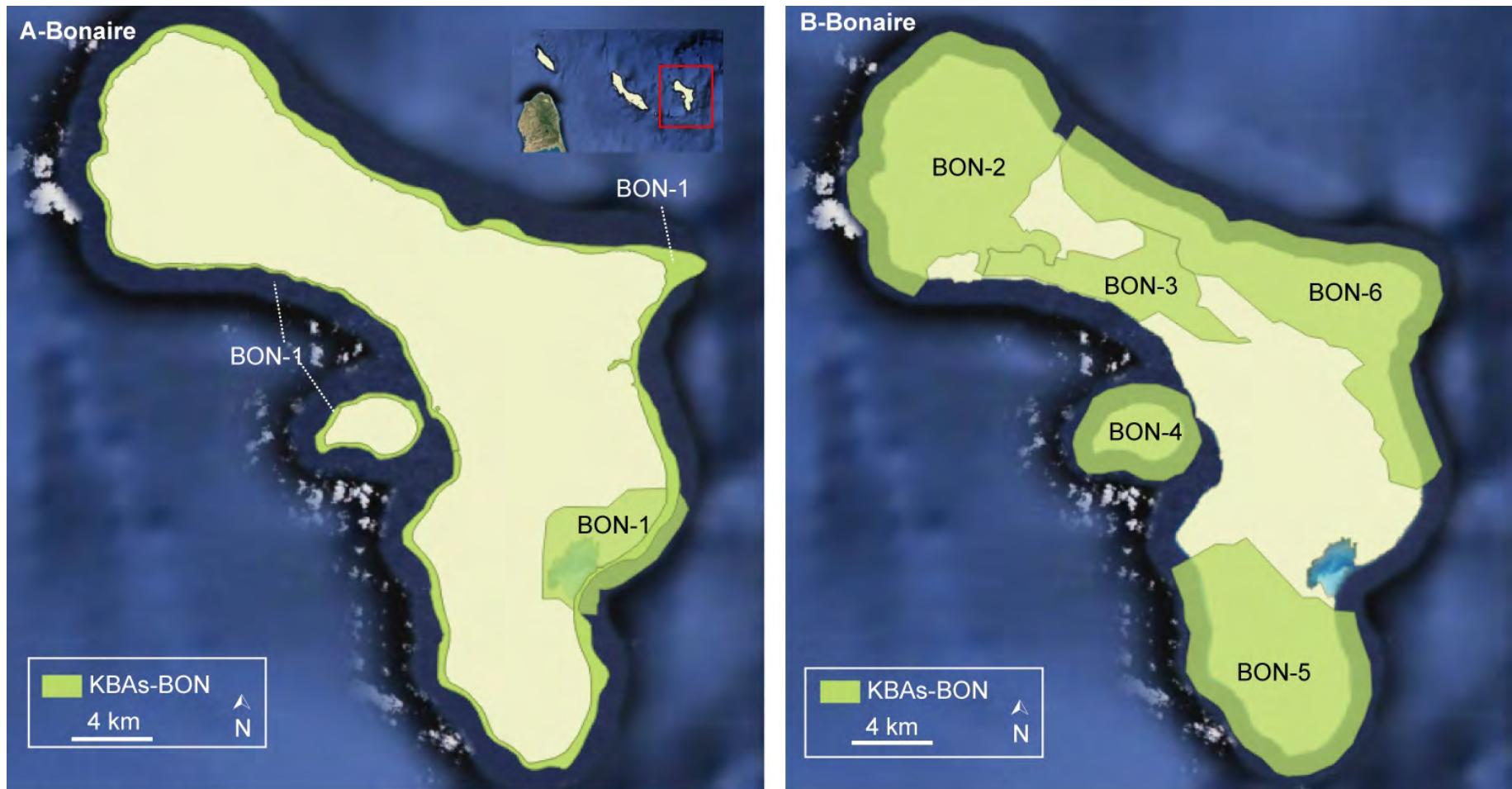


Figure 14. Maps of the Key Biodiversity Areas (KBAs) in Bonaire (Dutch OT).

- **Saba - St.Eustatius**

Table 16. Key Biodiversity Areas (KBAs) for Saba and St.Eustatius

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Saba				
SAB-1 - Saba Terrestrial Park and Mount Scenery Reserve	<p>- Saba National Terrestrial Park & Mount Scenery Reserve</p> <p>Plants: 2 threatened species (<i>Nectandra krugii</i>, <i>Guaiacum officinale</i>) (2EN) 20 endemic plant species, including 4 species restricted to only few islands of the Lesser Antilles (<i>Chromolaena macrantha</i>, <i>Begonia retusa</i>) The Elfin forests are mainly composed by Mountain Mahogany (<i>Freziera undulata</i>), a plant species restricted to the Lesser Antilles (LA). Invertebrates: 3 butterflies and 4 orthoptera endemic to LA</p> <p>Reptiles: 3 endemic reptiles, including <i>Anolis sabanus</i> strictly restricted to Saba and <i>Alsophis rufiventris</i> (EN) endemic to Saba and St-Eustatius. Birds: 3 bird species restricted to the LA and Puerto Rico. Presence of important populations of <i>Puffinus lherminieri</i>.</p>	3	33	1.5
SAB-2 - Saba Marine Park & coastal IBA	<p>- Marine Park (1300 ha): High coral coverage. Inter-connectivity between coral reefs and seagrass beds. - 8 threatened coral species (2CR-2EN-4VU), 7 fishes (1EN-6VU) and 2 sea turtles (1CR-1EN)</p> <p>- Birds - IBA surrounding Saba island: - 8 bird species endemic of the Lesser Antilles and Puerto Rico (including <i>Eulampis jugularis</i>, <i>Loxigilla noctis</i>). - Important congregation of breeding seabird populations: Red-billed Tropicbirds (<i>Phaethon aethereus</i>), Audubon's Shearwater (<i>Puffinus lherminieri</i>).</p>	17	8	22.2
SAB-3 - Caves and inland bird areas	<p>- Caves (Sulfur Mine, Great Hill cave, Tentpoint and Fort Bay caves): important habitat for bat populations, including the Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>) endemic to the Lesser Antilles and Puerto Rico.</p> <p>- Birds & Bats (Parish Hill, Great Hill, Bottom - Bud mountain - Middle island areas): - Important habitat for congregating bird and bat populations. - Important site for Audubon's Shearwater (<i>Puffinus lherminieri</i>) (300-400 specimens in Bottom-Bud mountains).</p>		1	0.54
SAB-4 - Saba Bank National Park	<p>Saba Bank National Park (268,000 ha) Offshore submerged coral atoll (3rd largest atoll in the world)</p> <p>Threatened marine species:</p>	20	1	2680

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<ul style="list-style-type: none"> - 7 threatened coral species (1CR-2EN-4VU), 8 fishes (1EN-7VU), occurrence of sharks (<i>Sphyrna zygaena</i>-VU), 2 sea turtles (1CR-1EN) and 1 marine mammal (<i>Physeter macrocephalus</i>- VU) - Endemic and threatened Labrisomidae fish (<i>Starksia williamsi</i>) (EN) - Species congregation: important breeding site for humpback whales (<i>Megaptera novaeangliae</i>) - Fish spawning area for red hinds (<i>Epinephelus guttatus</i>) and queen triggerfishes (<i>Balistes vetula</i>-VU) 			
St. Eustatius				
STA-1- Quill-Boven & Signal - Gilboa Hills	<p>Quill / Boven Terrestrial National Park (540 ha): contain about 67% of the island's remaining forests.</p> <p>2 IBAs Miriam C. Schmidt Botanical Garden</p> <p>Plants: 2 plant species (<i>Ipomoea sphenophylla</i>, <i>Gonolobus aloiensis</i>) and 1 lichen (<i>Eremothecella microcephalica</i>) strictly endemic to St.Eustatius</p> <ul style="list-style-type: none"> - 18 plant species endemic to the Lesser Antilles and Virgin Islands - 1 threatened plants (EN): <i>Guaiacum officinale</i> <p>Invertebrates: 4 arachnids restricted to the Lesser Antilles, including 1 pseudo-scorpion strictly endemic to Statia (<i>Pachyolpium confusum</i>).</p> <p>1 butterfly, 2 bees and 10 orthoptera endemic to the Lesser Antilles (including <i>Lactista eustatia</i> endemic to Statia)</p> <p>Birds: 2 IBAs of Boven and Quill</p> <ul style="list-style-type: none"> - Congregation of marine seabirds (<i>Phaethon aethereus</i>) - 9 restricted-range bird species - Important area for <i>Phaethon aethereus</i> along the NW shoreline (close to Signal Hill). Area not included within the IBA. <p>Reptiles: 2 threatened reptiles (Lesser Antillean iguana (<i>Iguana delicatissima</i>-EN), Red-bellied Racer snake (<i>Alsophis rufiventris</i>-EN)) and 6 species endemic to the Lesser Antilles</p> <p>Mammals: bat roosts for bat populations, including 2 bat species restricted to the Lesser Antilles and Puerto Rico (<i>Brachyphylla cavernarum</i>, <i>Ardops nicholls</i>)</p>	3	55	12.2

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
STA-2- Zeelandia beach	Sea turtle nesting area: important site for the threatened Hawksbill (<i>Eretmochelys imbricata-CR</i>) and Green turtle (<i>Chelonia mydas-EN</i>).	2		3.7 ha
STA-3- St. Eustatius National Marine Park	St. Eustatius National Marine Park (2750 ha), including 2 no-take zones Marine ecosystems - Coral reefs and seagrass beds surrounding much of the island, with a higher percentage of continuous reefs along the Caribbean side of the Marine Park. - 9 threatened coral (2CR-2EN-5VU) species and 8 threatened fishes (2EN-6VU) - 4 occasional shark and ray species	17		27.5

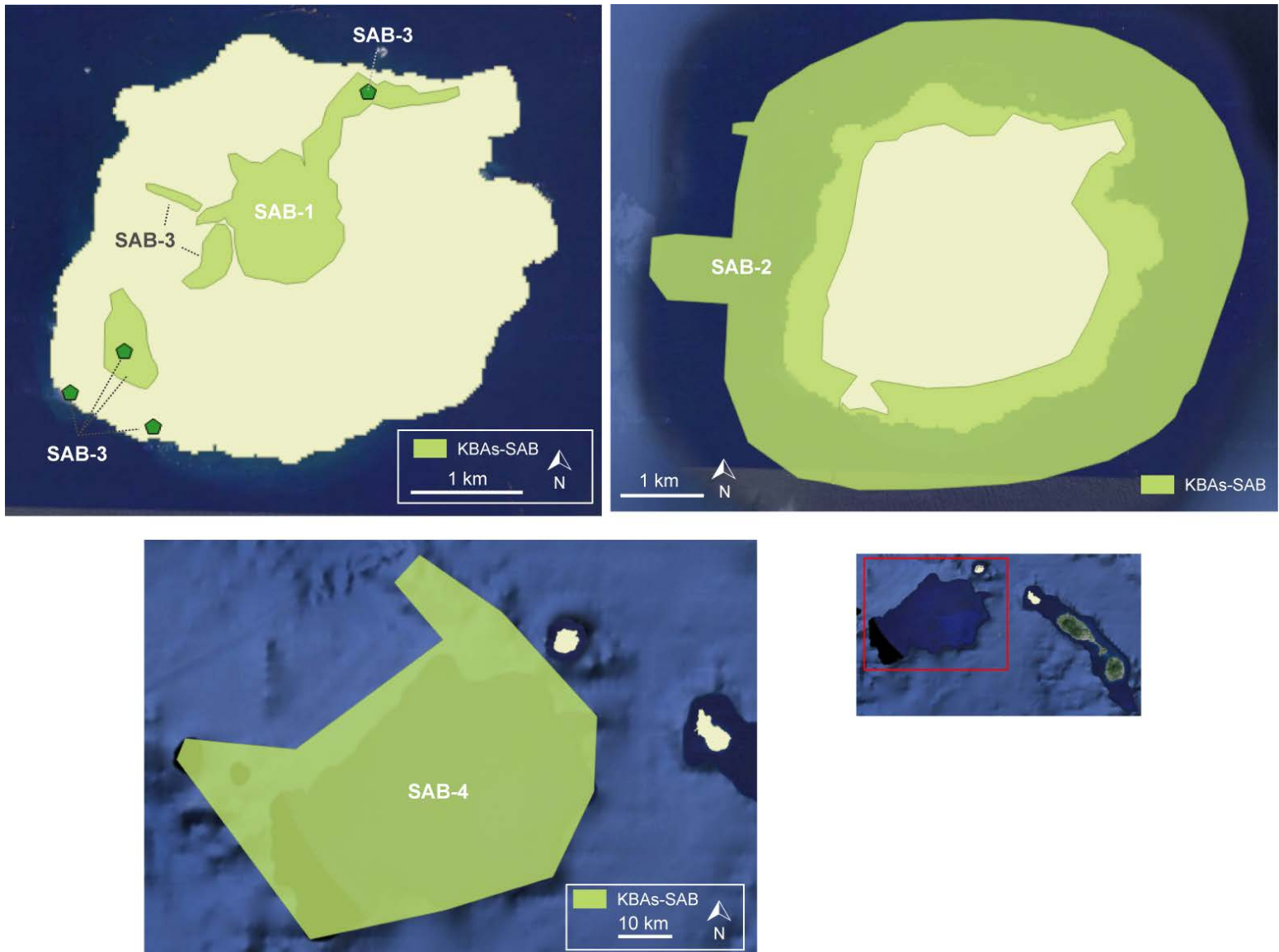


Figure 15. Maps of the Key Biodiversity Areas (KBAs) in Saba (Dutch OT).

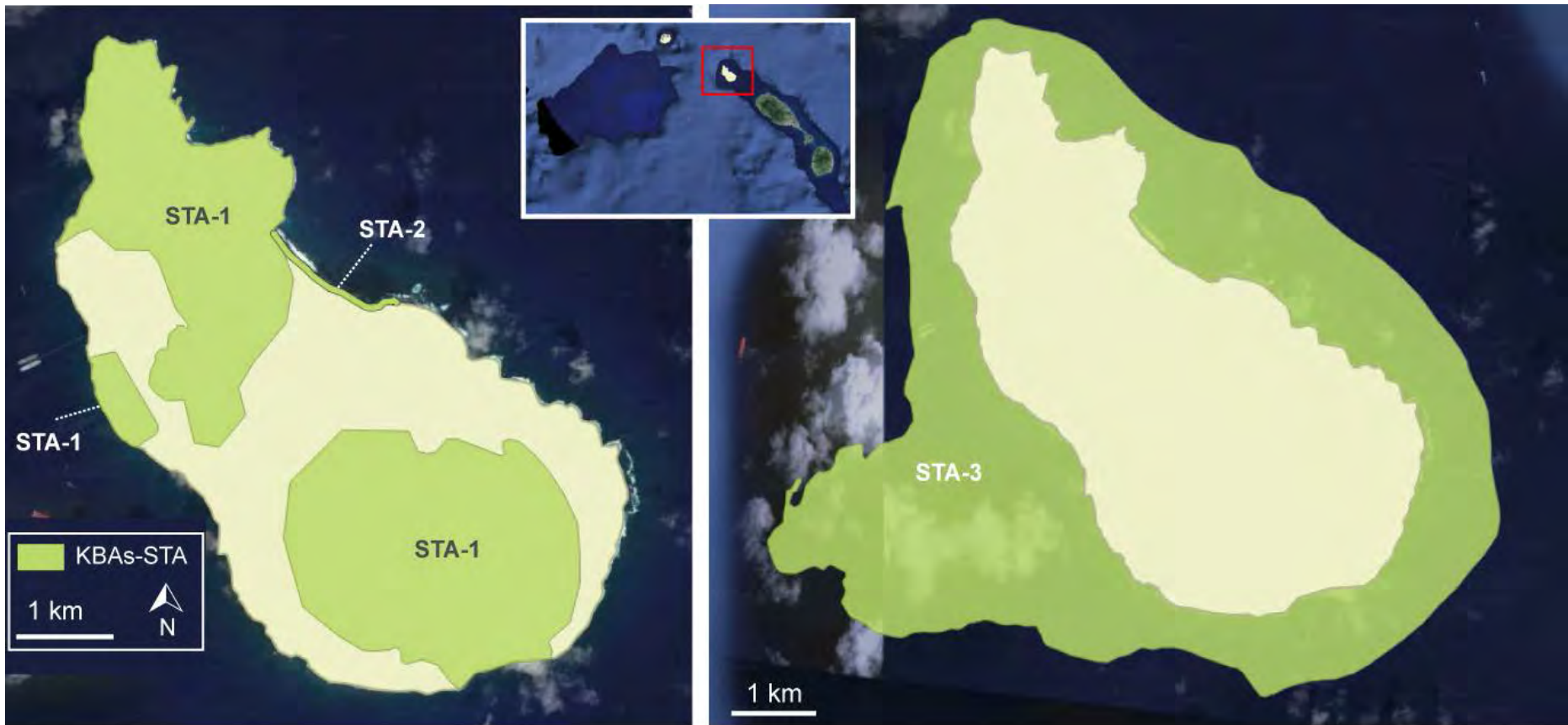


Figure 16. Maps of the KBAs in St.Eustatius (Dutch OT).

- St. Maarten

Table 17. Key Biodiversity Areas (KBAs) for St Maarten

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
St. Maarten				
SXM-1 - Man of War Shoal Marine Park & Eastern islets	<p>- Man of War Shoal National Marine Park</p> <p>Marine ecosystems:</p> <ul style="list-style-type: none"> - 12 threatened species: 6 coral (2CR-2EN-2VU) and 6 fish species (1EN-5VU) - resting and foraging areas for sea turtles (<i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>) (1CR-1EN) - connectivity between seagrass beds and coral reefs (15 km²) - seasonal occurrence of Humpback whales during the breeding season <p>- Eastern islets: Pelican Rock (IBA) - Molly Beday - Hen and Chicks - Cow and Calf</p> <p>- Birds - IBA: aggregation of 5 seabird species</p> <p>These sites are proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme. Islets are included in the project of extension of the MPA with a conservation zone around the islets.</p>	14		36.2
SXM-2 - Coastal areas & Seagrass beds (outside MPA and Eastern islets)	<ul style="list-style-type: none"> - Important areas of seagrass beds: foraging and nesting area for numerous species, including threatened species. - Simpson Bay Beach and Guana-Gibbs Bay: important sea turtle nesting areas for <i>Eretmochelys imbricata</i> and <i>Chelonia mydas</i> (1CR-1EN) - Simpson Bay - Guana-Gibbs Bay - Great Bay/ Front Amsterdam: Extensive seagrass beds. Important foraging areas for sea turtles. 	2		10.4
SXM-3 - Mangroves of Simpson Bay Lagoon	<ul style="list-style-type: none"> - Mullet Pond, Little Key and mangroves near the causeway - These sites encompass about 70% of the remaining mangroves of the Dutch side of the Simpson Bay Lagoon. <p>Marine ecosystems:</p> <ul style="list-style-type: none"> - Connectivity between seagrass beds and mangroves - Important nursery and foraging habitat for sea turtles (<i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>) (1CR-1EN) and fishes (3 VU) <p>Birds: important nesting and foraging areas.</p> <p>Mullet Pond is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme and proposed as a Ramsar site (the designation is pending).</p>	5		0.3

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
SXM-4 - Ponds and IBAs	5 ponds : Fort Amsterdam - Little Bay Pond - Fresh Pond - Great Salt Pond - Red Pond Birds: IBA of pond areas - 5 restricted-range bird species - Fort Amsterdam and Great Salt Pond: sites proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.		5	1.4
SXM-5 - Terrestrial areas	- 3 areas: Top Hills (from Sentry Hill to Williams Hill) - Emilio Wilson Estate - Geneve Back Bay Plants: 1 threatened plant (EN) and 1 plant endemic to LA and Puerto-Rico. Reptiles: 5 species endemic to the Anguilla Bank or the Lesser Antilles, including <i>Anolis pogus</i> (VU) strictly endemic to St.Maarten-St.Martin. Mammals - Billy Folly cave: 2 endemic bats (<i>Brachyphylla cavernarum</i> , <i>Monophyllus plethodon</i>) - Emilio Wilson Estate - Geneve Back Bay : sites proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.	2	8	3.0

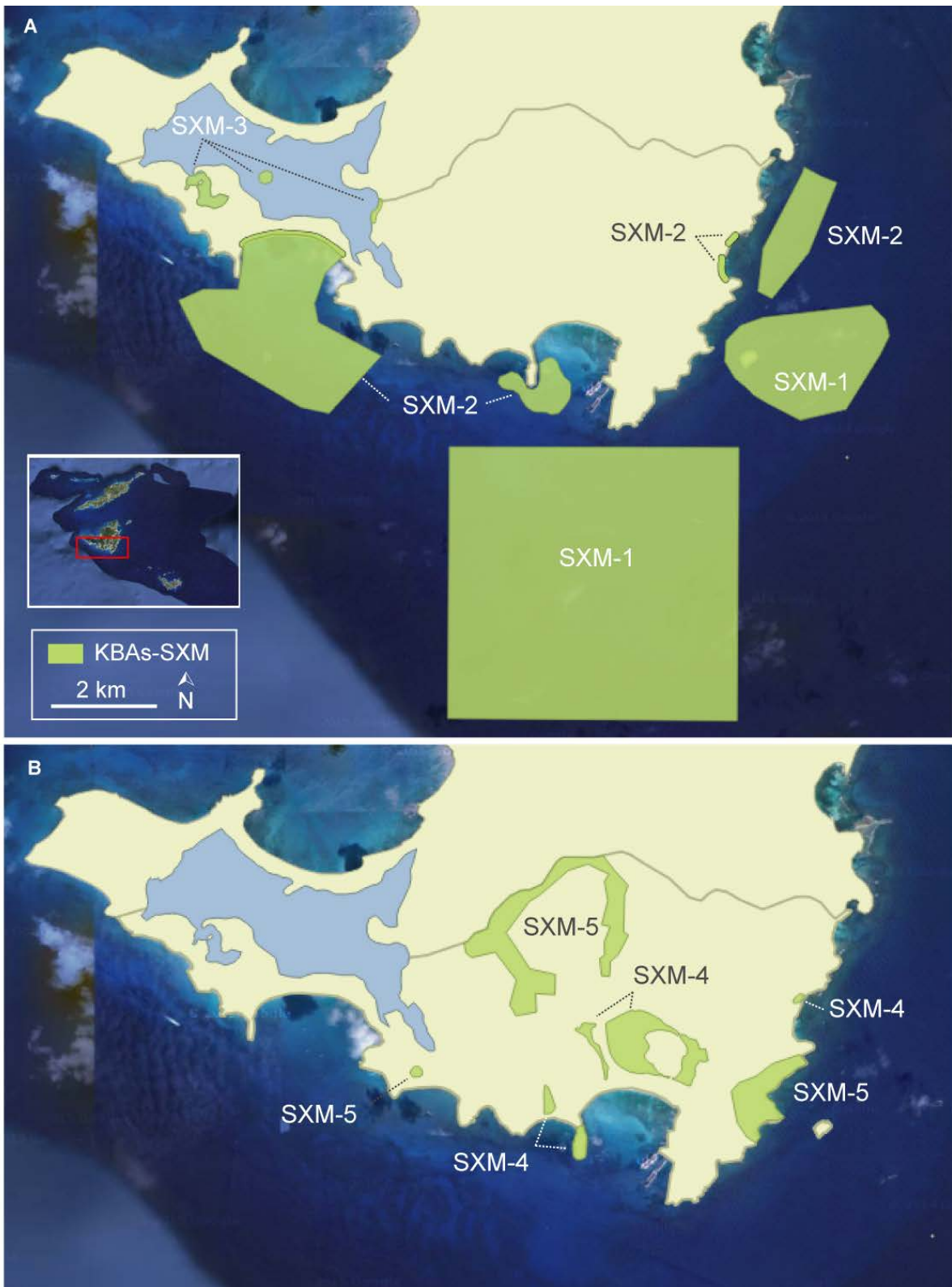


Figure 18. Maps of KBAs in St.Maarten (Dutch OC).

4.3.2. KBAs for the 4 French EU entities

- **St-Martin - St-Barthélemy - Guadeloupe - Martinique**

Table 18. Key Biodiversity Areas (KBAs) for the French EU entities

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
St. Martin				
MAF1- Marine, coastal areas and ponds	<p>- Areas of the Réserve Naturelle Nationale de St-Martin (Natural Reserve of St-Martin over 3054 ha) and the Conservatoire du Littoral (coastal areas and ponds over 360 ha).</p> <p>- Marine ecosystems</p> <p>- High inter-connectivity between seagrass beds and coral reefs</p> <p>- Bay of Cul-de-Sac and Galion- Etang aux Poissons : connectivity between mangroves, seagrass beds and coral reefs.</p> <p>Invertebrates, fishes, sharks and rays: 10 coral (3CR-2EN-5VU) and 8 fish species (1EN-7VU) (and 5 occasional species).</p> <p>- High diversity of marine invertebrates (818 Molluscs, Crustaceans and Echinoderms species including species potentially endemic to St-Martin)</p> <p>- Nurseries for shark species: Nurse shark (<i>Ginglymostoma cirratum</i>), the Lemon shark (<i>Negaprion brevirostris</i>) and the Blacknose shark (<i>Carcharhinus acronotus</i>)</p> <p>Reptiles: important foraging areas for sea turtles (<i>Eretmochelys imbricata</i> - CR, <i>Chelonia mydas</i> -EN)</p> <p>- Sea turtle nesting areas (Tintamarre, Petites Cayes)</p> <p>Mammals: breeding area for Humpback whales (<i>Megaptera novaeangliae</i>). Occasional occurrence of the vulnerable Spermwhale (<i>Physeter macrocephalus</i>, VU) due to the shallow waters of the Anguilla Bank.</p> <p>- Terrestrial areas</p> <p>- 14 ponds (Ramsar sites, SPAW areas, Conservatoire du Littoral, including 2 ponds within the Réserve Naturelle). Presence of mangroves around 9 of these ponds. Important habitats for bird, fish and invertebrate populations.</p> <p>Plants: 1 threatened plant (<i>Guaiacum officinale</i>) (EN), 3 species endemic to the Lesser Antilles-Puerto Rico</p> <p>Reptiles: 4 species endemic to the Anguilla Bank, including <i>Anolis pogus</i> (VU) strictly endemic to St-Martin/St-Maarten. Potential presence of <i>Spondylurus cf. martiniae</i> strictly endemic to Tintamarre islet (on-going morphometric and genetic analyses)</p>	22	9	34.9

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Birds: 2 IBAs - Tintamarre, Grand Etang - 3 bird species endemic to the Lesser Antilles and Puerto-Rico - important breeding seabird populations</p>			
<p>MAF2- Marine and coastal areas (outside the Réserve Naturelle and Conservatoire du Littoral areas)</p>	<p>Areas of Terres-Basses, Anse Marcel and Orient Bay</p> <p>Reptiles: beaches in Terres-Basses area - Baie Longue, Baie aux prunes, Baie Rouge (4.6 km of beach length) and Orient Bay beach (2.1 km) - Sea turtle nesting areas for Hawksbills (<i>Eretmochelys imbricata</i> - CR) and Green turtles (<i>Chelonia mydas</i> - EN) - Hawksbills, Green turtles and occasional Leatherback (<i>Dermochelys coriacea</i> - VU) in Orient Bay</p> <p>Sharks - Nurseries for shark species: Nurse shark (<i>Ginglymostoma cirratum</i>), the Lemon shark (<i>Negaprion brevirostris</i>) and the Blacknose shark (<i>Carcharhinus acronotus</i>)</p>	2		1.8
<p>MAF3- Terrestrial areas (Hill tops and mangroves)</p>	<p>- Dry forests of Pic Paradis, Red Rock (2 ZNIEFF) - Areas within Simpson Bay Lagoon - Cave Grotte du Puits</p> <p>Plants: -3 threatened species (<i>Guaiacum officinale</i> - EN, <i>Swietenia mahagoni</i> - EN, <i>Picrasma excelsa</i> - VU) and 5 plant endemic to the Lesser Antilles - mangroves bordering Simpson Bay Lagoon: important nursery and foraging area for threatened fish species and breeding bird populations. Connectivity between mangroves and seagrass beds.</p> <p>Reptiles: 4 species endemic to the Anguilla Bank and 1 species strictly endemic to St-Martin/St-Maarten (<i>Anolis pogus</i>-VU).</p> <p>Birds - 1 IBA (Pic Paradis) 6 bird species endemic to the Lesser Antilles and Puerto Rico</p> <p>Mammals (Pic Paradis, Grotte du Puits -cave in Terres-Basses): 2 bats restricted to the Lesser Antilles (<i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i>)</p>	4	18	4.7

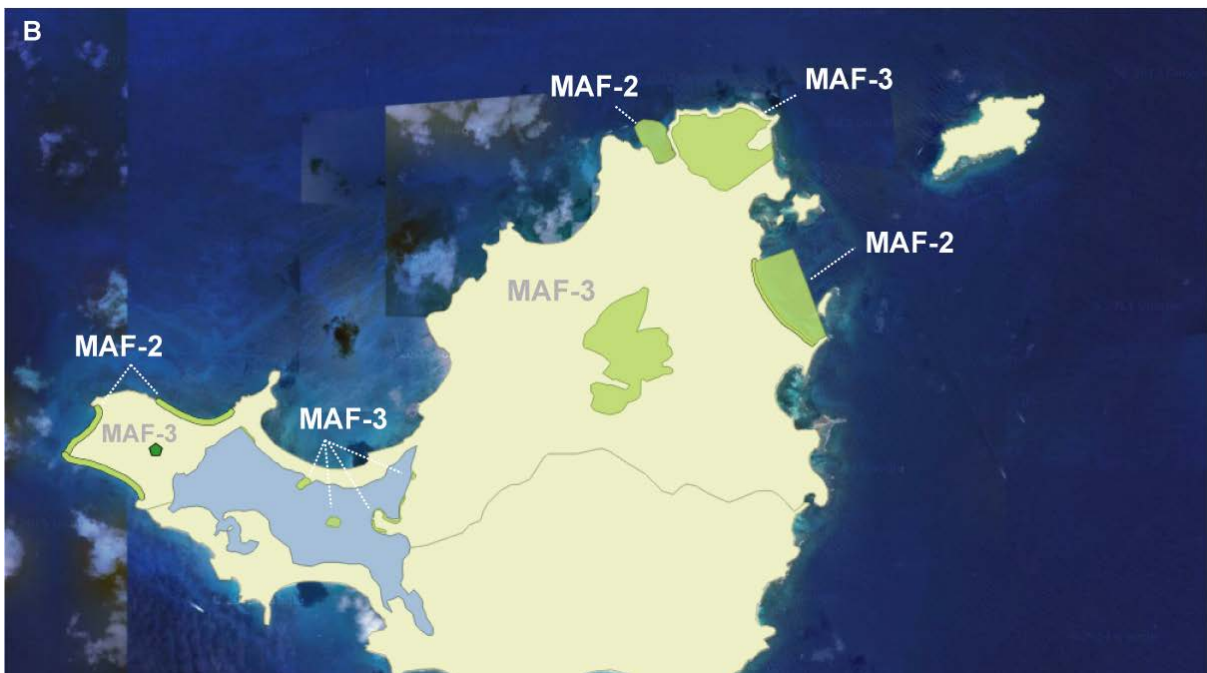
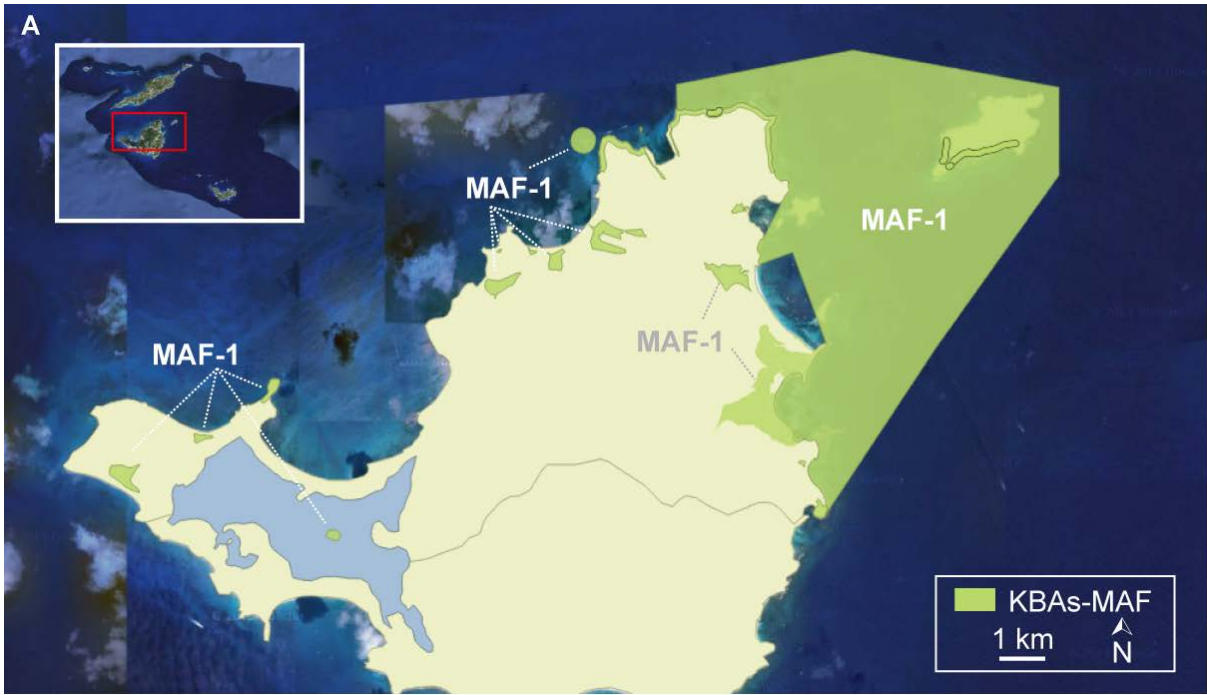


Figure 19. Maps of KBAs in St.Martin (French OR).

Table 18 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
St.Barthélemy				
BLM-1 - Marine areas and ilets	<p>- 5 areas included within the Réserve Naturelle Nationale of St-Barthélemy - 22 islets (including 11 within the Réserve Naturelle) - areas outside the Réserve Naturelle: Anse Grand Fond à Anse Toiny, Anse de Chauvette, Anse du Gouverneur, Anse de Grande Saline, Anse de Lorient - 2 ponds: Grand cul-de-sac (ou Grand Etang), Petit cul-de-sac (ou Saline) - sites identified as important areas for fauna and flora.</p> <p>- Connectivity between coral reefs and seagrass beds - Presence of mangroves surrounding the ponds of Grand cul-de-sac and connectivity with the sea</p> <p>Plants: 4 species with a distribution restricted to LA and Puerto Rico. 1 threatened plant (<i>Guaiaicum officinale</i>-EN)</p> <p>Invertebrates: 8 coral species (2CR-2EN-4VU) and relatively high coral coverage within the Réserve Naturelle. - 2 arthropods endemic to St-Barthélemy and 2 arthropods endemic to the LA</p> <p>Fishes, sharks and rays: 7 threatened fishes (1EN-6VU)</p> <p>Reptiles: Lesser Antilles Iguana (<i>Iguana delicatissima</i>-EN) (islet Frégate and Fourchue) - 4 reptiles with a restricted distribution, including the threatened <i>Alsophis rijgersmaei</i> (EN) endemic to the Anguilla Bank.</p> <p>Birds: 2 islets identified as IBAs (Petite Islette, Ilet Tortue) - important breeding area for sea birds. - ponds: important foraging and breeding area for bird populations</p>	17	13	22.6
BLM-2 - Terrestrial areas and ponds	<p>3 ponds : Etang de St Jean, Grande Saline, Etang de Toiny - Presence of mangroves surrounding the ponds (Etang de St Jean, Grande Saline) - Grande Saline: connectivity between mangroves, seagrass beds and coral reefs. Connectivity between the ponds and the sea.</p> <p>Plants: 2 species endemic to Lesser Antilles and Puerto Rico, 1 threatened plant (<i>Guaiaicum officinale</i>-EN)</p> <p>Birds: 2 restricted-range bird species. Important foraging and breeding area for bird populations</p> <p>The ponds are identified as important areas for fauna and flora.</p>	3	42	8.1

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Important areas for the fauna and flora: Pointe Toiny / Morne Vitet / Secteur de St Jean / Anse des Cayes - Anse Flamands / Secteur Colombier Petit Jean / Morne Grand Fond-Morne Rouge / Secteur Gouverneur -Grande Pointe.</p> <p>Plants: 9 species endemic to Lesser Antilles and Puerto Rico, 1 threatened plant (<i>Guaiacum officinale</i>-EN)</p> <p>Invertebrates: 6 arthropods endemic to St-Barthélemy and 18 arthropod species restricted to the Lesser-Antilles</p> <p>Birds: 2 IBAs (Ilet Tortue, Ilets les Petits Saints - Gros Ilets) 4 restricted-range bird species</p> <p>Reptiles: important population of the threatened Lesser Antilles Iguana (<i>Iguana delicatissima</i>-EN) - 5 reptile species endemic to the Lesser Antilles, including <i>Antillotyphlops annae</i> strictly endemic to St-Barthélemy and <i>Alsophis rijgersmaei</i> (EN)</p>			
BLM-3- Cave	Bat cave with species endemic to the Lesser Antilles and Puerto-Rico (<i>Brachyphylla cavernarum</i>)		1	0.1 ha

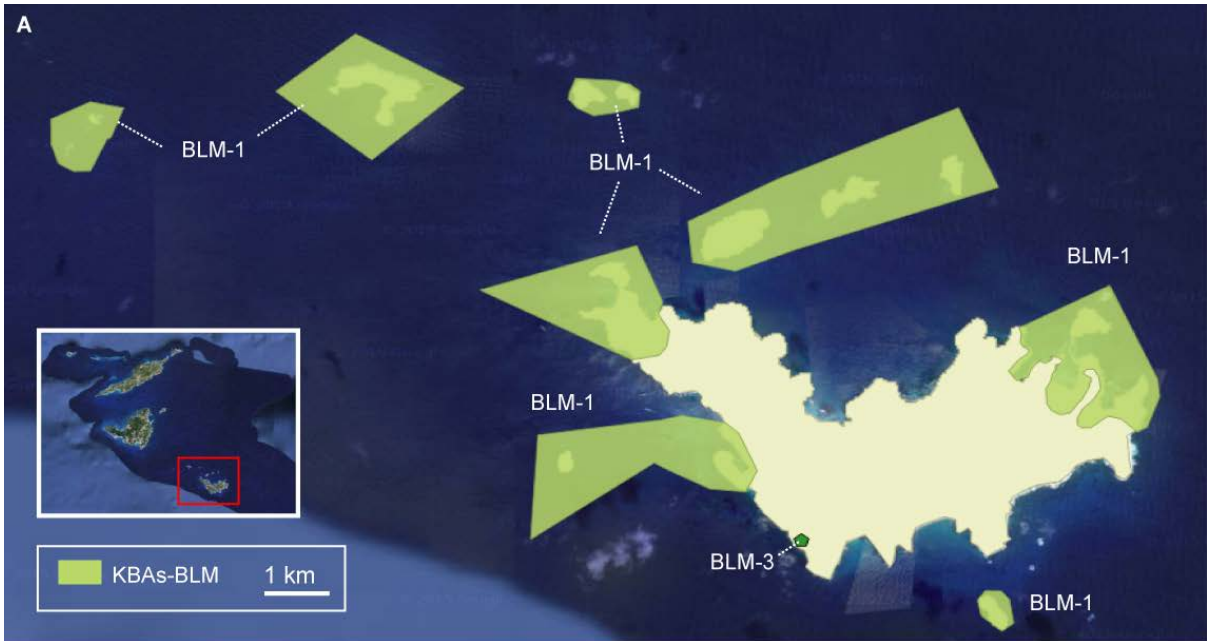


Figure 20. Maps of KBAs in St-Barthélemy (French OT).

Table 18 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Martinique				
MTQ-1- Fort de France Bay	<p><u>Marine ecosystems</u> - Connectivity between seagrass beds (370 ha), mangroves (1200 ha) and coral reefs. - Baie de Génipa: gathers 65% of Martinique's mangroves</p> <p><u>Invertebrates</u> - 1 marine mollusc (<i>Conus riosi</i>) and 1 land snail endemic to Martinique - 9 threatened coral species (2CR-2EN-5VU)</p> <p><u>Fishes</u> - 6 threatened species (6VU) - high diversity of fish community (78 esp.). Mangroves and seagrass beds constitute important foraging and nursery areas.</p> <p><u>Terrestrial ecosystems</u> <u>Plants</u> - 3 threatened plant species (1CR-1EN-1VU), including <i>Aechmea reclinata</i> (CR) that is also strictly endemic to Martinique</p> <p><u>Birds</u> - 1 IBA - mangroves of Fort-de-France Bay - 9 bird species restricted to the Lesser Antilles and Puerto-Rico</p>	18	14	60.6
MTQ-2- Area of Prêcheur - Ilet La Perle	<p><u>Marine ecosystems</u> - Connectivity between seagrass beds (13 ha) and coral reefs.</p> <p><u>Invertebrates and fishes</u> - 2 threatened coral species (1CR-1VU), 5 threatened fish species (5VU) - high diversity of mollusc species</p> <p><u>Terrestrial ecosystems</u> <u>Reptiles</u> - Lesser Antilles iguana, threatened and endemic to the Lesser Antilles (<i>Iguana delicatissima</i> -EN) - Anses Couleuvre, Lévrier, Voile: sea turtle nesting areas (<i>Eretmochelys imbricata</i>-CR, <i>Chelonia mydas</i>-EN)</p> <p><u>Birds</u> - cliffs, coastal areas: nesting areas for seabird species</p>	10	1	7.9
MTQ-3- Montagne Pelée - Pitons du Carbet - Case Pilote -	<p><u>Terrestrial ecosystems</u> - continuous areas of tropical rainforests and dry forests</p> <p><u>Plants</u> - 69 species endemic to Martinique - 8 threatened species (1CR-3EN-4VU)</p>	13	146	232.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Bellefontaine Lorrain	<p>Invertebrates</p> <ul style="list-style-type: none"> - 1 spider endemic to Martinique (<i>Avicularia versicolor</i>) and 1 species endemic to LA - 1 vulnerable land snail endemic to Martinique and strictly restricted to the hills of Montagne Pelée and Pitons du Carbet (<i>Amphicyclotulus liratus</i>-VU) and 13 land snails endemic to the island - 10 land snail species endemic to the LA - 26 insects (beetles and) endemic to the LA <p>Amphibians</p> <ul style="list-style-type: none"> - 1 vulnerable frog endemic to Martinique and strictly restricted to the hills of Montagne Pelée and Pitons du Carbet (<i>Allobates chalcopis</i>-VU) - 1 frog endemic to the LA <p>Reptiles</p> <ul style="list-style-type: none"> - 1 snake (<i>Bothrops lanceolatus</i>) endemic to Martinique, 2 reptiles restricted to the LA including the Lesser Antilles iguana (<i>Iguana delicatissima</i> -EN) <p>Birds</p> <ul style="list-style-type: none"> - 2 IBAs - tropical forests of the North of Montagne Pelée and Pitons du Carbet - 1 vulnerable bird strictly endemic to Martinique (<i>Icterus bonana</i>-VU) - 14 bird species endemic to the LA and Puerto-Rico <p>Mammals</p> <ul style="list-style-type: none"> - 1 bat endemic to Martinique (<i>Myotis martiniquensis</i>-VU) and 4 bats restricted to the LA 			
MTQ-4- Dufour - Diamant - Pointe Borgnèse	<p>Marine ecosystems</p> <ul style="list-style-type: none"> - Connectivity between mangroves, seagrass beds (750 ha) and coral reefs. <p>Invertebrates and fishes</p> <ul style="list-style-type: none"> - 9 threatened coral species (2CR-2EN-5VU), 6 threatened fish species (6VU) and a high diversity of fishes (104 sp.) - high diversity of molluscs including 1 species endemic to Martinique (<i>Conus nora</i>) and 1 species restricted to Guadeloupe and Martinique <p>Terrestrial ecosystems</p> <ul style="list-style-type: none"> - significant areas of dry forests and xerophytic vegetation <p>Plants</p> <ul style="list-style-type: none"> - 2 threatened plant species (2 VU) and 2 species restricted to the LA <p>Invertebrates</p> <ul style="list-style-type: none"> - scorpion endemic to Martinique (<i>Tityus marechali</i>) - 6 lands snails endemic to Martinique and 2 land snails restricted to the LA <p>Birds</p>	19	24	140.9

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>2 IBAs - Forest of Diamant-Trois Ilets & Ilet du Diamant</p> <ul style="list-style-type: none"> - 1 vulnerable bird strictly endemic to Martinique (<i>Icterus bonana</i>-VU) - 9 bird species endemic to the LA - Ilet du Diamant: nesting area for 5 seabird species <p>Reptiles</p> <ul style="list-style-type: none"> - Ilet du Diamant: the Martinique racer (<i>Erythrolamprus cursor</i> -CR) would be potentially only observed on the islet (presence to confirm) - Grande Anse du Diamant: sea turtle nesting site 			
<p>MTQ-5- Pointe Borgnèse - Macabou</p>	<p><u>Marine ecosystems</u></p> <ul style="list-style-type: none"> - Connectivity between mangroves (150 ha), seagrass beds (375 ha) and coral reefs. - Connectivity between seagrass beds and coral reefs around the islets of Ste Anne (RNN des ilets de Ste Anne) <p><u>Invertebrates and fishes</u></p> <ul style="list-style-type: none"> - 9 threatened coral species (2CR-2EN-5VU), 6 threatened fish species (6VU) and a high diversity of fishes (104 sp.) <p><u>Terrestrial ecosystems</u></p> <p>Plants</p> <ul style="list-style-type: none"> - 4 threatened plant species (2EN-2 VU) and 10 species restricted to the LA, including <i>Lithophila muscoides</i> ssp <i>macrantha</i> strictly endemic to Martinique (RNN Ilets Ste Anne) - 8 areas recognized as important floristic sites <p>Invertebrates</p> <ul style="list-style-type: none"> - 4 lands snails endemic to Martinique and 7 land snails restricted to the LA <p>Reptiles</p> <ul style="list-style-type: none"> - 1 snake (<i>Bothrops lanceolatus</i>) endemic to Martinique and 1 reptile potentially endemic to Martinique (<i>Sphaerodactylus</i> sp.) - RNN des ilets de Ste Anne : 1 reptile endemic to la (<i>Gymnophthalmus pleii</i>) - Grande Anse des Salines : sea turtle nesting sites <p>Birds</p> <p>2 IBAs - Ilet Cabrits au Cap Ferret & Cliffs of Ste Anne - Macabou</p> <ul style="list-style-type: none"> - nesting area for 5 seabird species, including an important nesting population of <i>Puffinus lherminieri</i> and <i>Onychoprion fuscatus</i> - 7 important areas for bird populations as foraging or nesting areas, including the Pond of Salines (Ramsar site) - Etang des Salines: 6 bird species restricted to the LA - Macabou: - 1 vulnerable bird strictly endemic to Martinique (<i>Icterus bonana</i>-VU) and 9 bird species endemic to the LA and Puerto-Rico 	<p>20</p>	<p>33</p>	<p>53.7</p>

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
<p>MTQ-6- Baie du Robert - Ilets Boiseau et Petit Piton - Ilet Chancel</p>	<p><u>Marine ecosystems</u> - Robert - Baie du Galion: connectivity between mangroves, seagrass beds and coral reefs.</p> <p><u>Invertebrates and fishes</u> - 9 threatened coral species (2CR-2EN-5VU), 6 threatened fish species (6VU) - 1 mollusc species endemic to Martinique (<i>Conus burryae</i>)</p> <p><u>Terrestrial ecosystems</u> Plants - Ilet Chancel: 1 plant endemic to the LA (<i>Tabebuia pallida</i>)</p> <p>Birds 1 IBA - <i>Ilet Boiseau and Petit Piton</i> - nesting area for the <i>Sterna dougallii</i></p> <p>Reptiles - Macabou : sea turtle nesting sites (<i>Dermochelys coriacea</i> -VU) Ilet Chancel: <i>Iguana delicatissima</i> (EN), a endangered reptile endemic to few islands of the LA</p> <p>Mammals - one of the main important roosting area for the Antillean Fruit-eating bat (<i>Brachyphylla cavernarum</i>), restricted to the Lesser Antilles and Puerto Rico.</p>	17	4	90.8
<p>MTQ-7- Presqu'île de la Caravelle - Pointe Pain de Sucre</p>	<p><u>Marine ecosystems</u> - connectivity between seagrass beds and coral reefs. - mangroves (18 ha) around the Presqu'île de la Caravelle</p> <p><u>Invertebrates and fishes</u> - 9 threatened coral species (2CR-2EN-5VU), 6 threatened fish species (6VU)</p> <p><u>Terrestrial ecosystems</u> Plants - 3 plants endemic to Martinique (including the threatened <i>Aechmea serrata</i> - CR) and 1 species restricted to the LA.</p> <p>Invertebrates -7 land snails restricted to the LA</p> <p>Reptiles - 1 anolis endemic to Martinique (<i>Dactyloa roquet</i>) and 2 reptiles restricted to the LA - 2 beaches northern of the Presqu'île: sea turtle nesting sites - Le Lorrain, Marigot, Ste Marie: nesting sites for the Leatherback sea turtle (<i>Dermochelys coriacea</i> -VU)</p>	19	25	116.1

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Birds 2 IBAs - Pointe Caravelle & Pointe Pain de Sucre - Pointe Caravelle : 1 vulnerable bird strictly endemic to Martinique (<i>Icterus bonana</i>-VU) - Pointe Caravelle : 11 bird species endemic to the LA, including the White-breasted Thrasher (<i>Ramphocinclus brachyurus</i> - EN) restricted to Martinique and Ste Lucia. About 20% of the global population of this bird species occur within the Presqu'île de la Caravelle</p> <p>- Pointe Caravelle & Pointe Pain de Sucre: important nesting areas for seabird species</p>			
MTQ-8- Dry forests	<p>Terrestrial ecosystems Dry forests Plants - 1 threatened species (<i>Pouteria semecarpifolia</i> - VU) - 1 plant endemic to Martinique and 5 species restricted to the LA</p> <p>Invertebrates -4 land snails restricted to the LA</p>	1	10	6.3
Guadeloupe				
GLP1- Forests of Basse-Terre	<p>Plants - at least 30 plant species strictly endemic to Guadeloupe, including 7 threatened species (4CR-3VU) - 3 other threatened species (1EN-2VU), including <i>Pouteria pallida</i> - at least 19 plants endemic to the LA</p> <p>Invertebrates - 1 spider (<i>Holothele sulfurensis</i>) strictly endemic to Guadeloupe - 8 land snails, including the threatened <i>Amphicyclotulus perplexus</i> (VU), 3 butterflies, 2 threatened dragonflies (<i>Protoneura romanae</i>-CR, <i>Macrothemis meurgeyi</i>-CR), 3 beetles, 3 phasma endemic to Guadeloupe - 3 land snails, 2 dragonflies restricted to the LA - 1 freshwater crab (<i>Guinotia dentata</i>) endemic to the LA</p> <p>Fishes - 1 freshwater fish endemic to the LA (<i>Eleotris perniger</i>)</p> <p>Birds 1 IBA - Forests of Basse-Terre - 70% of the population of the endemic Guadeloupe woodpecker (<i>Melanerpes herminieri</i>) - 1 threatened bird (<i>Turdus lherminieri</i>- VU) endemic to 4 islands of the LA, with a subspecies strictly endemic to Guadeloupe - 16 bird species restricted to the LA and Puerto-Rico, including <i>Cinclocerthia ruficauda</i>, <i>Orthorynchus cristatus</i></p>	19	106	425.9

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Amphibians & Reptiles - 2 threatened amphibians strictly endemic to Guadeloupe (occurring only in Basse-Terre forests): Hylode de Barlagne (<i>Eleutherodactylus barlagnei</i>), Hylode de Pinchon (<i>E. pinchoni</i>) (2EN) - 1 frog and 1 sphaero endemic to the LA - 2 snakes endemic to Guadeloupe (<i>Typhlops guadeloupensis</i>, <i>Alsophis antillensis</i>), 1 skink restricted to Guadeloupe (<i>Mabuya guadeloupae</i> -presence to confirm) and 1 racer restricted to Guadeloupe and Dominica (<i>Erythrolamprus juliae</i>)</p> <p>Mammals - 6 bat species endemic to few islands of the LA, including 3 threatened species (<i>Eptesicus guadeloupensis</i>, <i>Sturnira thomasi</i>, <i>Myotis dominicensis</i> -3VU). The species <i>E. guadeloupensis</i> is strictly endemic to Guadeloupe</p>			
<p>GLP2- Northern Cliffs and sector from Port-Louis to Pointe de la Vigie - northern Grande-Terre</p>	<p>Plants - 4 threatened species (1EN-3VU), including <i>Zanthoxylum flavum</i> -16 plant endemic to the LA (including <i>Tetramicra elegans</i>, <i>Consolea rubescens</i>)</p> <p>Birds 2 IBAs - Barrage de Gaschet and cliffs of north Grande-Terre - population of the endemic Guadeloupe woodpecker (<i>Melanerpes herminieri</i>) - 10 bird species endemic to the LA - resting and nesting area for shorebirds and 2 seabird species, including <i>Phaethon aethereus</i></p> <p>Amphibians & Reptiles - 2 reptiles restricted to Guadeloupe (<i>Anolis marmoratus</i>, <i>Mabuya grandisterrae</i> -presence to confirm) - 1 frog and 1 sphaero endemic to the LA - Pte Antigues - Pte Plate: nesting area for Hawksbill sea turtles (1CR)</p> <p>Mammals - 2 bat species endemic to the LA and Puerto Rico</p> <p>Marine areas from Port-Louis to Pointe de la Grande Vigie - 3 marine molluscs endemic to Guadeloupe (including <i>Conus magellanicus</i>) and 1 mollusc endemic to the LA - foraging and resting area for marine mammals</p> <p>Deep marine areas - 2 marine molluscs endemic to Guadeloupe (<i>Sveltia yoyottei</i>, <i>Terebra lamyi</i>)</p>	5	38	41.0

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
GLP3- Lagoon of the Grand Cul-de-Sac Marin	<p>Marine ecosystems</p> <ul style="list-style-type: none"> - Lagoon of 11,000 ha bordered by a 30km long barrier reef and 3377 ha of wetlands (including mangroves). - Connectivity between coral reefs (4177 ha), seagrass beds (5766 ha) and mangroves (2784 ha). - 3 mangrove channels connected to the lagoon (Grande-Terre). - 1800 ha of <i>Pterocarpus</i> swamp forests (<i>Pterocarpus officinalis</i>). For the Antilles, Guadeloupe island gathers the highest area of <i>Pterocarpus</i> swamp forests (2092 ha). - presence of the rare mangrove tree, <i>Avicennia schaueriana</i> <p>Invertebrates</p> <ul style="list-style-type: none"> - 5 threatened coral species (2CR-2EN-1VU), including <i>Acropora palmata</i> - 1 sea snail endemic to Guadeloupe (<i>Conus magellanicus</i>) <p>Fishes</p> <ul style="list-style-type: none"> - 4 threatened fish species (1CR-1EN-2VU), including <i>Lachnolaimus maximus</i> <p>Terrestrial coastal ecosystems</p> <p>Plants</p> <ul style="list-style-type: none"> - Kahouanne islet: 2 plants endemic to the LA (<i>Justicia eustachiana</i>, <i>Chromolaena integrifolia</i>) <p>Invertebrates</p> <ul style="list-style-type: none"> - threatened and endemic dragonfly <i>Protoneura romanae</i> (CR) <p>Birds</p> <p>2 IBAs - Eastern coastline of the lagoon & Tête à l'Anglais islet</p> <ul style="list-style-type: none"> - 11 bird species restricted to the LA and Puerto Rico (including <i>Geotrygon mystacea</i>, <i>Setophaga plumbea</i>) - population of the endemic Guadeloupe woodpecker (<i>Melanerpes herminier</i>) - 2 IBAs, islets and mangroves: resting and nesting area for 14 sea bird species, including important populations of <i>Onychoprion fuscatus</i> and <i>Sterna dougallii</i> - ponds of Choisy, Lambis and Port-Louis marshes, saltworks (Fajou): resting and foraging area for shorebirds <p>Reptiles & Amphibians</p> <ul style="list-style-type: none"> - important nesting sites for Hawksbill (Port-Louis, Fajou, Kahouanne islet), Green (Kahouanne islet) and Leatherback sea turtles (northern Basse-Terre) (1CR-1EN-1VU) - 1 anolis endemic to Guadeloupe (<i>Anolis marmoratus</i>) - 1 amphibian (<i>Eleutherodactylus martinicensis</i>) and 1 sphaero (<i>Sphaerodactylus fantasticus</i>) endemic to the LA - northern Basse-Terre: population of the threatened and 	18	27	295.0

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>endemic Lesser Antilles iguana (<i>I. delicatissima</i>-EN)</p> <p>Mammals</p> <p>- wetlands and northern Basse-Terre forests: 7 bat species endemic to LA (including <i>Eptesicus guadeloupensis</i> endemic to Guadeloupe) (4VU)</p>			
<p>GLP4- Windward side of Basse-Terre</p>	<p>Marine ecosystems</p> <p>- Lagoon of the Petit Cul-de-Sac Marin</p> <p>- Windward coast: connectivity between coral reefs (1476 ha), seagrass beds (1800 ha) and wetlands (334 ha)</p> <p>Invertebrates & Fishes</p> <p>- 7 threatened coral species (2EN-5VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i></p> <p>Reptiles & Amphibians</p> <p>- populations of the threatened and endemic Lesser Antilles iguana (<i>I. delicatissima</i>-EN)</p> <p>- 1 amphibian (<i>Eleutherodactylus martinicensis</i>) and 1 sphaero (<i>Sphaerodactylus fantasticus</i>) endemic to the LA</p> <p>- important nesting sites for Hawksbill sea turtles (1CR) (Capesterre-Belle-Eau)</p> <p>- Ilet Cochon: endemic skink (<i>Mabuya cochonae</i>)</p>	16	4	88.5
<p>GLP5- Leeward side of Basse-Terre</p>	<p>Marine ecosystems</p> <p>- Leeward coast: connectivity between coral reefs (3300 ha) and seagrass beds (1713 ha)</p> <p>- hydrothermal plumes with new species for Guadeloupe archipelago</p> <p>Invertebrates & Fishes</p> <p>- 9 threatened coral species (including Acroporid species) (2CR-2EN-5VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i> and <i>Lachnolaimus maximus</i></p> <p>- High diversity of coral and fish species along the Leeward shoreline</p> <p>Mammals</p> <p>- diverse marine mammal populations, including a resident population of vulnerable Sperm Whales (<i>Physeter macrocephalus</i>)</p> <p>Deep areas</p> <p>- 4 molluscs endemic to Guadeloupe (including <i>Cantrainea yoyottei</i>) and 1 species restricted to the LA (<i>Conus roberti</i>)</p> <p>Reptiles & Amphibians</p> <p>- 1 amphibian and 1 sphaero endemic to the LA</p> <p>- south of Basse-Terre: small population of the endemic racer (<i>Alsophis antillensis</i>)</p> <p>- 1 anolis (<i>Anolis marmoratus</i>) endemic to Guadeloupe with a species potentially endemic to Pigeon islets (<i>Anolis marmoratus pigeonnensis</i>)</p> <p>- foraging and nesting areas for Hawksbill and Green sea turtles (1CR-1EN)</p>	19	9	179.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
<p>GLP6- Southern part of Grande-Terre</p>	<p>Marine ecosystems - connectivity between coral reefs (252 ha) and seagrass beds (903 ha) - High diversity of coral and fish species</p> <p>Invertebrates & Fishes - 7 threatened coral species (2EN-5VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i></p> <p>Terrestrial ecosystems Plants (Grands-Fonds) - important populations of the endemic and threatened <i>Acrocomia karukerana</i> (1EN) and of 2 species restricted to the LA - 1 threatened plant, <i>Zanthoxylum flavum</i> (VU)</p> <p>Invertebrates - 1 beetle endemic to Guadeloupe (<i>Strategus syphax</i>)</p> <p>Birds - population of the endemic Guadeloupe woodpecker (<i>Melanerpes herminieri</i>) and the vulnerable <i>Turdus lherminieri</i>- VU) endemic to 4 islands of the LA - wetlands and ponds: important resting and foraging areas for shorebirds</p> <p>Reptiles & Amphibians - 1 blind snake and 1 racer species (<i>Alsophis antillensis</i>) endemic to Guadeloupe; 1 racer (<i>Erythrolamprus juliae</i>) restricted to Guadeloupe and Dominica - 1 frog (<i>E. martinicensis</i>), 1 sphaero and 1 rough-scaled worm lizard (<i>Gymnophthalmus pleii</i>- EN-presence to confirm) endemic to the LA - nesting areas for Hawksbill sea turtles (Gosier, Ste Anne) (1CR)</p> <p>Mammals - 1 bat species restricted to the LA (<i>Ardops nicholls</i>)</p>	18	9	21.2
<p>GLP7- Eastern part of Grande-Terre</p>	<p>Marine ecosystems - connectivity between coral reefs seagrass beds</p> <p>Invertebrates & Fishes - 8 threatened coral species, including scattered colonies of <i>Acropora palmata</i> (1CR-2EN-5VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i> - Diversity of marine molluscs, including the species endemic to Guadeloupe, <i>Triphora guadaloupensis</i>.</p> <p>Mammals - Significant populations of marine mammals, including important population of Humpback whales (<i>Megaptera novaeangliae</i>) gathering for reproduction.</p> <p>Terrestrial ecosystems - Diversity of ecosystems (ponds, mangroves near Le</p>	17	13	14.1

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Moule, dry shrublands)</p> <p>Plants</p> <ul style="list-style-type: none"> - 2 plant species endemic to the LA (including <i>Heliotropium microphyllum</i>) - threatened plants (<i>Guaiacum officinale</i> -EN) <p>Birds</p> <p>2 IBAs - Pointe des Châteaux et Digue de St-François</p> <ul style="list-style-type: none"> - 8 bird species restricted to the LA and Puerto Rico (including <i>Margarops fuscatus</i> and <i>Loxigilla noctis</i>) - congregation of 5 seabird species, with significant colonies of <i>Onychoprion fuscata</i> and <i>Sternula antillarum</i> - ponds and marshes: important resting and foraging area for shorebirds <p>Reptiles & Amphibians</p> <ul style="list-style-type: none"> - 1 frog (<i>E. martinicensis</i>) and 1 sphaero endemic to the LA - Anse des Châteaux : nesting area for Green sea turtles (EN) 			
GLP8- Ilets de Petite-Terre et La Désirade	<p>Marine ecosystems</p> <ul style="list-style-type: none"> - fringing coral reefs - connectivity between coral reefs and seagrass beds <p>Invertebrates & Fishes</p> <ul style="list-style-type: none"> - 5 threatened coral species, including scattered colonies of the 2 Acroporid species (2CR-1EN-2VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i> - 1 sea snail endemic to Guadeloupe (<i>Conus magellanicus</i> - La Désirade) - shallow lagoon of Petite-Terre: nursery for shark species (<i>Negaprion brevirostris</i>) <p>Marine mammals</p> <ul style="list-style-type: none"> - Populations of cetaceans including Humpback whales congregating for reproduction <p>Deep marine areas between La Désirade and Petite-Terre:</p> <ul style="list-style-type: none"> - 3 marine molluscs endemic to Guadeloupe (including <i>Terebra lamyi</i>) and 1 sea snail restricted to the LA and Puerto-Rico (<i>Conus mazel</i>) <p>Terrestrial ecosystems</p> <p>Plants</p> <ul style="list-style-type: none"> - 7 plant species endemic to LA, including <i>Agave karatto</i> and <i>Tabebuia pallida</i> - threatened plants (<i>Guaiacum officinale</i> -EN) - mangroves bordering 4 saltponds (15 ha) <p>Invertebrates</p> <ul style="list-style-type: none"> - 5 insects restricted to the LA, including 1 species strictly endemic to Guadeloupe (<i>Arawakia inopinata</i>) <p>Reptiles & Amphibians</p>	17	31	87.9

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>- 50% of the global population of the Lesser Antilles Iguana (<i>I. delicatissima</i>-EN) restricted to few islands of the LA</p> <p>- 1 Anolis species endemic to Guadeloupe (<i>Anolis marmoratus</i>), with species potentially endemic to the islets of Petite-Terre (<i>A. chrysops</i>) and La Désirade (<i>A. desiradei</i>)</p> <p>- 1 skink endemic to La Désirade (<i>Mabuya desiradae</i>)</p> <p>- 1 skink endemic to Petite-Terre (<i>Mabuya parviterrae</i> sp. nov.)</p> <p>- 1frog and 1 sphaero endemic to the LA</p> <p>- beaches of Petite-Terre: nesting areas for Hawksbill and Green sea turtles (1CR-1EN)</p> <p>Birds 1IBA - Ilets de Petite-Terre</p> <p>- 6 birds endemic to the LA and Puerto-Rico</p> <p>- nesting populations of seabirds (<i>Phaethon aethereus</i>, <i>Sternula antillarum</i>)</p> <p>- occurrence of the threatened <i>Dendrocygna arborea</i> (VU)</p> <p>- ecological corridor between Petite-Terre islets and La Désirade for Procellariidae bird species (<i>Puffinus puffinus</i>, <i>P. gravis</i>, <i>Calonectris diomedea</i>)</p>			
GLP9- Marie-Galante	<p>Marine ecosystems</p> <p>- connectivity between fringing coral reefs, seagrass beds and mangroves</p> <p>Invertebrates & Fishes</p> <p>- 3 threatened coral species (1EN-2VU) and 7 threatened fishes (1EN-6VU), including <i>Lutjanus analis</i></p> <p>Marine mammals</p> <p>- Populations of cetaceans including Humpback whales congregating for reproduction</p> <p>Plants</p> <p>- 9 plant species endemic to LA, including <i>Chamaesyce balbisii</i> and <i>Byrsonima lucida</i></p> <p>- 4 threatened plants (<i>Guaiacum officinale</i>, <i>Cedrela odorata</i>) (1EN-3VU)</p> <p>- wetlands of St-Louis and Folle-Anse, Vieux Fort pond (200 ha), more than 600 ponds over the island</p> <p>Invertebrates</p> <p>- 1 insect endemic to Guadeloupe (<i>Solenoptera canaliculata</i>) and 1 land snail restricted to the LA</p> <p>Birds 2 IBAs - Islet of Vieux Fort and northern cliffs of Marie-Galante</p> <p>- congregation of 3 sea bird species, including some of the most abundant colonies of <i>Onychoprion fuscata</i> and <i>Phaethon aethereus</i> for Guadeloupe archipelago</p> <p>- 9 birds endemic to the LA and Puerto-Rico</p>	16	28	79.3

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>Reptiles & Amphibians</p> <ul style="list-style-type: none"> - important nesting areas for Hawksbill and Green sea turtles (1CR-1EN) - 1 Anolis species endemic to Guadeloupe (<i>Anolis marmoratus</i>), with a species potentially endemic to Marie-Galante (<i>A. ferreus</i>) - 1frog and 1 sphaero endemic to the LA <p>Mammals</p> <ul style="list-style-type: none"> - 4 bat species endemic to the LA (including <i>Natalus stramineus</i>) 			
GLP10- Les Saintes	<p>Reptiles & Amphibians</p> <ul style="list-style-type: none"> - 1 anolis (<i>Anolis terraecaltae</i>), 1 sphaero (<i>Sphaerodactylus phyzacinus</i>), 1 racer (<i>Alsophis sanctonum</i>-EN) (with 2 endemic subspecies), 1 skink endemic to Les Saintes - 1 frog and 1 sphaero endemic to the LA - important nesting areas for Hawksbill and Green sea turtles (1CR-1EN) <p>Birds</p> <ul style="list-style-type: none"> - congregation of seabird species (<i>Sterna fuscata</i>, <i>S. anaethetus</i>, <i>S. maxima</i>, <i>Anous stolidus</i>) for resting or foraging <p>Mammals</p> <ul style="list-style-type: none"> - 3 bats endemic to the LA and Puerto Rico (including <i>Brachyphylla cavernarum</i>) - occurrence of marine mammal populations, including congregation of Humpback whales 	3	9	42.5

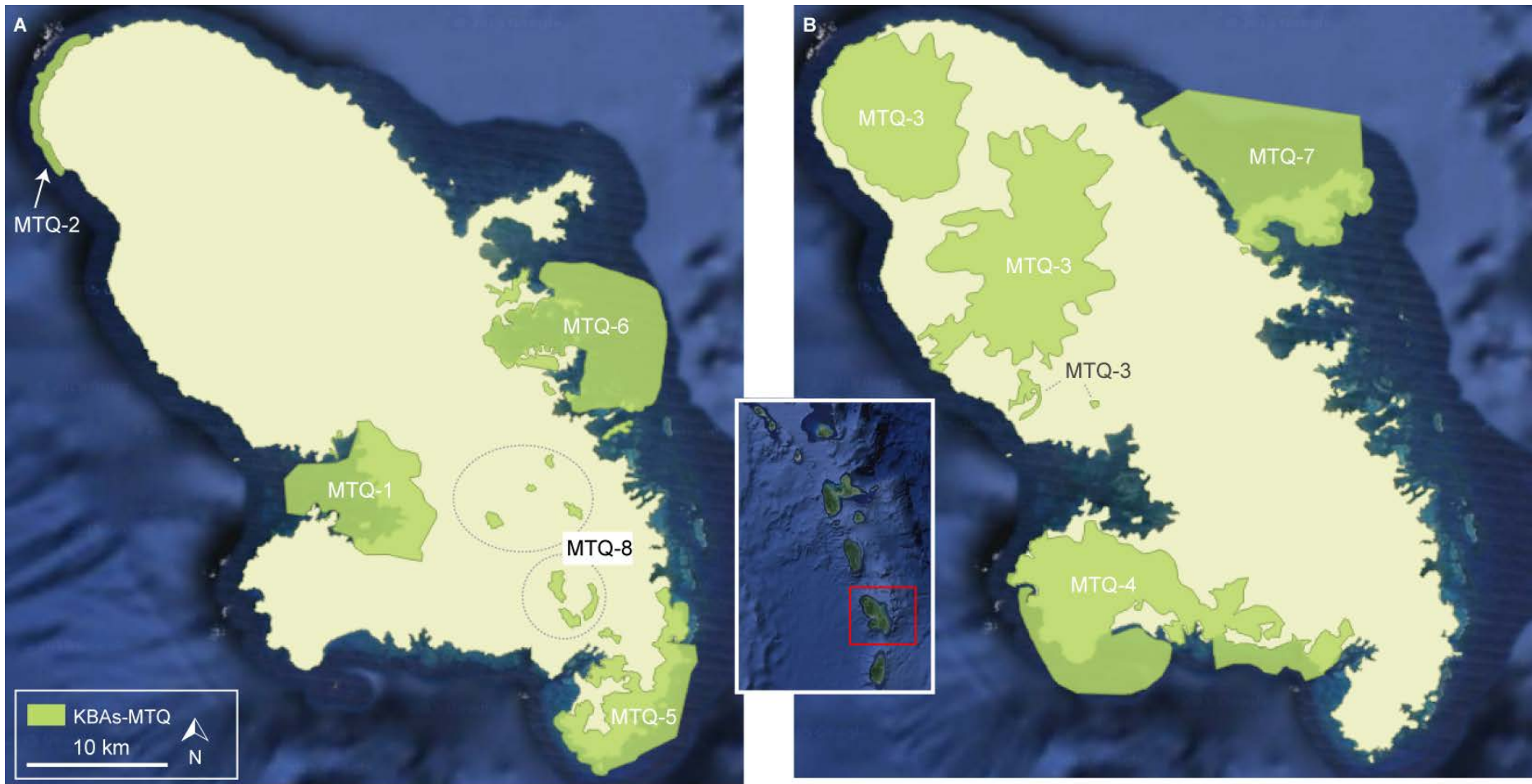


Figure 21. Maps of KBAs in Martinique (French OR).

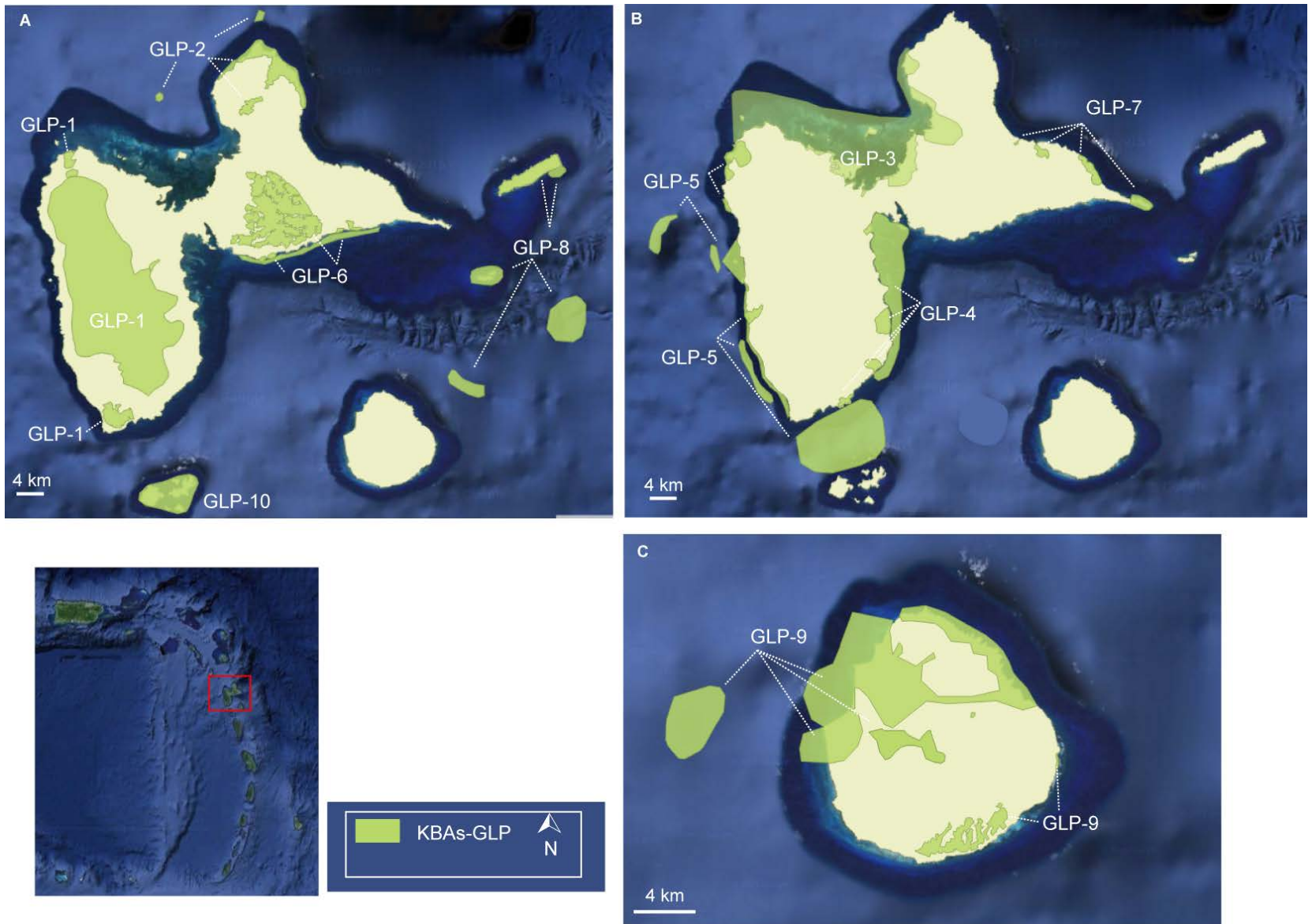


Figure 22. Maps of KBAs in Guadeloupe (French OR).

4.3.3. KBAs for the 5 UK OTs

- Anguilla - Montserrat - British Virgin Islands - Cayman Islands - Turks and Caicos Islands

Table 19. Key Biodiversity Areas (KBAs) for St-Barthélemy, Guadeloupe, Martinique

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Anguilla				
AIA-1 - Offshore cays and Marine Park system	<p>- 7 areas within the MPA network: Dog Island; Sandy Island; Sombrero Island; Prickly Pear Cays and Seal Island Reefs; Little Bay; Shoal Bay and Island Harbour Reefs</p> <p>- Connectivity between coral reefs and seagrass beds - important seagrass bed areas (Crocus Bay, Sandy Island, Shoal Bay)</p> <p>Invertebrates & Fishes - 7 threatened coral species (2CR-2EN-3VU) and 6 threatened fishes (2EN-4VU)</p> <p>Plants - 1 plant species restricted to the LA and Puerto-Rico (including <i>Melocactus intortus</i>)</p> <p>Birds 3 IBAs Sombrero Island - Dog Island - Prickly Pear East - important nesting area for 9 seabird species - globally important breeding colonies of Bridled Terns (<i>Onychoprion anaethetus</i>) in Sombrero island, Sooty Tern (<i>Onychoprion fuscatus</i>) on Dog Island, Red-billed Tropicbirds (<i>Phaethon aethereus</i>) in Prickly Pear West</p> <p>Reptiles - 2 reptile species strictly endemic to Anguilla, including <i>Ameiva corvina</i> (VU) endemic to Sombrero, <i>Sphaerodactylus</i> sp. nov. (a new species potentially endemic to Sombrero) - 4 reptiles endemic to the Anguilla Bank - 2 reptiles restricted to the LA, including the Lesser Antilles iguana (<i>Iguana delicatissima</i> -EN) occurring on northern Little Bay - Blackgardens Bay: sea turtle nesting site for Hawksbill, Green and Leatherback sea turtles (1CR-1EN-1VU)</p>	18	9	80.6
AIA-2 - Windward point- Junks Hole - Scrub and Little	<p>Areas of Windward point, Junks Hole (MPA network), Little Scrub and Scrub islets</p> <p>Plants - 2 plant species restricted to the LA and Puerto-Rico (including <i>Mammillaria nivosa</i>) - 1 threatened plant (<i>Zanthoxylum flavum</i>- VU)</p>	8	10	11.1

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Scrub islets	<p>Coral and fish species</p> <ul style="list-style-type: none"> - 1 threatened coral: <i>Acropora palmata</i> (CR) - 2 threatened fish species (<i>Epinephelus striatus</i>-EN, <i>Balistes vetula</i>-VU) <p>Birds</p> <ul style="list-style-type: none"> - 1 IBA - Scrub and Little Scrub Islands - important breeding site for 4 seabird species - 2 bird species restricted to LA and Puerto-Rico <p>Reptiles</p> <ul style="list-style-type: none"> - Captain's Bay: sea turtle nesting site for Hawksbill, Green and Leatherback sea turtles (1CR-1EN-1VU) - Foraging areas for Hawksbill and Green turtles - 1 threatened reptile species strictly endemic to Little Scrub island (<i>Ameiva corax</i> -VU) - 4 reptile species endemic to Anguilla Bank and 1 species restricted to the LA 			
AIA-3 - Ponds & IBAs	<ul style="list-style-type: none"> - East End Pond: conservation area managed by Anguilla National Trust - Mangroves around the ponds <p>Birds</p> <ul style="list-style-type: none"> - 11 IBAs - Pond network - 4 bird species restricted to LA and Puerto-Rico - congregatory seabird species (4 species) 		4	2.7
AIA-4 - Forest areas and bat caves	<p>Katouche area - The Valley - Fountain Cavern and Pitch Apple Hole</p> <ul style="list-style-type: none"> - Katouche area: continuous area of dry forests - The Valley: scientific and research reserve <p>Plants</p> <ul style="list-style-type: none"> - 1 species endemic to Anguilla (<i>Rondeletia anguillensis</i>) and 2 species endemic to the LA, including the orchid <i>Psychilis correllii</i> restricted to the northern LA - 2 threatened plants (2EN), including <i>Guaicum officinale</i> <p>Birds</p> <ul style="list-style-type: none"> 1 IBA - Katouche area - 3 species restricted to LA and Puerto-Rico <p>Reptiles</p> <ul style="list-style-type: none"> - occurrence of the threatened Back racer (<i>Alsophis rijgersmaei</i>-EN) endemic to the Anguilla Bank <p>Mammals</p> <ul style="list-style-type: none"> - Katouche area, Fountain Cavern and Pitch Apple Hole: 2 bats endemic to the LA and Puerto-Rico (<i>Monophyllus plethodon</i>, <i>Brachyphylla cavernarum</i>) 	3	9	0.9

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
AIA-5 - Marine areas (outside the MPA network)	<p>Mimy Bay - Anguillita & Blowing Rock - Rendez vous Bay</p> <ul style="list-style-type: none"> - Connectivity between seagrass beds and coral reefs <p>Fish species</p> <ul style="list-style-type: none"> - 1 threatened fish species (<i>Megalops atlanticus</i> -VU) <p>Reptiles</p> <ul style="list-style-type: none"> - Mimy Bay: sea turtle nesting site for Hawksbill, Green and Leatherback sea turtles (1CR-1EN-1VU) - Sea turtle foraging areas <p>Birds</p> <ul style="list-style-type: none"> - breeding populations of 6 sea bird species 	4		1.9
Montserrat				
MSR-1 - Centre Hills - forest reserve boundary	<ul style="list-style-type: none"> - Continuous forest area: wet forest, mesic forest, littoral forest, dry forest and elfin woodland forest. - Centre Hills support the island's freshwater resources. - Proposed as an IPA and Ramsar site - Recognized as an AZE site - Alliance for Zero Extinction <p>Plants</p> <ul style="list-style-type: none"> - 74 plant species restricted to the LA and 2 species strictly endemic to Montserrat (<i>Epidendrum montserratense</i>-CR, <i>Rondeletia buxifolia</i>-CR) - 3 threatened species (2EN-1VU), including <i>Guaiacum officinale</i> and <i>Cedrela odorata</i> <p>Invertebrates</p> <ul style="list-style-type: none"> - high diversity of invertebrates with 77 beetle species, 1 land snail (<i>Amphibulimus rawsonis</i>), 3 arachnids endemic to the island - 92 beetles, 2 arachnids and 2 dragonflies restricted to the LA <p>Amphibians</p> <ul style="list-style-type: none"> - 1 threatened frog (<i>Leptodactylus fallax</i>-CR) endemic to Montserrat and Dominica <p>Reptiles</p> <ul style="list-style-type: none"> - 6 reptiles strictly endemic to Montserrat, including the threatened <i>Diploglossus montisserrati</i> (CR) <p>Birds</p> <p>1 IBA - Centre Hills</p> <ul style="list-style-type: none"> - the threatened and endemic Montserrat Oriole (<i>Icterus oberi</i>-CR) - the threatened <i>Turdus Iherminieri</i> (VU) restricted to few islands of the LA - 8 bird species restricted to the LA and Puerto Rico <p>Mammals</p> <ul style="list-style-type: none"> - 2 threatened bat species (<i>Chiroderma improvisum</i>-VU, <i>Sturnira thomasi</i>-VU) endemic to Montserrat and Guadeloupe 	11	272	13.2

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
MSR-2 - Northern Forested Ghauts	<ul style="list-style-type: none"> - Discontinuous series of steep, forested streams that originate in the Centre Hills area - Area proposed to be recognized as Ramsar site <p>Birds</p> <p>1 IBA - Northern Forested Ghauts</p> <ul style="list-style-type: none"> - the threatened <i>Turdus Iherminieri</i> (VU) restricted to few islands of the LA - 8 bird species restricted to the LA and Puerto Rico <p>Reptiles</p> <ul style="list-style-type: none"> - 3 reptiles strictly endemic to Montserrat, including the endemic Montserrat anole (<i>Anolis lividus</i>) 	1	12	1.7

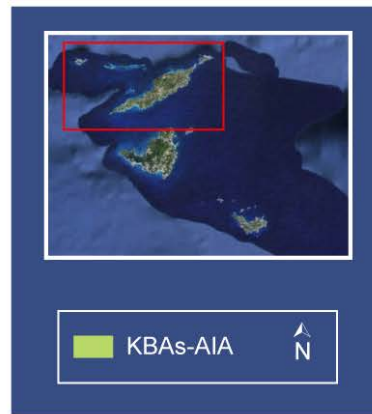
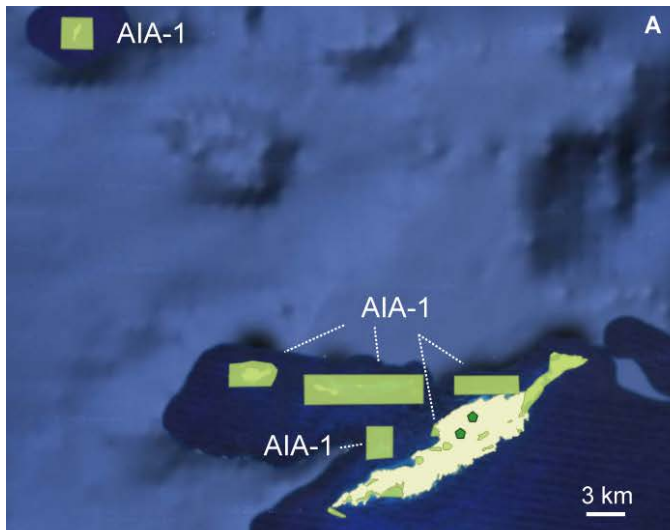


Figure 23. Maps of KBAs in Anguilla (UKOT).

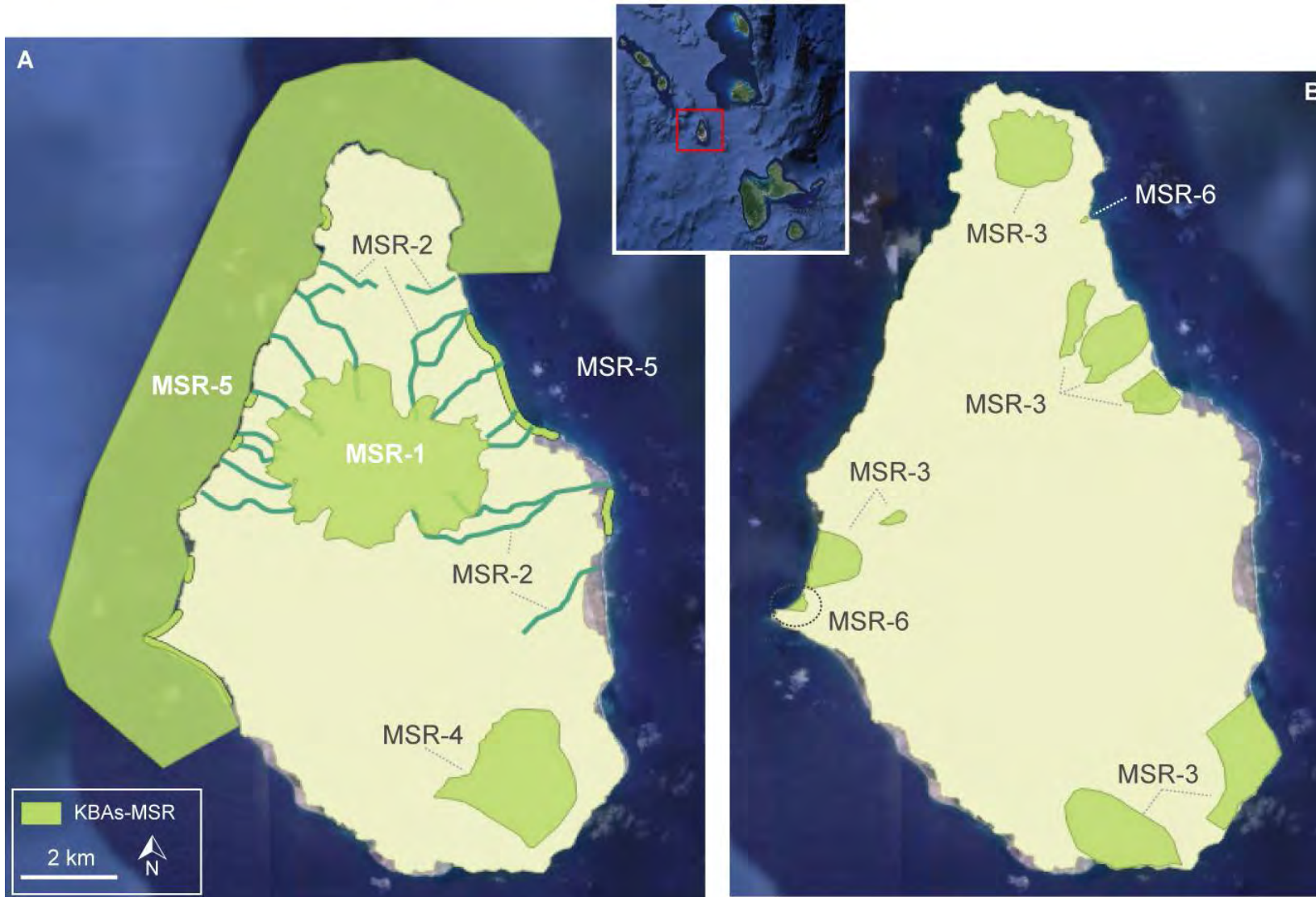


Figure 24. Maps of KBAs in Montserrat (UKOT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
<p>MSR-3 - Silver Hills reserve - dry forests</p>	<p>Plants - 2 threatened plant species strictly endemic to Montserrat (2CR) - 2 threatened species, including the Red Cedar (<i>Cedrela odorata</i>) (1EN-1VU) - Southern tip of the island: only known location for the endemic <i>Xylosma serratum</i></p> <p>Reptiles - 3 reptiles strictly endemic to Montserrat, including the endemic Montserrat anole (<i>Anolis lividus</i>)</p>	4	6	10.7
<p>MSR-4 - South Soufrière Hills</p>	<p>- Remaining dry forest patch following the volcanic activity</p> <p>Plants - Southern tip of the island: only known location for the endemic <i>Xylosma serratum</i> - 1 threatened plant species (<i>Guaiacum officinale</i> -EN)</p> <p>Reptiles - 2 reptiles strictly endemic to Montserrat, including the endemic Montserrat Ameiva (<i>Ameiva pluvianotata</i>)</p> <p>Birds 1 IBA - South Soufrière Hills - the threatened and endemic Montserrat Oriole (<i>Icterus oberi</i>-CR) - 9 bird species restricted to the LA and Puerto Rico, including the threatened <i>Turdus lherminieri</i> (VU) restricted to few islands of the LA</p> <p>Mammals - 2 threatened bat species (<i>Chiroderma improvisum</i>-VU, <i>Sturnira thomasi</i>-VU) endemic to Montserrat and Guadeloupe</p>	5	15	5.4
<p>MSR-5 - Marine ecosystems - Sea turtle nesting sites</p>	<p>- fringing coral reefs scattered around the island, connectivity with patchy seagrass beds limited to the north-western side of the island.</p> <p>Invertebrates and fishes -10 threatened coral species (2CR-2EN-6VU) and 12 (2EN-10VU) threatened fishes</p> <p>Reptiles Nesting areas for the Green (<i>Chelonia mydas</i>-EN) and Hawksbill sea turtles (<i>Eretmochelys imbricata</i>-CR) - 8 nesting sites along the western coast (Rendez vous beach, Bunkum Bay, Woodlands, Lime Kiln and Old Road Bay and Iles Bay Beaches, Fox's Bay, Bransby point and Barton Bay): nesting area for - 2 nesting beaches along the eastern side of the island (area from Trant's Bay to Cat ghaut southwards to white's bottom ghaut south of the former airport)</p>	25		50.8

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	Mammals - Montserrat's EEZ - the vulnerable Sperm whale (<i>Physeter macrocephalus</i> -VU) - breeding area for Humpback whales (<i>Megaptera novaeangliae</i>)			
MSR-6 - Wetlands	- Wetlands of Marguerita Bay, Foxes Bay, Trant's Bay Plants - 1 threatened plant species (<i>Guaiacum officinale</i> -EN) around Marguerita Bay - High levels of threats on wetlands	1		0.3
Cayman Islands				
CYM-1 - Terrestrial areas of Grand Cayman	- Important areas of dry forest habitats within the Mastic region - Central Mangrove Wetland (CMW): significant area of wetlands and mangroves Plants: endemic and threatened species - 12 plants strictly endemic to Grand Cayman (9CR-3EN), including <i>Hohenbergia caymanensis</i> - 12 plants endemic to the Cayman Islands (3EN-3VU), including <i>Myrmecophila thomsoniana</i> - 15 plant species endemic to the Cayman Islands, Cuba, Jamaica (1EN-1VU) - 2 threatened plant species (2EN), including <i>Guaiacum officinale</i> Invertebrates - 32 molluscs endemic to the Cayman islands - 2 arthropods endemic to Grand Cayman Fishes - 2 freshwater fish species endemic to Grand Caymans (<i>Gambusia xanthosoma</i> , <i>Limia caymanensis</i>) Reptiles - endemic and threatened Grand Cayman Blue Iguana (<i>Cyclura lewisi</i> - EN) - 5 other reptile species endemic to Grand Cayman, including Cayman Blue-Throated anole (<i>Anolis conspersus</i>), Grand Cayman Racer (<i>Alsophis caymanus</i>) Birds 6 IBAs - Central Mangrove Wetlands, Mastic reserve, Botanic Park and Salina Reserve, Frank Sound Forest, Franklin's Forest, Eastern Dry Forest - threatened West Indian Whistling duck <i>Dendrocygna arborea</i> (VU) - 1 bird species endemic to Cayman Islands, Bahamas archipelago and Cuba (<i>Amazona leucocephala</i>), 4 bird species restricted to Cayman Islands and islands of the Greater Antilles	22	86	55.2

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
CYM-2 - Marine ecosystems of Grand Cayman	<ul style="list-style-type: none"> - Fringing coral reefs inter-connected with seagrass beds (6230 ha) and lagoon areas - Mangrove areas (6520 ha) <p>Invertebrates and fishes</p> <ul style="list-style-type: none"> - 9 threatened coral species (2CR-2EN-5VU) and 9 threatened fishes (2EN-7VU) <p>Reptiles</p> <ul style="list-style-type: none"> - Important foraging areas for Hawksbill and Green sea turtles (1CR-1EN) 	20		136.0

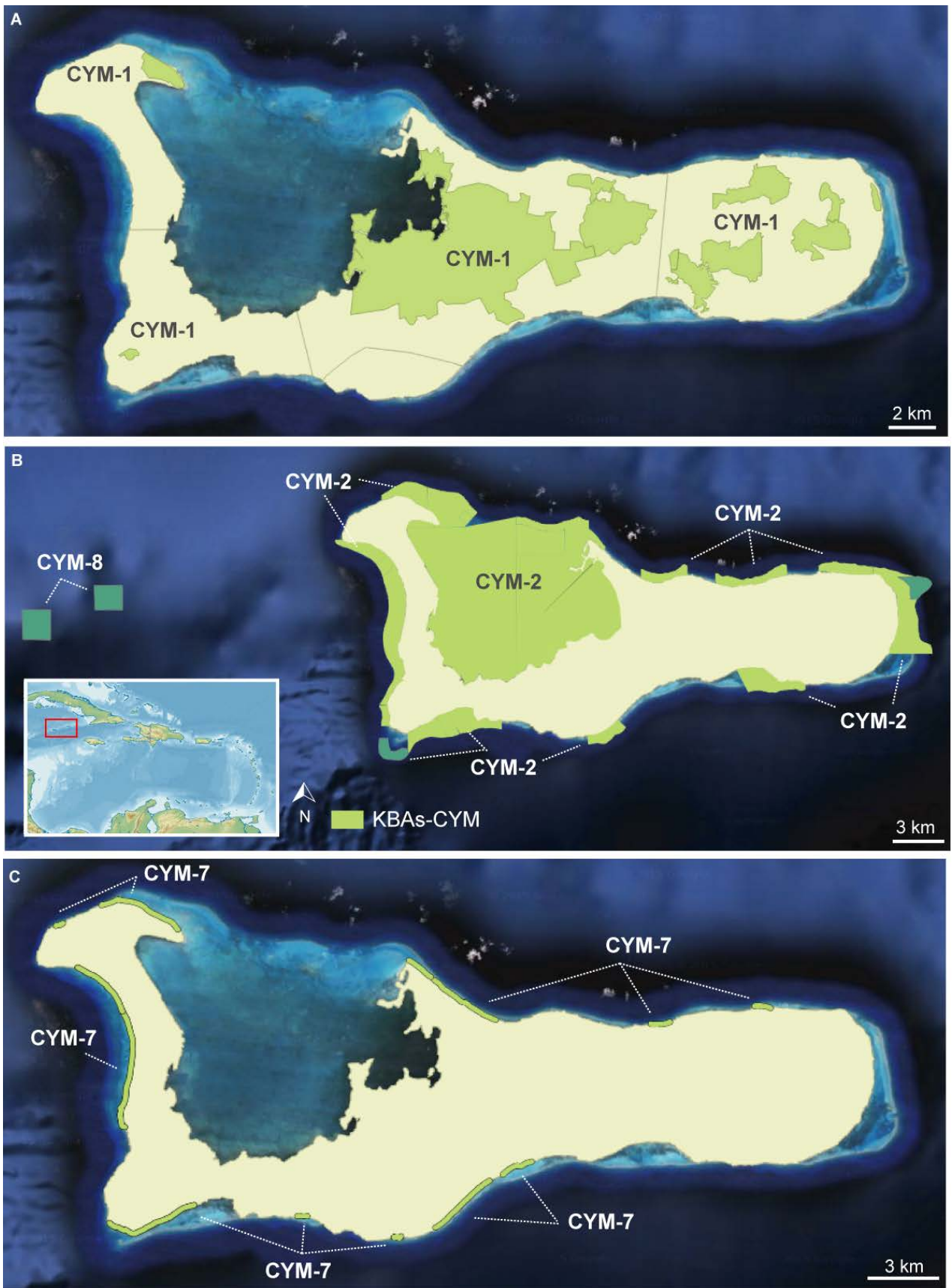


Figure 25. Maps of KBAs in Grand Cayman (UKOT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
<p>CYM-3 - Terrestrial areas of Little Cayman</p>	<p>- Variety of habitats: Dry forests, ponds, hyper-saline lagoons, mangroves - Wetlands (with mangroves) cover about 40% of Little Cayman - Ramsar site of Booby Pond and Rookery</p> <p>Plants: endemic and threatened species - 2 plants strictly endemic to Little Cayman (2CR), including <i>Chamaesyce bruntii</i> - 5 plants endemic to Sister Islands (2CR-2EN), including <i>Banara caymanensis</i> - 12 plants endemic to the Cayman Islands (3EN-3VU), including <i>Agave caymanensis</i> - 11 plant species endemic to the Cayman Islands, Cuba, Jamaica (1EN-1VU)</p> <p>Invertebrates - 32 molluscs endemic to the Cayman islands - 1 threatened land snail strictly endemic to Little Cayman (<i>Cerion nanus</i>-CR)</p> <p>Fishes - 2 freshwater fish species endemic to Grand Caymans (<i>Gambusia xanthosoma</i>, <i>Limia caymanensis</i>)</p> <p>Reptiles - 1 anole strictly endemic to Sister Islands (<i>Anolis maynardi</i>) - Threatened Sister Islands Rock Iguana (<i>Cyclura nubila</i>-VU) endemic to CI and Cuba - 5 other reptile species endemic to the CI, Cayman Ground gecko (<i>Sphaerodactylus argivus</i>)</p> <p>Birds 3 IBAs - Booby Pond Reserve, Crown Wetlands and Sparrowhawk Hill - threatened West Indian Whistling duck <i>Dendrocygna arborea</i> (VU) - 3 bird species restricted to Cayman Islands and islands of the Greater Antilles - congregation of 3 seabird species, including important populations of the Red-footed Booby (<i>Sula sula</i>)</p>	17	75	9.4
<p>CYM-4- Marine ecosystems of Little Cayman</p>	<p>- Fringing coral reefs inter-connected with seagrass beds (145 ha) and lagoon areas - Mangrove areas (475 ha)</p> <p>Invertebrates and fishes - 9 threatened coral species (2CR-2EN-5VU) and 9 threatened fishes (2EN-7VU)</p> <p>Reptiles - Important foraging areas for Hawksbill and Green sea turtles (1CR-1EN)</p>	20		20.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
<p>CYM-5 - Terrestrial areas of Cayman Brac</p>	<p>Plants: endemic and threatened species - 2 plants strictly endemic to Cayman Brac (2CR), including <i>Verbesina caymanensis</i> - 5 plants endemic to Sister Islands (2CR-2EN), including <i>Banara caymanensis</i> - 12 plants endemic to the Cayman Islands (3EN-3VU), including <i>Argythamnia proctorii</i> - 11 plant species endemic to the Cayman Islands, Cuba, Jamaica, Bahamas (1EN-1VU) - threatened <i>Cedrela odorata</i> (1VU) Invertebrates - 32 molluscs endemic to the Cayman islands Reptiles - Threatened Sister Islands Rock Iguana (<i>Cyclura nubila</i>-VU) endemic to CI and Cuba - 8 other reptile species endemic to the CI, including the Cayman Brac Blind Snake (<i>Typhlops epactius</i>) Birds 1 IBA - Bluff Forest - 1 parrot endemic to Cayman Islands, Bahamas and Cuba (<i>Amazona leucocephala</i>) - 2 bird species restricted to Cayman Islands and islands of the Greater Antilles</p>	16	74	12.7
<p>CYM-6 - Marine ecosystems of Cayman Brac</p>	<p>- Fringing coral reefs inter-connected with seagrass beds (10 ha) and lagoon areas - Mangrove areas (14 ha) Invertebrates and fishes - 9 threatened coral species (2CR-2EN-5VU) and 9 threatened fishes (2EN-7VU) Reptiles - Important foraging areas for Hawksbill and Green sea turtles (1CR-1EN)</p>	20		15.8
<p>CYM-7 - Sea turtle nesting sites</p>	<p>- Important nesting areas for Hawksbills, Loggerheads and Green sea turtles (1CR-2EN) Grand Cayman - 10 key nesting areas for Green and Loggerhead sea turtles: Barefoot Gardens, Barkers, Little Spotts, Sand Hole Road, South Sound, 2 areas along Seven Miles Beach, Rum Point, Bodden Town, Beach Bay, Spotts Beach, Little Cayman - 4 key nesting areas for Green and Loggerhead sea turtles: Jacksons, South Hole Sound, Preston Bay, Point of</p>	3		14.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	Sand Cayman Brac - 4 key nesting areas for Loggerhead sea turtles: South Side East and West, Brac Reef West, Airport Beach.			
CYM-8 - Offshore Banks	12 Mile Bank West & East Grouper Holes Invertebrates and fishes - 7 threatened coral species (2EN-5VU) and 9 threatened fishes (2EN-7VU) Sharks and rays - 6 threatened species occurring in the Cayman's waters (2EN-4VU) Reptiles - Hawksbills, Loggerheads and Green sea turtles (1CR-2EN)	25		5.8
British Virgin Islands				
VGB-1 - Anegada	- 5 IPAs on Anegada: West End IPA, Cays IPA, "Soldier Plain" IPA, East End IPA, Warner Plain IPA - ponds and mangroves (439 ha), 75% of the BVI's mangroves occur on Anegada Plants - 3 plants strictly endemic to Anegada, including 2 CR species (<i>Vachellia anegadensis</i> , <i>Metastelma anegadense</i>) - 11 plant species endemic to the Puerto Rican Bank, including 3 CR species (<i>Leptocereus quadricostatus</i> , <i>Machaonia woodburyana</i> , <i>Varronia rupicola</i>) - 1 threatened plant species (not endemic) (<i>Guaiaacum officinale</i> -EN) Invertebrates - 2 butterflies endemic to Anegada (<i>Calisto anegadensis</i> , <i>Copaeodes eoa</i>) Reptiles - the threatened Anegada Rock Iguana (<i>Cyclura pinguis</i> -CR) strictly endemic to this island - 2 other reptiles strictly endemic to Anegada (including <i>Spondylurus anegadae</i>) - 4 reptiles restricted to the Puerto Rican Bank (including <i>Ameiva exsul</i>) - Sea turtle nesting sites (<i>Eretmochelys imbricata</i> -CR, <i>Chelonia mydas</i> -EN) Birds 1 IBA - Anegada wetlands - 7 bird species restricted to the Puerto Rican Bank and the Lesser Antilles - 7 seabird species that congregate over the IBA	9	30	41.9

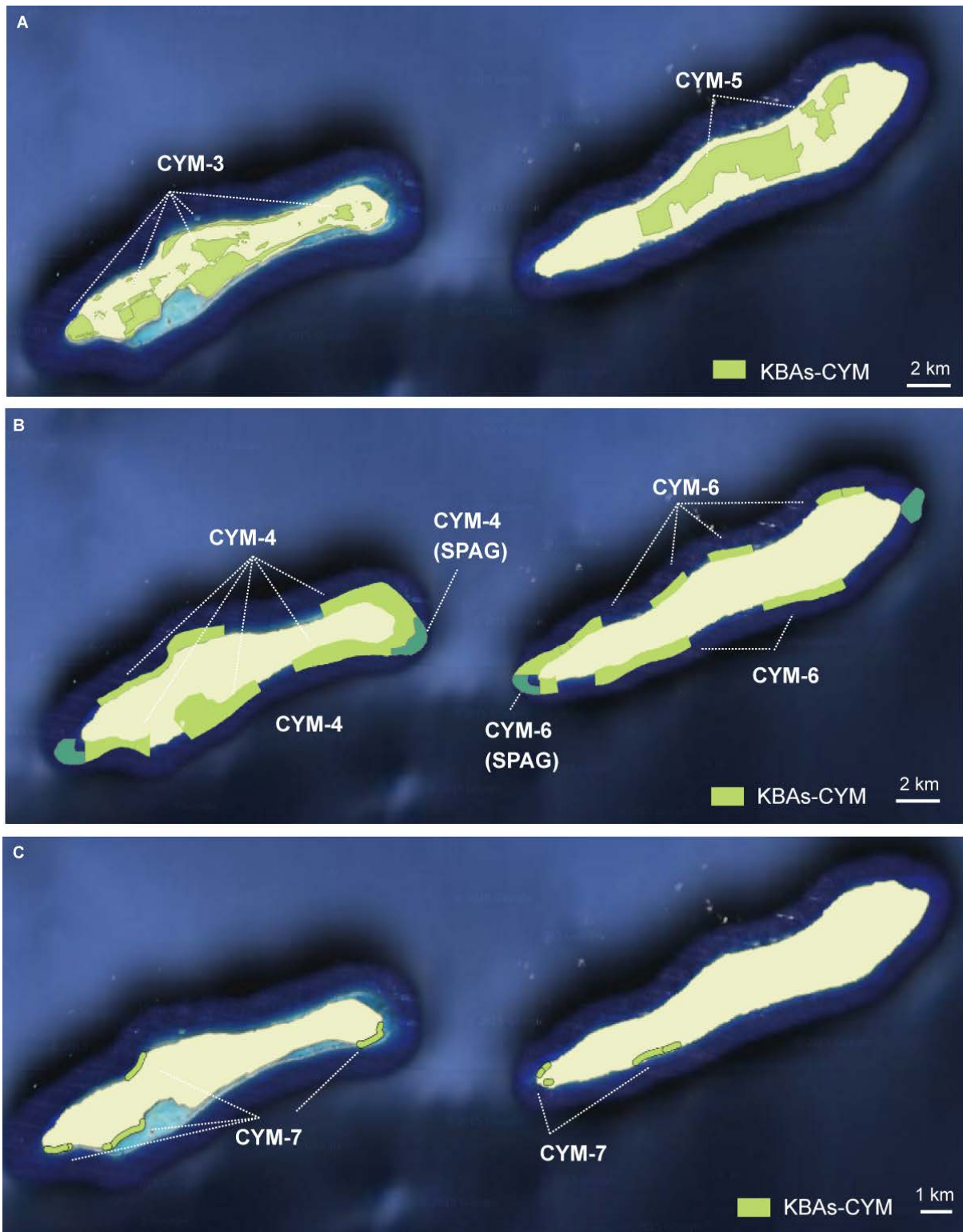


Figure 26. Maps of KBAs in Little Cayman and Cayman Brac (UKOT).

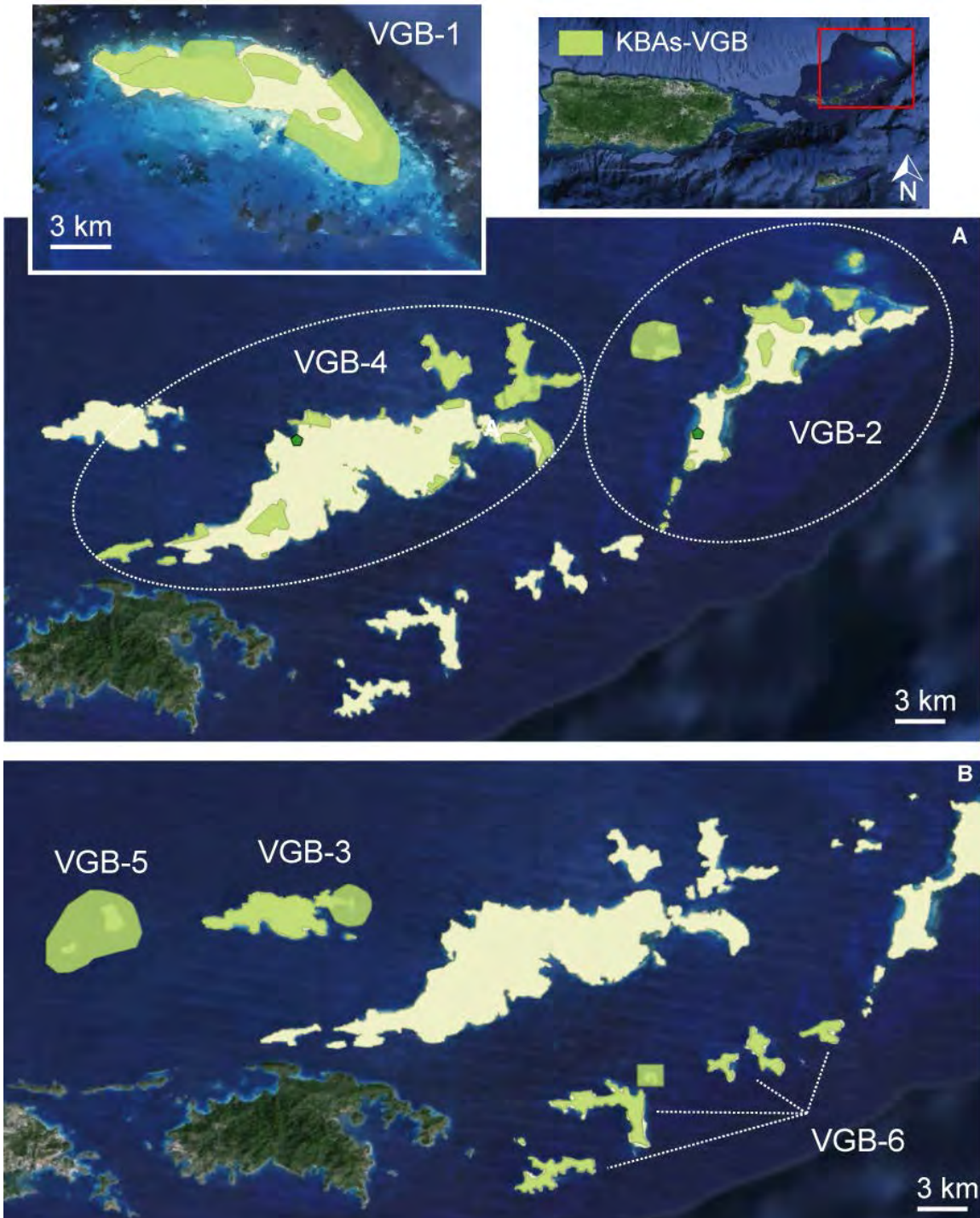


Figure 27. Maps of KBAs in the BVI (UKOT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
British Virgin Islands				
VGB-2 - Virgin Gorda and nearby islands	<p>Plants</p> <ul style="list-style-type: none"> - 3 plants endemic to the BVI, including 1 CR species (<i>Calyptanthes kiaerskovii</i>) - 14 plant species endemic to the Puerto Rican Bank, including 1 CR and 2 EN species - 4 species endemic to the BVI and LA <p>Amphibians</p> <ul style="list-style-type: none"> - threatened and endemic Virgin Islands Coqui (<i>Eleutherodactylus schwartzi</i>-EN) <p>Reptiles</p> <ul style="list-style-type: none"> - 1 species endemic to the BVI (<i>Sphaerodactylus parthenopion</i>) - 5 reptiles restricted to the Puerto Rican Bank, including the threatened <i>Spondylurus semitaeniatus</i> (CR) - translocation of the endemic and threatened Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) on Necker Island <p>Birds</p> <ul style="list-style-type: none"> - 5 bird species restricted to the Puerto Rican Bank and the Lesser Antilles - 1 seabird species (<i>Sterna dougallii</i>) congregating on East Seal Dog island 	7	34	12.4
VGB-3 - Jost Van Dyke and Green Cay	<p>Plants</p> <ul style="list-style-type: none"> - 1 plant endemic to the BVI (<i>Reynosia guama</i>) - 11 plant species endemic to the Puerto Rican Bank, including <i>Bastardiopsis eggersii</i> - 1 threatened plant species (not endemic) (<i>Guaiacum officinale</i> -EN) <p>Amphibians</p> <ul style="list-style-type: none"> - 2 amphibians endemic to the BVI: <i>Eleutherodactylus schwartzi</i>, <i>E. lentus</i> (2EN) - 2 amphibians restricted to the Puerto Rican Bank (<i>Eleutherodactylus antillensis</i>, <i>E. cochranae</i>) <p>Reptiles</p> <ul style="list-style-type: none"> - 6 reptiles restricted to the Puerto Rican Bank, including the racer <i>Alsophis portoricensis</i> - the 2 threatened and endemic skinks, <i>Spondylurus sloanii</i>, <i>S. semitaeniatus</i> (2CR), potentially occur on Green Cay <p>Birds</p> <p>1IBA - Green Cay</p> <ul style="list-style-type: none"> - 6 bird species restricted to the Puerto Rican Bank and the Lesser Antilles - congregation of Roseate Terns (<i>Sterna dougallii</i>) <p>Mammals</p> <ul style="list-style-type: none"> - 1 bat species (<i>Brachyphylla cavernarum</i>) endemic to the LA, Puerto Rico and Virgin Islands 	5	31	13.4

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
VGB-4 - Tortola & nearby islands	<p>Plants - 24 plant species endemic to the Puerto Rican Bank, including 4 threatened species (1CR-3EN) - 1 threatened plant species (not endemic) (<i>Guaiacum officinale</i> -EN)</p> <p>Invertebrates - 5 invertebrates (2 spiders, 1 centipede, 1 crab, 1 snail) endemic to the BVI, including the land snail <i>Hemistrochus nemoralinus</i></p> <p>Amphibians - 1 amphibian endemic to the BVI: <i>Eleutherodactylus schwartzi</i> (EN) - 2 amphibians restricted to the Puerto Rican Bank (<i>Eleutherodactylus antillensis</i>, <i>E. cochranae</i>)</p> <p>Reptiles - 1 reptile endemic to the BVI (<i>Sphaerodactylus parthenopion</i>) - 7 reptiles restricted to the Puerto Rican Bank, including the Tree Boa <i>Chilabothrus granti</i> (EN) and the skink <i>Spondylurus semitaeniatus</i> (CR) - translocation of the endemic and threatened Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) on Guana Island and Little Thatch</p> <p>Birds - 7 bird species restricted to the Puerto Rican Bank and the Lesser Antilles - congregation of Caribbean Flamingos (<i>Phoenicopterus ruber</i>) on Necker Island</p> <p>Mammals - vulnerable bat (<i>Stenoderma rufum</i>-VU) endemic to the Puerto Rican Bank and the Lesser Antilles</p>	10	49	18.2
VGB-5 - Great and Little Tobago	<p>Plants - 10 species endemic to the Puerto Rican Bank, including <i>Coccothrinax barbadensis</i> and <i>Agave missionum</i></p> <p>Birds 1IBA - Great Tobago - 6 bird species restricted to the Puerto Rican Bank and the Lesser Antilles - congregation of 4 seabird species, including <i>Fregata magnificens</i> and <i>Leucophaeus atricilla</i></p> <p>Reptiles (Little Tobago) - 1 skink endemic to the BVI (<i>Spondylurus sloanii</i> -CR) - 1 racer (<i>Alsophis portoricensis</i>) endemic to the Puerto Rican Bank</p>	1	18	15.7

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
VGB-6 - Sisters Islands	<p>Plants</p> <ul style="list-style-type: none"> - 3 plants strictly endemic to the BVI (including <i>Galactia eggersii</i>) - 13 plant species endemic to the Puerto Rican Bank <p>Reptiles</p> <ul style="list-style-type: none"> - 7 reptiles endemic to the BVI, including species strictly restricted to some islands (<i>Anolis ernestwilliamsii</i> endemic to Carrot Rock) and threatened species (<i>Spondylurus sloanii</i>-CR) - translocation of the endemic and threatened Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) on Norman Island <p>Birds</p> <ul style="list-style-type: none"> - 5 bird species restricted to the Puerto Rican Bank and the Lesser Antilles <p>Mammals</p> <ul style="list-style-type: none"> - 1 bat species (<i>Brachyphylla cavernarum</i>) endemic to the LA, Puerto Rico and Virgin Islands 	2	30	12.7
VGB-7 - Marine space	<ul style="list-style-type: none"> - Marine ecosystems: connectivity between coral reefs, seagrass beds and mangroves - 17 critically important mangrove sites identified in the BVI - Anegada coral reefs (77km²) encompass the Anegada Horseshoe Reef, the 3rd largest continuous reef in the Eastern Caribbean (63 km long). <p>Invertebrates</p> <ul style="list-style-type: none"> - 10 threatened coral species (2CR-2EN-6VU) <p>Fishes and sharks</p> <ul style="list-style-type: none"> - 13 threatened fishes (1CR-2EN-10VU) - 3 shark species that can occur in the BVI's waters (3VU) 	26		25.3

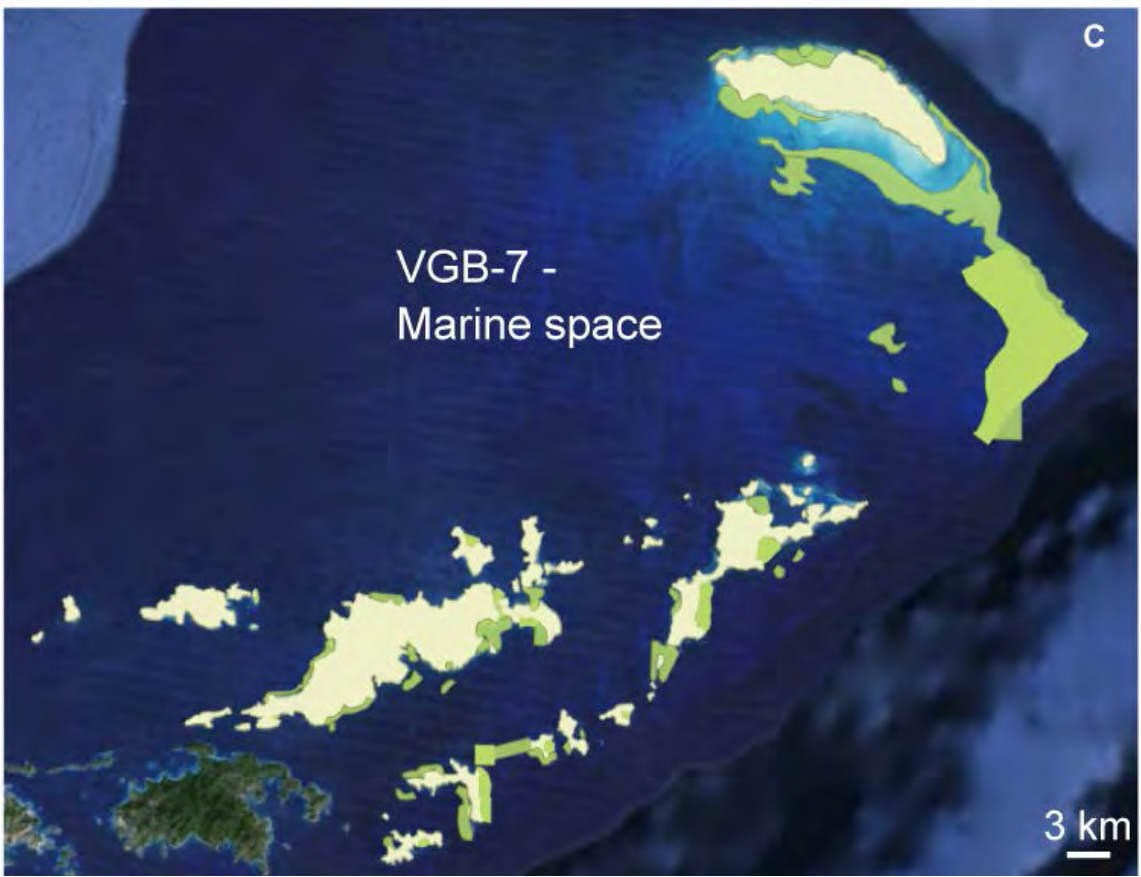


Figure 27 (cont.). Maps of the KBAs in the BVI (UKOT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
Turks and Caicos Islands				
<p>TCA-1 - Wetlands & Ramsar site</p>	<p>- Wetlands (26,700 ha) identified as a Nature Reserve and Ramsar site - Connectivity between wetlands and drier lands (uplands)</p> <p>Plants - 2 plant species strictly endemic to the TCI, including the threatened (<i>Spermacoce capillaris</i> -EN) - the variety of the Caicos Pine is endemic and vulnerable (<i>Pinus caribaea</i> var. <i>bahamensis</i> -VU)</p> <p>Reptiles - 5 species strictly endemic to the TCI, including the threatened Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - 4 subspecies endemic to the TCI - coastal areas are important foraging areas for Green, Hawksbill and Loggerhead sea turtles (1CR-2EN)</p> <p>Birds - 1 IBA - Ramsar site - vulnerable West Indian Whistling-duck (<i>Dendrocygna arborea</i>-VU) - 3 bird species endemic to the Bahamas and TCI archipelago (including <i>Vireo crassirostris</i>) - 1 bird species restricted to Bahamas-TCI archipelago and Lesser Antilles - congregation of 16 waterbird species, with particular high numbers of Least Sandpipers (<i>Calidris minutilla</i>)</p>	7	12	575.8
<p>TCA-2 - Marine ecosystems</p>	<p>Connectivity between coral reefs and seagrass beds - About 1,200 km² of coral reefs. TCI archipelago has one of the least damaged coral reef in the Caribbean region with a high diversity of corals. - A single barrier reef fringes the north coasts of the 6 islands of the Caicos Bank</p> <p>Invertebrates - 10 threatened coral species (including <i>Acropora cervicornis</i>, <i>Dendrogyra cylindrus</i>) (2CR-3EN-5VU)</p> <p>Fishes and sharks - 11 threatened fishes (including <i>Epinephelus striatus</i> and <i>Balistes vetula</i>) (3EN-8VU) and 3 threatened shark species (including <i>Sphyrna mokarran</i>) (1EN-2VU)</p> <p>Reptiles - 3 common sea turtles: Hawksbills, Green and Loggerhead sea turtles (1CR-2EN)</p>	26		927.0

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
TCA-3 - Providenciales	<p>Plants - 2 threatened species: <i>Guaiacum sanctum</i> and <i>Swietenia mahagoni</i> (2EN)</p> <p>Reptiles - 3 species strictly endemic to the TCI (<i>Leiocephalus psammodomus</i>, <i>Trophidophis greenwayii</i>), including the threatened Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR)</p> <p>Birds - important overwintering and nesting areas for bird populations - presence of the birds species <i>Margarops fuscatus</i> with a restricted distribution</p>	3	4	38.8
TCA-4 - North Caicos & Water-Pine Cays	<p>Plants - 2 threatened plant species strictly endemic to the TCI: <i>Encyclia caicensis</i> (EN), <i>Stenandrium carolinae</i> (CR)</p> <p>Invertebrates - endemic Remipeda</p> <p>Reptiles - 5 species strictly endemic to the TCI (with <i>Leiocephalus psammodomus</i>), including the threatened Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - Highas Cay: nesting areas for Green turtles (EN)</p> <p>Birds - 1 IBA - Wade's Green-Teren Hill - 3 bird species endemic to the Bahamas and TCI archipelago (including <i>Vireo crassirostris</i>) - 1 bird species restricted to Bahamas-TCI archipelago and Lesser Antilles</p> <p>Mammals - occurrence of the Guinea pig (<i>Hutia</i> sp.) endemic to the TCI and Bahamas (presence to confirm)</p>	4	12	45.6
TCA-5 - Middle Caicos	<p>Invertebrates - prawn endemic to TCI, Bahamas archipelago and Cuba (<i>Barbouria cubensis</i>)</p> <p>Reptiles - 3 species strictly endemic to the TCI (including <i>Aristelliger hechti</i>)</p> <p>Birds - 2 IBAs - Middle Caicos Forest & Fish Ponds and Crossing Place Trail - Middle Caicos - vulnerable West Indian Whistling-duck (<i>Dendrocygna arborea</i>-VU) - 3 bird species endemic to the Bahamas and TCI</p>	1	8	22.8

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
	<p>archipelago (including <i>Vireo crassirostris</i>)</p> <ul style="list-style-type: none"> - 1 bird species restricted to Bahamas-TCI archipelago and Lesser Antilles - Big pond: congregation of Caribbean flamingos <p>Mammals</p> <ul style="list-style-type: none"> - Conch Bar cave system: important habitat for bat populations 			

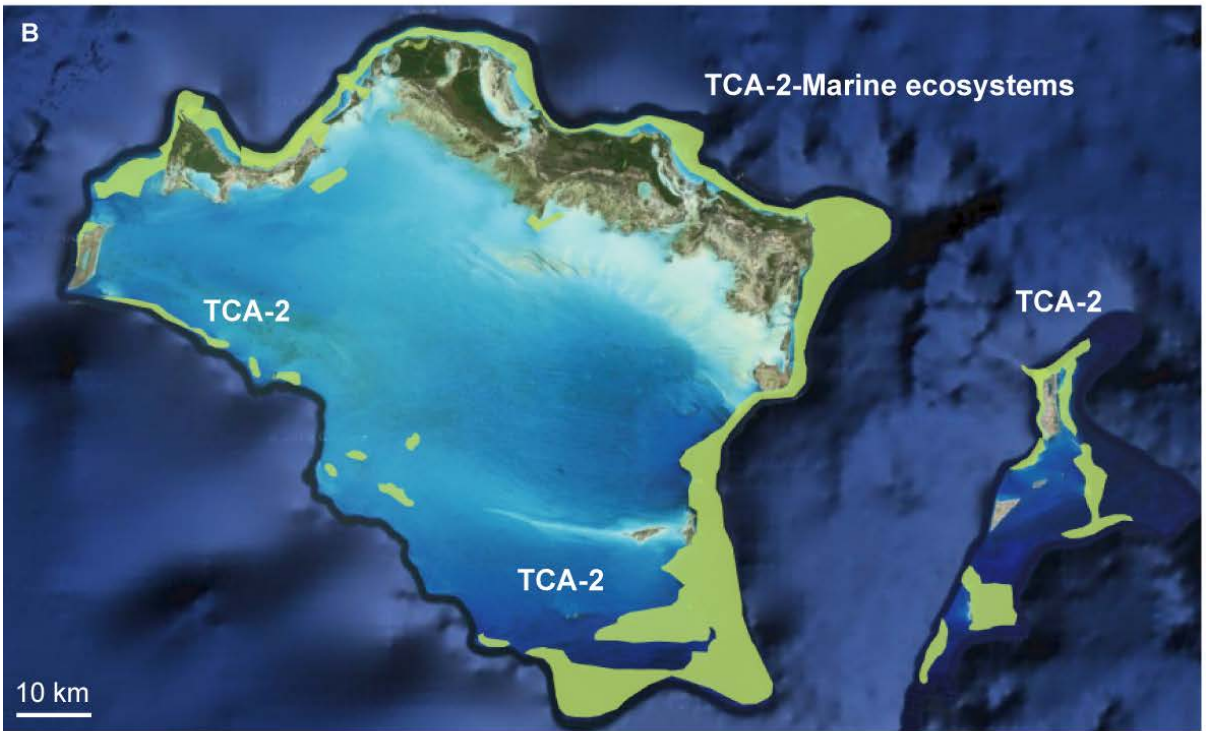
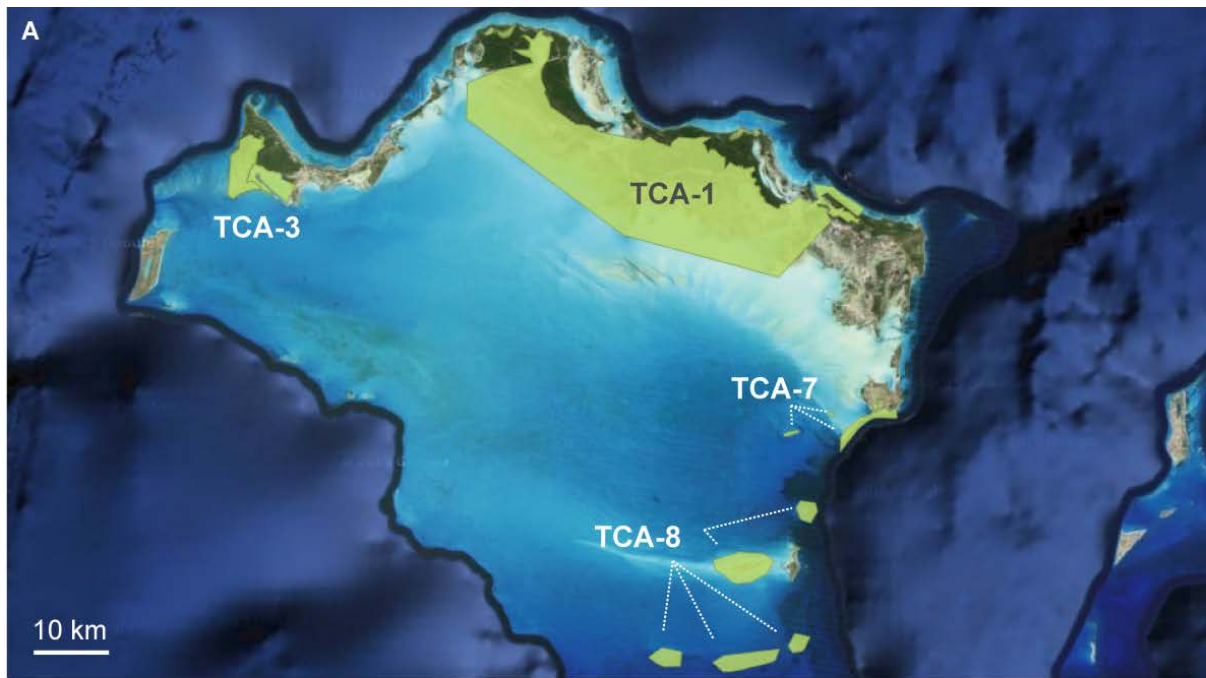


Figure 28. Maps of KBAs in the TCI (UK OT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
TCA-6 - East Caicos	<p>Plants - 10 plant species strictly endemic to the TCI, including 6 threatened species (1CR-5EN)</p> <p>Invertebrates - prawn endemic to TCI, Bahamas archipelago and Cuba (<i>Barbouria cubensis</i>)</p> <p>Reptiles - important nesting sites for Hawksbill and Green turtles (1CR-1EN) - 3 reptiles endemic to the TCI (including <i>Leiocephalus psammodromus</i>) - 2 reptiles restricted to the TCI and Bahamas (including <i>Chilabothrus chrysogaster</i>)</p> <p>Birds - 1 IBA - East Caicos - vulnerable West Indian Whistling-duck (<i>Dendrocygna arborea</i>-VU) - 3 bird species endemic to the Bahamas and TCI archipelago (including <i>Calliphlox evelynae</i>) - 1 bird species restricted to TCI archipelago and Cuba (<i>Corvus nasicus</i>) - congregation of 8 waterbirds and 6 seabird species, including populations of Caribbean flamingos</p> <p>Mammals - cave system: important habitat for bat populations</p>	9	20	305.0
TCA-7 - South Caicos	<p>Plants - 1 plant species strictly endemic to the TCI, <i>Limonium bahamense</i> (EN)</p> <p>Reptiles - threatened and endemic Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - presence of juvenile Green sea turtles (EN)</p>	3	2	11.0
TCA-8 - Southern Cays	<p>Reptiles - 3 reptiles endemic to the TCI, including the threatened and endemic Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - important foraging and nesting areas for Hawksbills (Fish Cay) and Green Turtles (Fish Cay, Ambergris Cay) (1CR-1EN)</p> <p>Birds - 1 IBA - Caicos Bank Southern Cays - congregation of 5 seabird species, including populations of <i>Sterna dougallii</i>, <i>S. anaethetus</i>, <i>Anous stolidus</i></p>	3	3	59.7

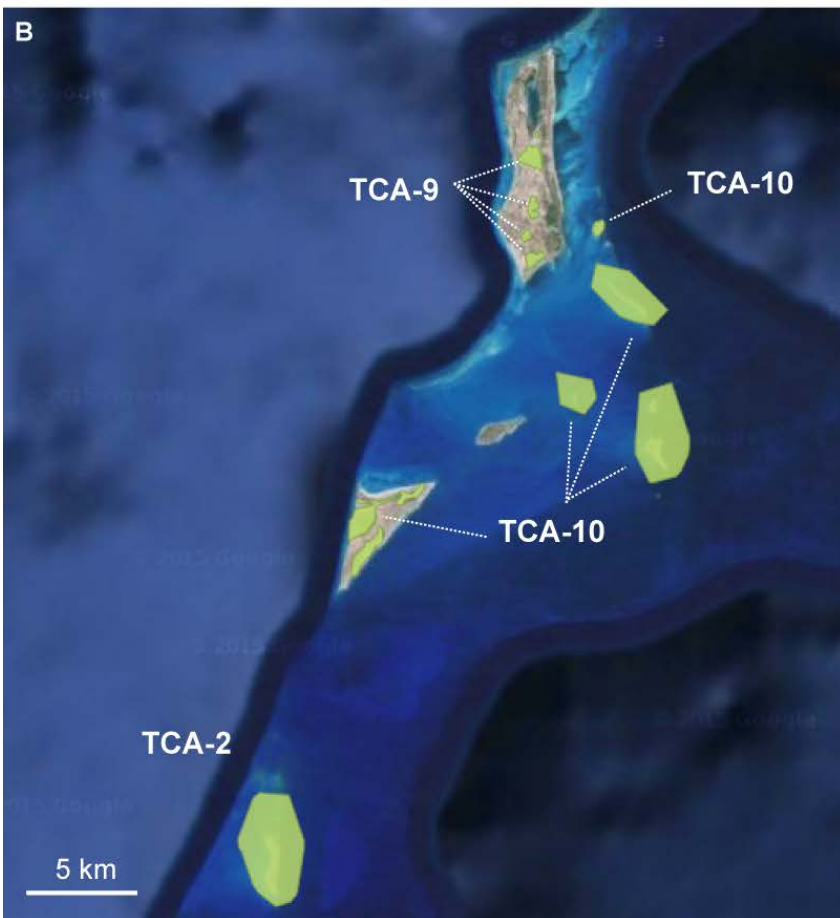
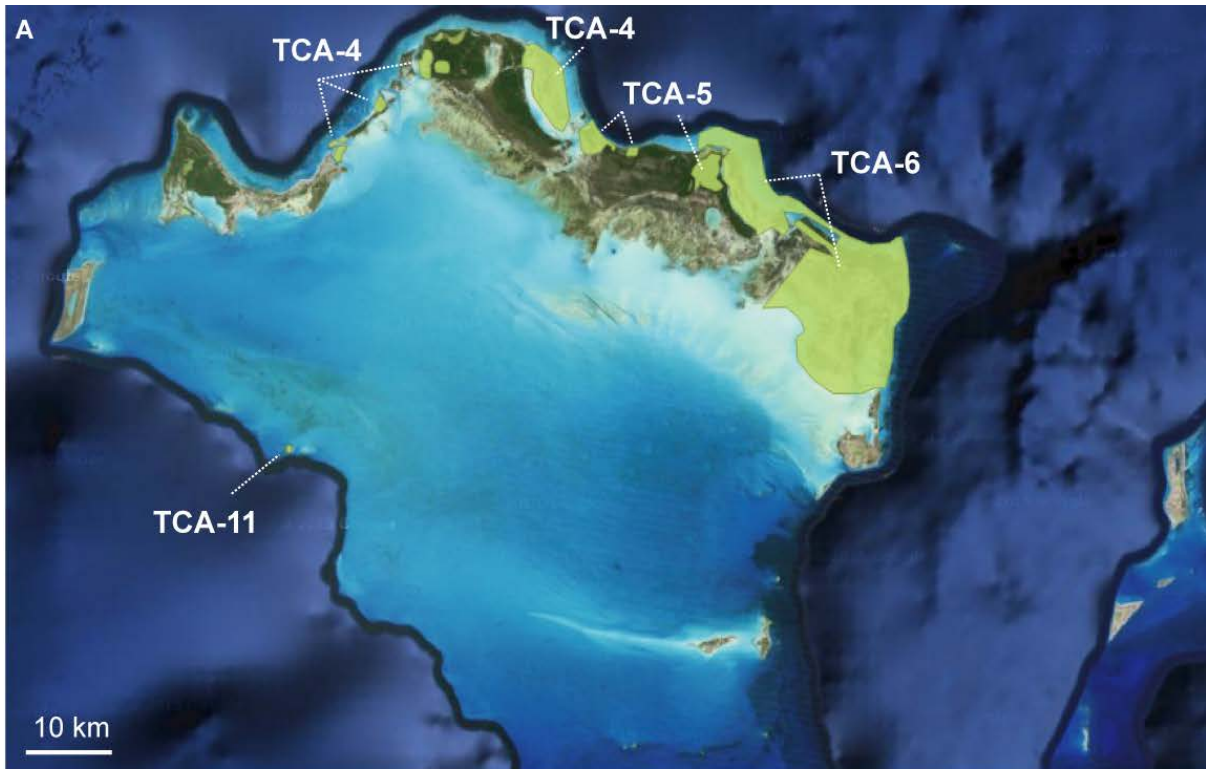


Figure 28 (cont.) Maps of KBAs in the TCI (UK OT).

Table 19 (cont.)

KBAs	Geographic Scope and Trigger species	Threatened species	Endemic species	Area (km ²)
TCA-9 - Grand Turk	<p>Plants - 1 plant species strictly endemic to the TCI, <i>Limonium bahamense</i> (EN)</p> <p>Reptiles - 1 reptile restricted to the TCI and Bahamas (including <i>Chilabothrus chrysogaster</i>) - Gibb's Cay : important nesting areas for Hawksbills and Green Turtles (1CR-1EN)</p> <p>Birds - 1 IBA - Grand Turk Salinas and Shores - congregation of 9 waterbirds and 5 seabird species, including populations of Stilt Sandpipers (<i>Calidris himantopus</i>)</p>	3	2	1.6
TCA-10 - Turks Bank & Salt Cay	<p>Plants - 1 plant species strictly endemic to the TCI, <i>Limonium bahamense</i> (EN)</p> <p>Reptiles - 2 reptiles endemic to the TCI, including the threatened and endemic Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - nesting areas for Green (Salt Cay Creek and Salinas, Big Sand Cay, Cotton Cay and Eastern Cay), Hawksbill (Salt Cay Creek, Big Sand Cay and Salinas) and Loggerhead (Salt Cay Creek and Salinas) sea turtles (1CR-2EN)</p> <p>Birds - 2 IBAs - Turks Bank Seabird Cays & Salt Cay Creek and Salinas - congregation of 5 seabird species, including populations of <i>Leucophaeus atricilla</i> and <i>Sterna anaethetus</i> - 3 bird species endemic to the Bahamas and TCI archipelago (including <i>Calliphlox evelynae</i>)</p>	5	6	28.6
TCA-11 - French, Bush and Seal Cays	<p>Reptiles - 2 reptiles endemic to the TCI: <i>Aristelliger hechti</i> and the threatened and endemic Turks & Caicos Rock Iguana (<i>Cyclura carinata</i>-CR) - Indian Cay and Bush Cay (Seal Cays): nesting areas for Green and Hawksbill sea turtles (1CR-1EN)</p>	3	2	0.4

4.3.4. Candidate KBAs

Sites that do not meet the criteria for their identification as KBAs are considered as **Candidate KBAs** (see Section 4.3 for the Methodology).

A total of **18 KBAs** have been highlighted in the 15 EU overseas entities, covering an area of about 180 km² (Table 20). These candidate KBAs can be used as important scientific background information to guide territorial biodiversity conservation strategy.

The list of Candidate KBAs, as well as their criteria, are provided in Table 20 and the corresponding maps in App. 4.

Table 20. Candidate Key Biodiversity Areas (KBAs) for the 15 European OCTs and ORs in the Caribbean region.

Candidate KBAs	Geographic Scope and Trigger species	Area (km ²)
Aruba		
ABW-Candidate KBA1	- Wetlands of California Duinen. Important areas for bird populations. - Sites part of the 16 terrestrial areas proposed to be included in the PA network.	2.1
ABW-Candidate KBA2	- Reptiles: 1 sea turtle nesting site: Arashi beach for Leatherback and Hawksbill sea turtles.	1.5 ha
ABW-Candidate KBA3	- Wetlands Saliña Malmok, Saliña di Palmbeach and mangrove areas near the airport. Important areas for bird populations. - Sites part of the 16 terrestrial areas proposed to be included in the PA network.	10.3
Curaçao		
CUW-Candidate KBA1 - Muizenberg	- important freshwater resources for species. - Ramsar site - 1 IBA (trigger bird population of the Caribbean coot, <i>Fulica caribaea</i> - Least Concern)	1.1
CUW-Candidate KBA2 - Northern grassland habitats	- Important habitat for bird populations that are inter connected through ecological corridors between these grassland sites over the island. - Habitat for the Cottontail hare subspecies (<i>Silvilagus floridensis nigronuchalis</i>).	2.2
CUW-Candidate KBA3 - Southern grassland habitats	- Important habitat for bird populations that are inter connected through ecological corridors between these grassland sites over the island. - Habitat for the Cottontail hare subspecies (<i>Silvilagus floridensis nigronuchalis</i>).	7.7
St. Eustatius		
STA-Candidate KBA1	- Plants: Scattered sites with the endangered <i>Guaiaicum officinale</i>	1 ha

Candidate KBAs	Geographic Scope and Trigger species	Area (km ²)
St.Maarten		
SXM-Candidate KBA1	- Mullet Bay and Dawn Bay: Sea turtle nesting areas for <i>Eretmochelys imbricata</i> , <i>Chelonia mydas</i> and <i>Dermochelys coriacea</i> (1CR-1EN-1VU) (less than 10 nesting tracks/ year / sp.)	3.3 ha
Guadeloupe		
GLP-Candidate KBA1	- ponds of Marie-Galante: more than 600 ponds occur over the island - ecological corridor for bird populations, significant ecosystem services for catering and rain water collecting	25.4
GLP-Candidate KBA2	- nesting areas for sea turtles (with less than 10 nesting tracks / species / year) - Grande-Terre : Anse Laborde, la Chapelle, Pointe de la fontaine (Anse Bertrand), Anse des Salines (Pointe des Châteaux), la Grotte et KM7 (St François) - Basse-Terre : plage des Galets Rouge et Anse Machette (CSV), Leroux (Deshaies), Petite Anse et Malendure (Bouillante), La Madeleine et Anse du Grand Marigot (CAV) - Other islands : Plage a Galets (La Désirade), Feuillère et Anse Canot (Marie-Galante), Ilet Cabrit, Pain de Sucre (Les Saintes)	90.3
GLP-Candidate KBA3	Marine ecosystems of the Atlantic coast. Fringin coral reefs with threatened coral and fish species. Lack of knowledge due to the difficulty of access to the sampling sites.	20.4
Montserrat		
MSR-Candidate KBA1	Streams - 8 streams: Pelican ghaut, Bottomless ghaut, Soldier ghaut, Bunkum river, Runaway ghaut, Nantes river, Farm river, Daly River. - Occurrence of freshwater species (Molly fishes, crayfish)	0.6
Cayman Islands		
CYM-Candidate KBA1	Sea turtles nesting sites Grand Cayman - 5 candidate nesting sites for Loggerheads: South Sound West, Barefoot Gardens, Morritts, Little Spotts, Bat Cave Little Cayman - 1 candidate nesting sites for Green sea turtles: Jacksons	0.3
Turks and Caicos Islands		
TCA-Candidate KBA1	West Caicos (Lake Catherine Nature Reserve) - wetlands - important area for bird populations	3.8
TCA-Candidate KBA2	- Pumpkin Bluff Pond Nature Reserve and Three Mary Cays Sanctuary - important area for bird populations - rare plant species	1.9
TCA-Candidate KBA3	South Caicos - Bell Sound Nature Reserve - occurrence of threatened sea turtles and juvenile sharks	12.4
TCA-Candidate KBA4	Grand Turk eastern side - South Creek National Park - wetlands - important area for bird populations	0.9
TCA-Candidate KBA5	- Cotton Cay (private island) - important area for bird populations	1.7

4.4. Conservation Corridors

- **Ecological corridors between KBAs**

Ecological corridors have been identified between the identified terrestrial, coastal and marine KBAs.

A total of **43 ecological corridors** have been highlighted among the 15 EU overseas entities over an area of 2,720 km². Marine and terrestrial corridors are indicated Table 21 and Figure 29.

Table 21. Corridors connecting KBAs for the 15 EU OCTs and ORs in the Caribbean region.

Corridors	Geographic Scope	KBAs connected	Trigger species	Area (km ²)
Aruba				
ABW-Corridor 1	Marine	ABW-2 and ABW-3	- Marine mammals: 2 coastal areas are reported as marine mammal nursery, breeding and resting habitats (mostly for dolphins) (Aruba Marine Mammal Foundation, Directie Natuur en Milieu Aruba, pers. com. 2016). - species occurring in these areas in important aggregations: <i>Stenella frontalis</i> , <i>S. longirostris</i> , <i>Tursiops truncatus</i> , <i>Steno bredanensis</i> .	15.5
ABW-Corridor 2	Marine	ABW-2	- Marine area between the 2 proposed MPAs located along the eastern side of the island. - Corridor important for the larval dispersal of threatened coral, invertebrates and fish species.	10.7
ABW-Corridor 3	Marine	ABW-2 and ABW-4	- Birds: Important bird feeding area located on the northern part of the island for a diverse array of bird species including Terns (Adrian del Nevo, pers. com. 2015).	21.9
Bonaire				
BON-Corridor 1-coastal area	Marine	BON-1 and BON-4	- Sea turtles: ecological corridor for Hawksbills (CR) between nesting areas located on Klein Bonaire and the mainland.	2.8
Curaçao				
CUW-Corridor 1-Coastal area	Marine	CUW-1 and 5	- Marine mammals: Occurrence of Humpback whales (<i>Megaptera novaeangliae</i>) and other cetacean species over a deep area that is located relatively close to the shore along the mid-eastern coast.	22.1
CUW-Corridor 2-Terrestrial area	Terrestrial	CUW-2 and 6	- Bird populations: ecological corridors for bird populations between IBAs and grassland habitats.	55.1

Corridors	Geographic Scope	KBAs connected	Trigger species	Area (km ²)
CUW-Corridor 3- Terrestrial area	Terrestrial	CUW-1	- Bat populations: corridor for bat species between the cave network.	5.6
Saba				
SAB-Corridor 1 - Terrestrial areas	Terrestrial	SAB-1 - 2 - 3	Corridor for bird populations between National Park, Mt Scenery Reserve and the middle island areas (Parish Hill, Great Hill, Bottom - Bud mountain)	2.8
St Eustatius				
STA-corridor 1- Terrestrial areas	Terrestrial	STA-1	Terrestrial areas between KBA-STA-1. - Important ecological corridor for bird populations between the 2 IBAs. Corridor for endemic and endangered reptile species.	3.9
St Maarten				
SXM-corridor 1- Marine areas	Marine areas	SXM-1 and 2	Corridor for threatened fishes, sharks, rays and sea turtles. Connectivity between seagrass beds and coral reefs. Regional connectivity between MPAs on the Dutch and French entities.	96.3
SXM-MAF-corridor 2- Simpson Bay Lagoon	Marine and coastal	SXM-3	Simpson Bay Lagoon: inland lagoon shared by France and the Kingdom of the Netherlands. - Important corridor for threatened marine species (sea turtles, fishes).Breeding and foraging area for bird populations.	7.4
SXM-MAF-corridor 3- Hill tops	Terrestrial areas	SXM-5 - MAF-3 / MAF-corridor3	Terrestrial corridor between the hilltops of the French and Dutch side. Ecological corridor for plants, invertebrates, birds and bat populations.	1.7
St Martin				
MAF-corridor 1- Marine areas	Marine areas	MAF1 - SXM 1-2 / SXM-corridor 1	Corridor for threatened fishes, sharks, rays and sea turtles. Connectivity between seagrass beds and coral reefs. Regional connectivity between MPAs on the Dutch and French entities.	2.7
SXM-MAF-corridor 2- Simpson Bay Lagoon	Marine and coastal	MAF 1-3 / SXM-3 / SXM-corridor 2	Simpson Bay Lagoon: inland lagoon shared by France and the Kingdom of the Netherlands. - Important corridor for threatened marine species (sea turtles, fishes).Breeding and foraging area for bird populations.	7.4

Corridors	Geographic Scope	KBAs connected	Trigger species	Area (km ²)
SXM-MAF corridor 3- Hill tops	Terrestrial	MAF-3/ SXM-5 / SXM- corridor 3	Terrestrial corridor between the hilltops of the French and Dutch side. Ecological corridor for plants, invertebrates, birds and bat populations.	1.7
St Barthélemy				
BLM-corridor 1- Marine areas	Marine	BLM-1	Marine corridor, connectivity between seagrass beds and coral reefs.	69.8
Martinique				
MTQ-corridor 1- Unesco buffer zones & river basins	Terrestrial and riverine	MTQ-1-3 & MTQ-4-5	<ul style="list-style-type: none"> - Buffer zones between proposed Unesco sites - River basins (catchment areas) - Carbet, Grande Rivière, Rivière Case Navire, Rivière Blanche, Rivière Lézarde (parties aval et médiane), Fond Bourlet Rivers: ecological corridors and important biological reservoirs (Decree for rivers ranking) - Presence of invertebrates (<i>Guinotia dentata</i>, <i>Argia concinna</i>, <i>Protoneura ailsa</i>) and fishes (<i>Eleotris perniger</i>) endemic to the LA. - Presence of the Killifish, <i>Anablepsoides cryptocallus</i>, endemic to Martinique 	249.2
MTQ-corridor 2- tropical forest	Terrestrial	MTQ-3	<ul style="list-style-type: none"> - Ecological corridor between the 2 areas of the KBA MTQ-3. - Tropical rainforest, important corridor for bird and bat species. 	35.9
MTQ-corridor 3- Marine ecosystems	Marine	MTQ-3 - MTQ-5-6-7	<ul style="list-style-type: none"> - Connectivity between seagrass beds and coral reefs - Threatened coral species and fishes 	95.5
Guadeloupe				
GLP-corridor 1- Forest areas	Terrestrial	GLP-1	<ul style="list-style-type: none"> - important ecological corridor for the population of the endemic Guadeloupe woodpecker (<i>Melanerpes herminieri</i>) between Mont Caraïbes forests and forests of Basse-Terre. - corridor for populations of the Guadeloupe woodpecker (<i>M. herminieri</i>) between the forests of Basse-Terre and the wetland areas located in the north of Basse-Terre and the Rivière Salée. 	77.8
GLP-corridor 2- Rivers	Riverine ecosystem	GLP-1-3-4-5	<ul style="list-style-type: none"> - ecological corridor for amphidromous species (invertebrates, fishes) - connectivity between marine and freshwater ecosystems 	20.3

Corridors	Geographic Scope	KBAs connected	Trigger species	Area (km ²)
GLP-corridor 3- Connectivity between wetlands	Terrestrial	GLP-2	- corridor between wetlands of northern Grande-Terre (Port Louis) for bird populations	22.4
GLP-corridor 4- Bird populations	Terrestrial/ Marine	GLP-7 8	- Corridor for migrating Procellariidae bird species (<i>Puffinus puffinus</i> , <i>P. gravis</i> , <i>Calonectris diomedea</i>)	64.2
Anguilla				
AIA-corridor 1- Marine areas	Marine	AIA1-2-5	- Connectivity between coral reefs and seagrass beds - Threatened fish species - Foraging areas for threatened sea turtles and seabirds	216.8
AIA-corridor 2- Ponds	Terrestrial	AIA3	- Connectivity for bird populations between the ponds	12.3
AIA-corridor 3- Marine areas	Marine	AIA1	- Important marine foraging areas for seabirds.	1150.3
Montserrat				
MSR-corridor 1- Dry forests	Terrestrial	MSR 1-2-3-4	- Connectivity for bird and bat populations between - Ecological corridor between dry forests	21.9
Cayman Islands				
CYM-corridor 1- Dry forests	Terrestrial Grand Cayman	CYM-1	- Corridor for bird and reptile populations	14.8
CYM-corridor 2- Dry forests	Terrestrial Little Cayman	CYM-3	- Corridor for bird and reptile populations	10.2
CYM-corridor 3- Dry forests	Terrestrial Cayman Brac	CYM-5	- Corridor for bird and reptile populations	4.0
CYM-corridor 4- Marine ecosystems	Marine Grand Cayman	CYM-2-7	- Connectivity for threatened fishes, sharks and rays, sea turtles - Larval dispersion of threatened coral species, invertebrates, fishes	26.4
CYM-corridor 5- Marine ecosystems	Marine Little Cayman	CYM-4-7	- Connectivity for threatened fishes, sharks and rays, sea turtles - Larval dispersion of threatened coral species, invertebrates, fishes	7.9
CYM-corridor 6- Marine ecosystems	Marine Cayman Brac	CYM-6-7	- Connectivity for threatened fishes, sharks and rays, sea turtles - Larval dispersion of threatened coral species, invertebrates, fishes	11.0
British Virgin Islands				
VGB-corridor 1- Anegada	Terrestrial	VGB-1	- Terrestrial corridor between IBAs and IPAs, important connectivity for plants, invertebrates, reptile and bird species.	9.5
VGB-corridor 2- Virgin Gorda	Terrestrial	VGB-2	- important connectivity for plants, invertebrates, reptile and bird species.	12.3

Corridors	Geographic Scope	KBAs connected	Trigger species	Area (km ²)
VGB-corridor 3- Tortola	Terrestrial	VGB-4	- important connectivity for plants, invertebrates, reptile, bird and mammal species.	4.4
VGB-corridor 4- Seabirds foraging areas	Marine	VGB-7	- foraging tracks and migration patterns for seabirds (Magnificent Frigatebirds, Roseate Terns)	249.5
Turks and Caicos Islands				
TCA-corridor 1- North Caicos & Water-Pine Cays	Terrestrial	TCA-4	- ecological corridor for bird and bat populations - presence of endemic reptile and plant species	53.2
TCA-corridor 2- West Caicos	Terrestrial	Cand. KBA	- ecological corridor for bird and bat populations	3.3
TCA-corridor 3- Providenciales	Terrestrial	TCA-3	- ecological corridor for bird and bat populations	7.7
TCA-corridor 4- Middle Caicos	Terrestrial	TCA-5	- ecological corridor for bird and bat populations - occurrence of endemic reptile species	4.3
TCA-corridor 5- South Caicos	Terrestrial	TCA-7	- presence of rare plant species - ecological corridor for bird populations	6.9
TCA-corridor 6- Grand Turk	Terrestrial	TCA-9	- ecological corridor for bird populations	1.9

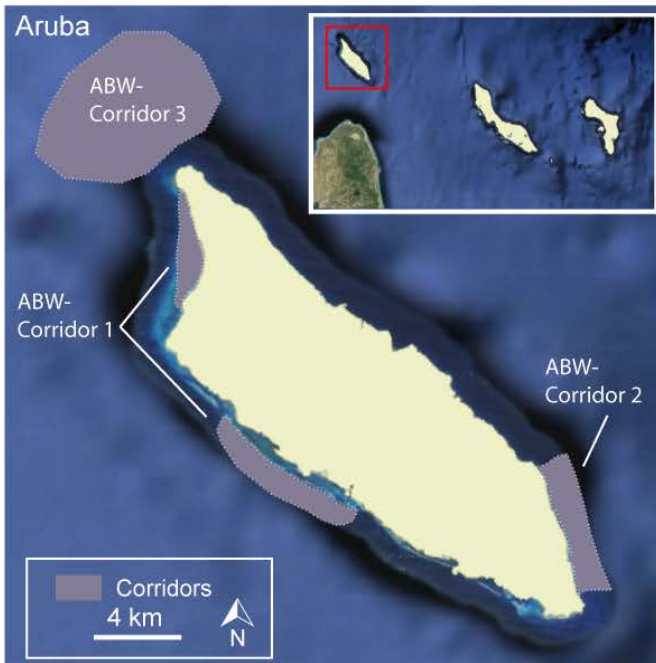


Figure 29.
Ecological corridors identified in the 15 EU overseas entities.

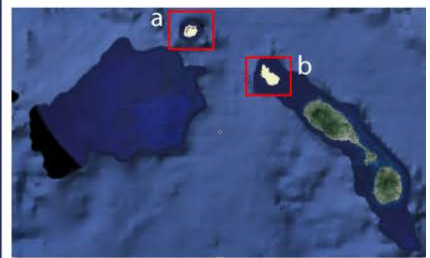
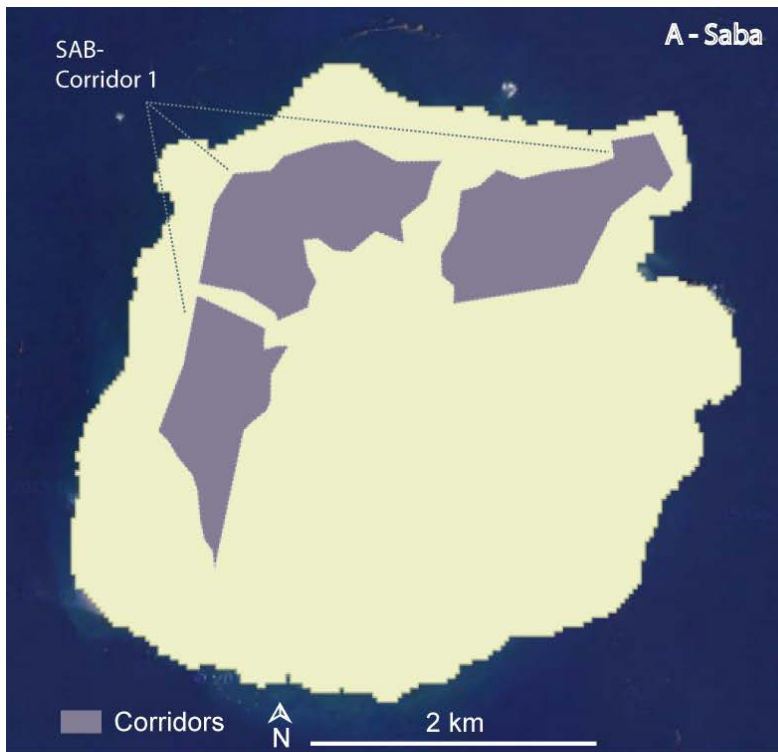


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

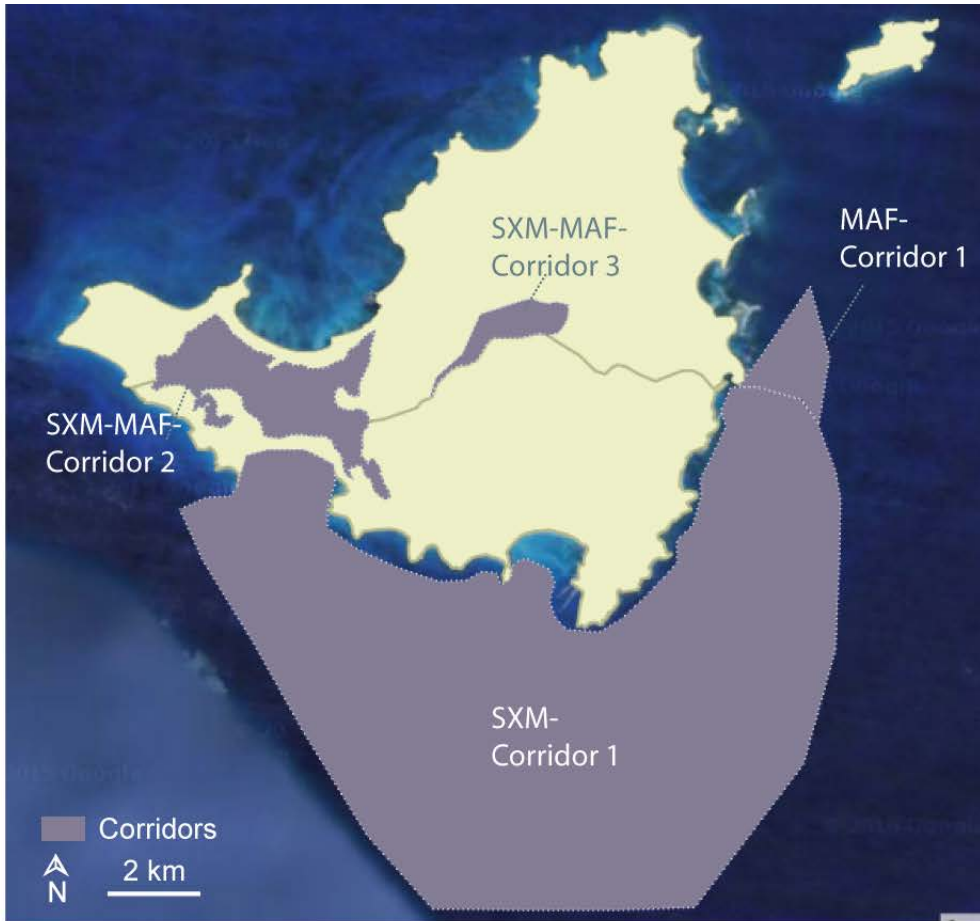


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

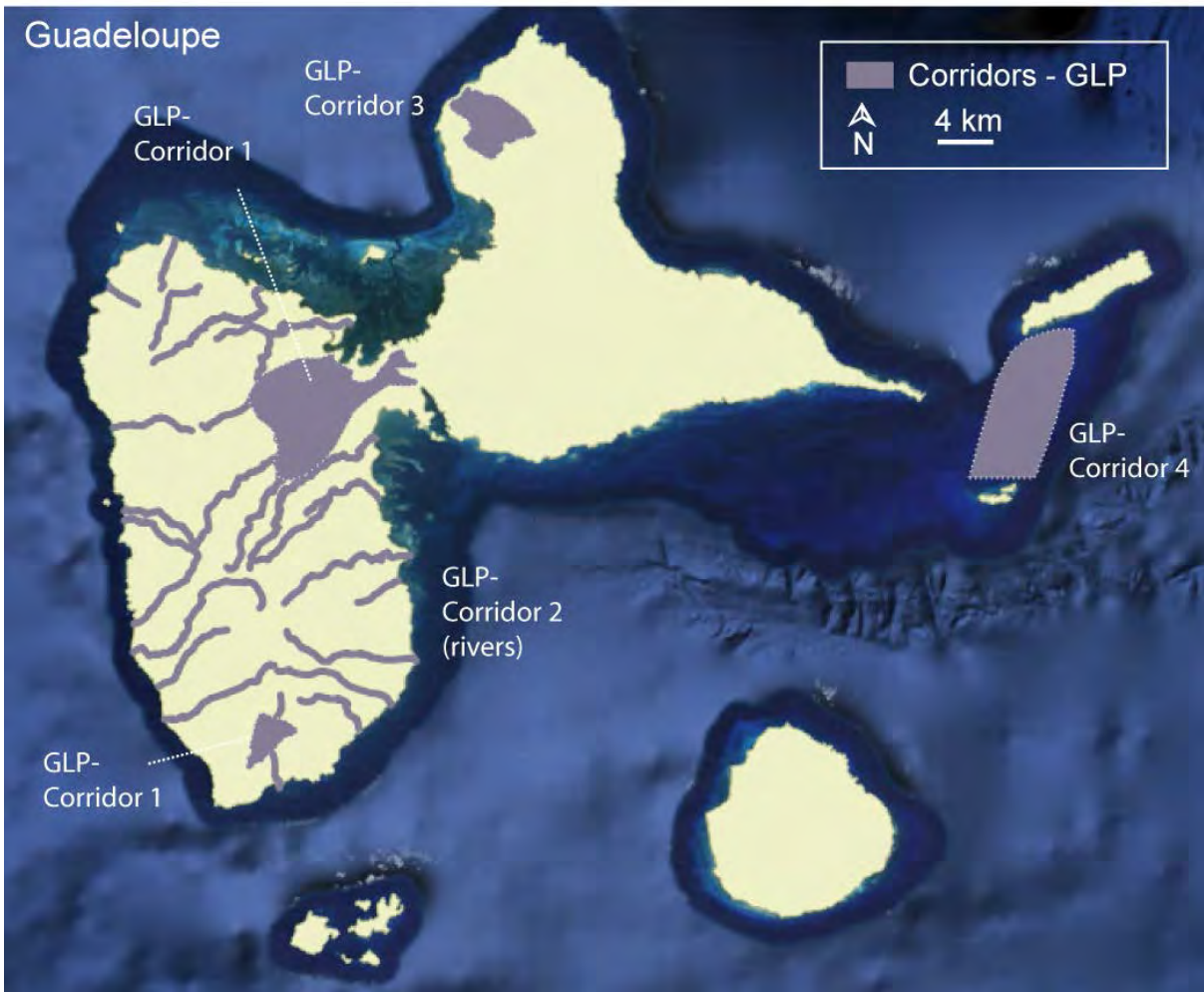


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

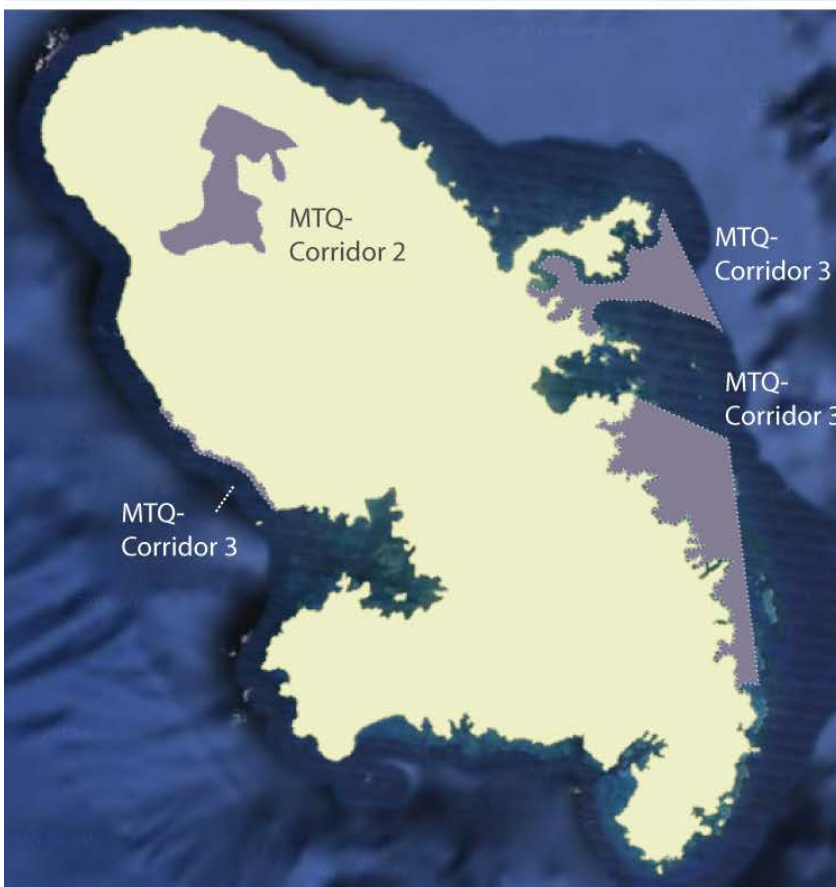


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

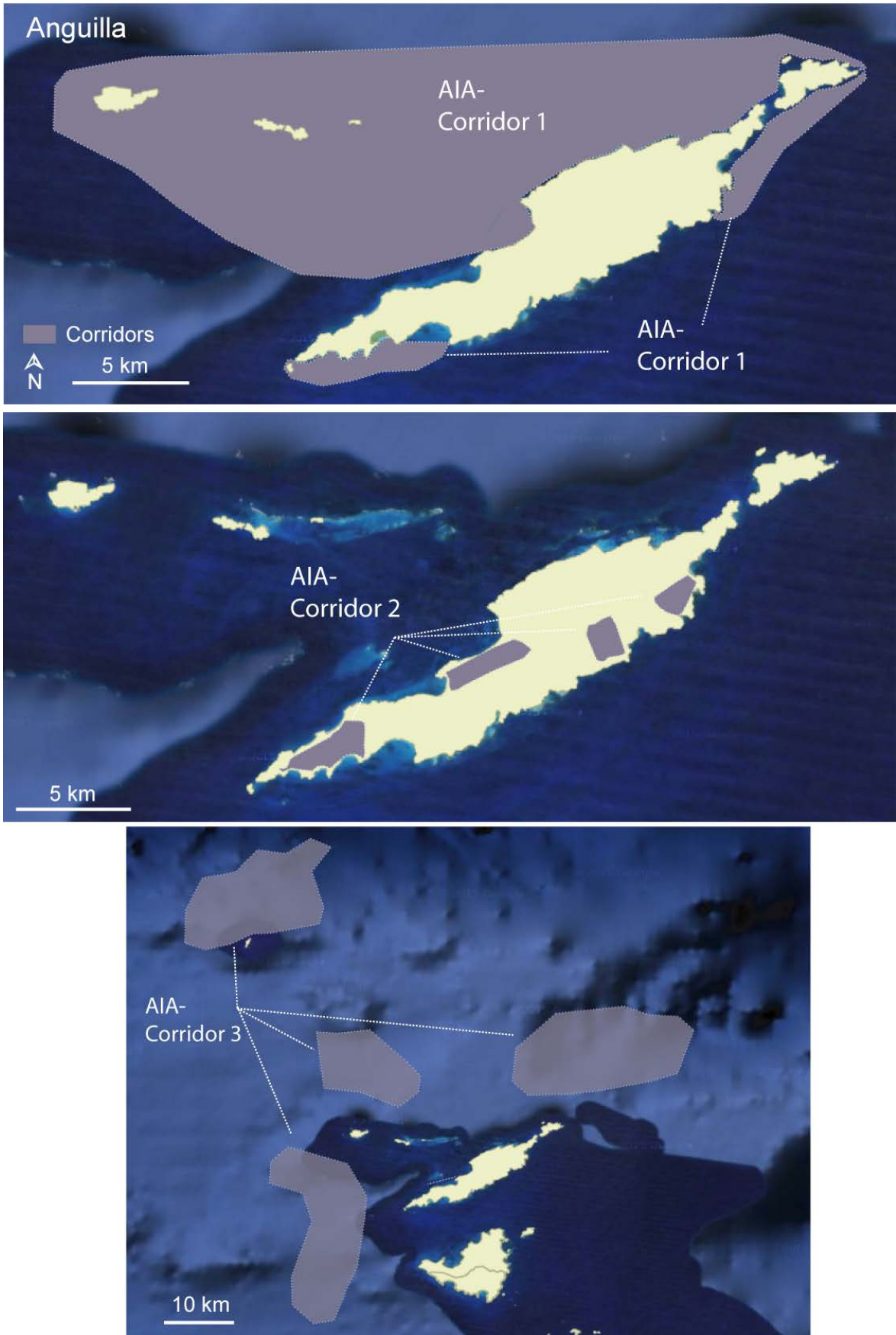


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

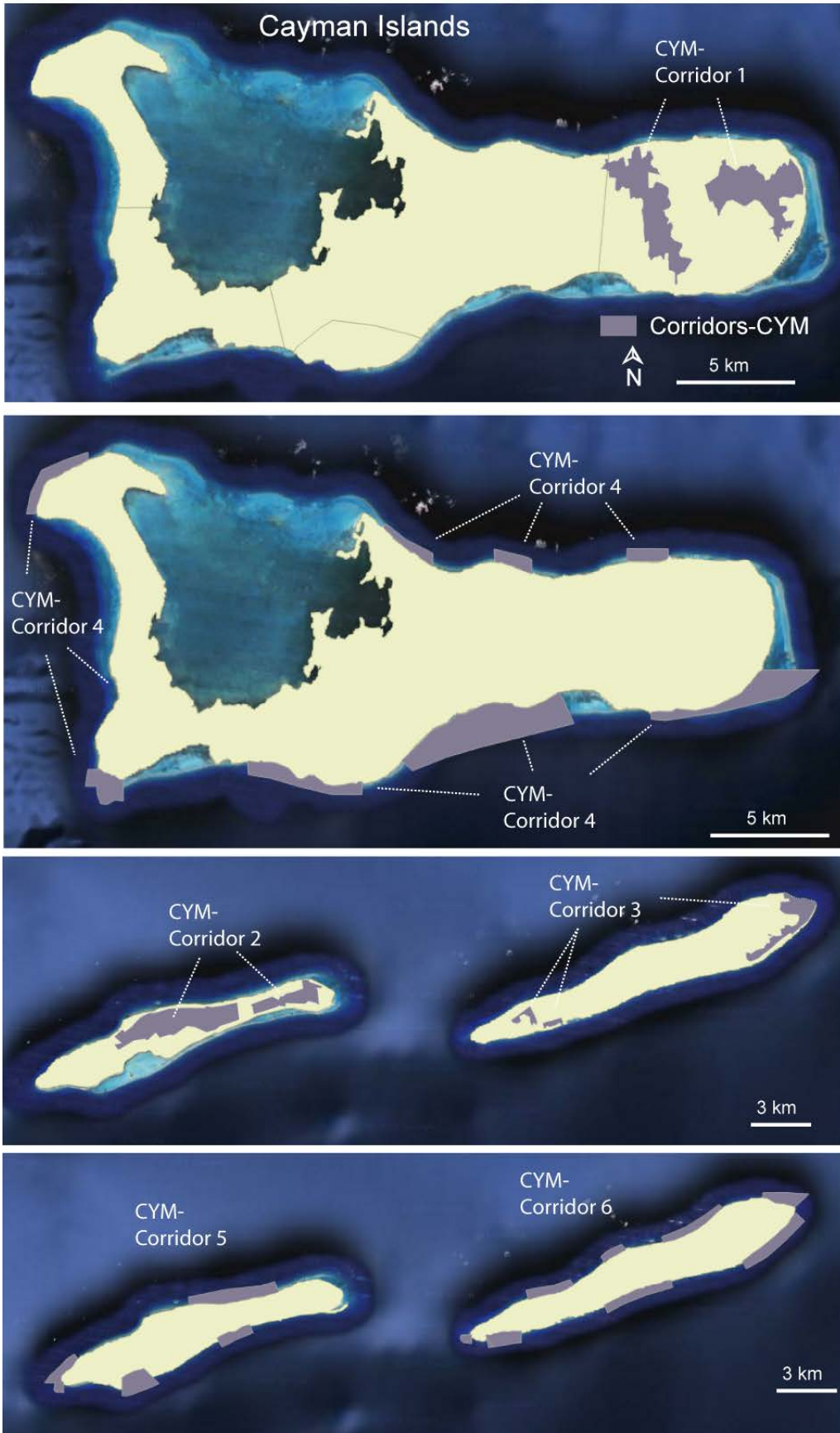


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

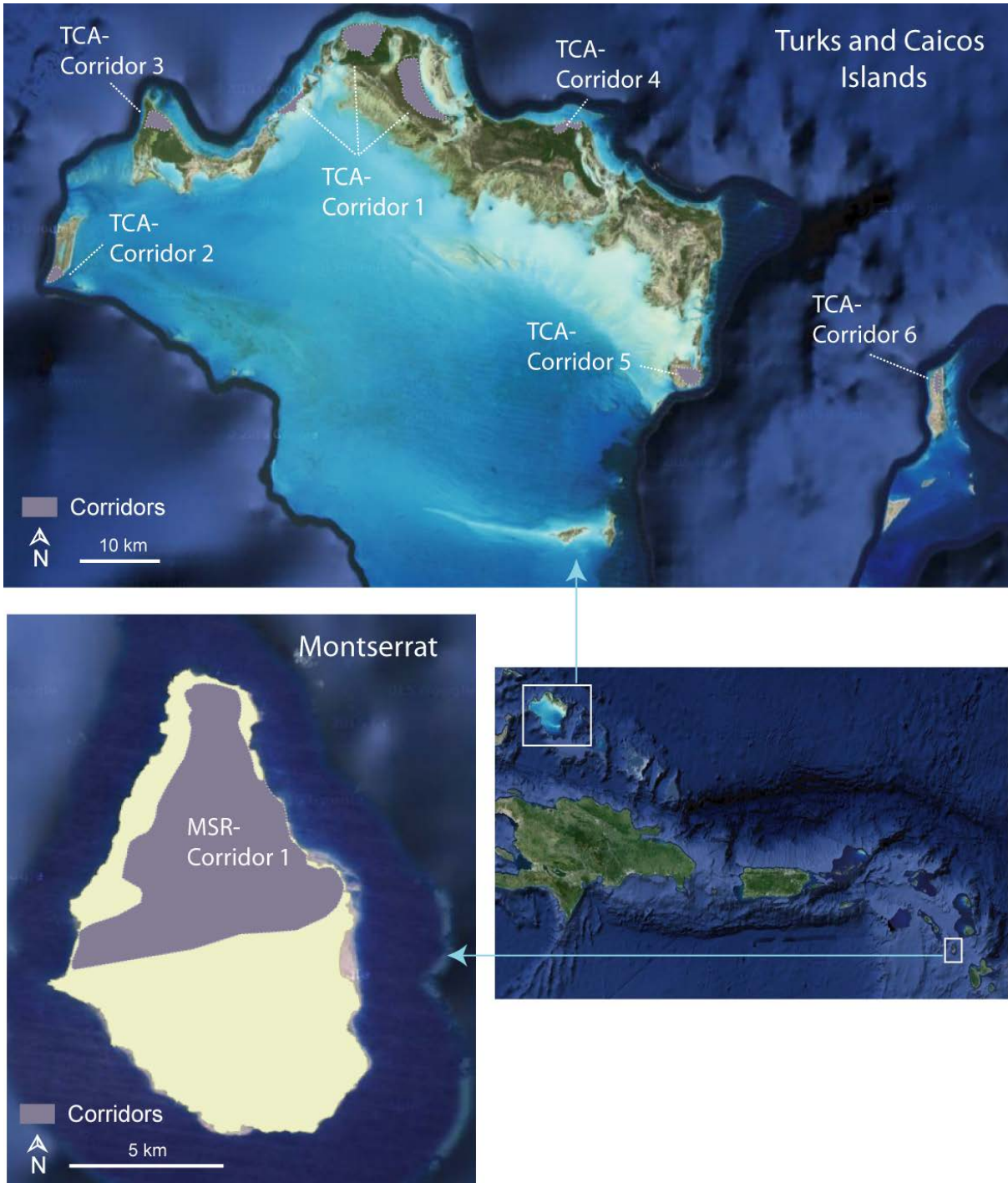


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

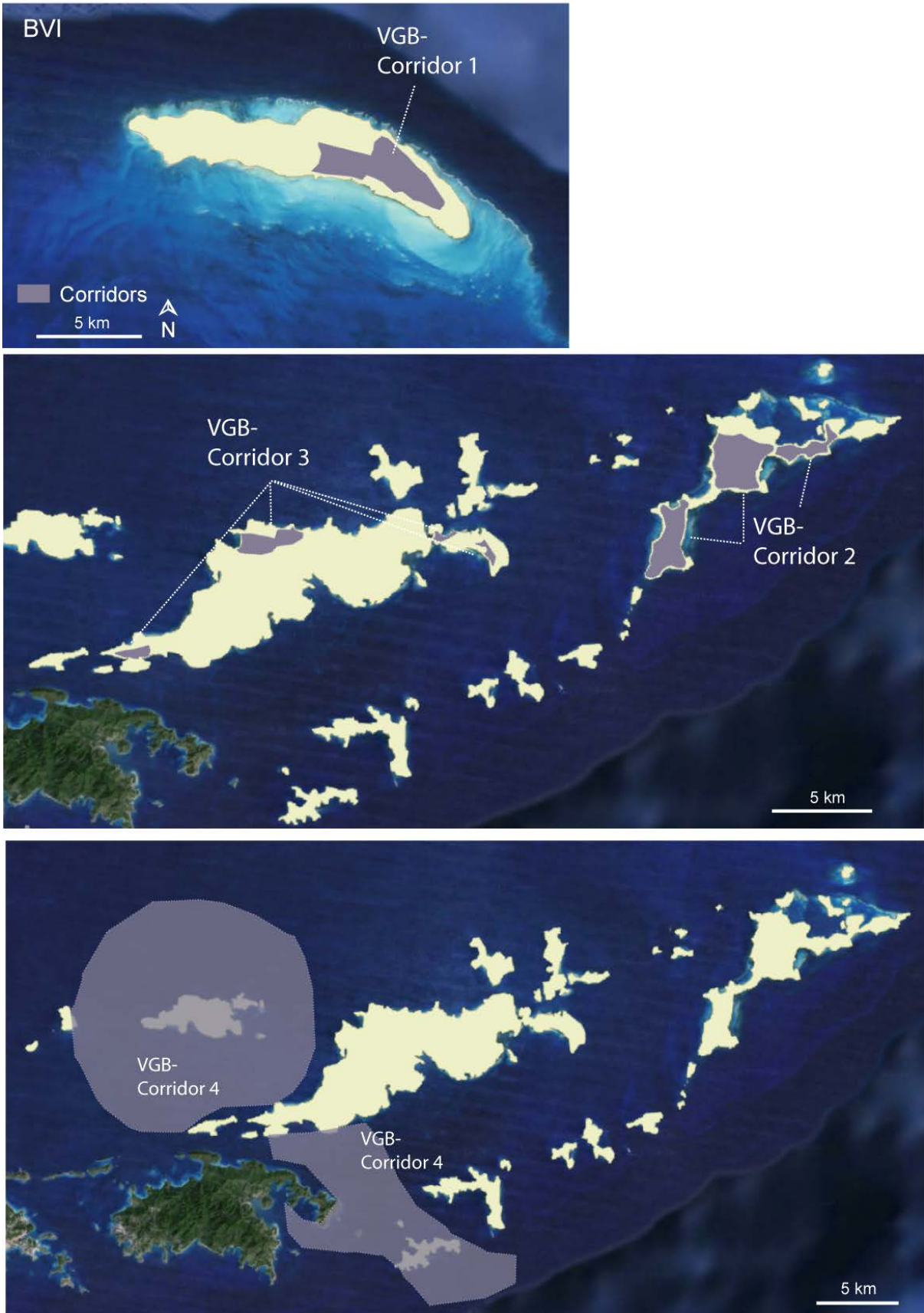


Figure 29. Ecological corridors identified in the 15 EU overseas entities.

- **Regional ecological corridors**

Regional ecological corridors are highlighted following the migration patterns of bird species, sea turtles, bat species and marine mammals and with the dispersion of larvae of marine species (i.e. corals, fishes, marine invertebrates).

The following sections summarize some data information regarding pelagic larvae dispersion and migration patterns of sea turtles, birds, and marine mammals.

It provides some examples of connectivity across the Wider Caribbean Region and particularly focuses on the connectivity among the 15 EU overseas entities.

Pelagic larval dispersion

Long-lived pelagic larvae have the ability to disperse over long distances thus maintaining an ecological connectivity across wide geographic area and contributing to the persistence of populations. For example, larvae of the coral species *Montastrea cavernosa* disperse over distances up to 3000 km, thus enabling a genetic connectivity of coral populations across the Eastern Caribbean islands and more generally in the Wider Caribbean Region (Becking and de Bakker 2015, Nunes et al. 2009).

In the Caribbean Region, Schill et al. (2015) modeled coral larvae dispersal patterns based on coral spawning events from 2008-2011, regional coral reef data (Millennium Coral Reef Mapping Project) and ocean current data. The model outputs (applying a 30-day pelagic larval duration and 20% mortality rate) showed coral populations connectivity across the region and more particularly among the Lesser and Greater Antilles (Cayman Islands) (Fig. 30) (Schill et al. 2015).

This research highlighted that approx. 77% of coral reefs that showed a high connectivity value are not included in the existing regional MPA network (Schill et al. 2015).

Saba Bank: an important ecological connectivity to the Wider Caribbean region

Saba Bank is considered as an important Caribbean reef habitat due to its large extent and its upstream position relative to the northern Antilles and Meso-American Barrier Reef (Hoetjes and Wulf 2012). This offshore Bank is affected by the Antilles Current that flows east to west along the southern parts of the Antilles Ridge, turning to the northwest at higher latitudes.

Long-lived invertebrate larvae (e.g. spiny lobster, Queen conch, sponges, corals, fishes) are therefore dispersed from the Saba Bank to the Eastern Caribbean islands (Saba, St. Eustatius, St. Marteen, Jamaica) and to the Wider Caribbean region (Becking and de Bakker 2015). Indeed, a genetic connectivity of *Montastraea cavernosa* coral populations has been highlighted between the Saba Bank and the Flower Garden Banks (over 3000 km) (Becking and de Bakker 2015).

Moreover, the Saba Bank gathers a unique genetic diversity (i.e. uniqueness of particular haplotypes) indicating that the Bank can function as an important buffer for the region as either a source of larvae or a sink of diversity to downstream marine ecosystems (Becking and de Bakker 2015, Lundvall 2008).

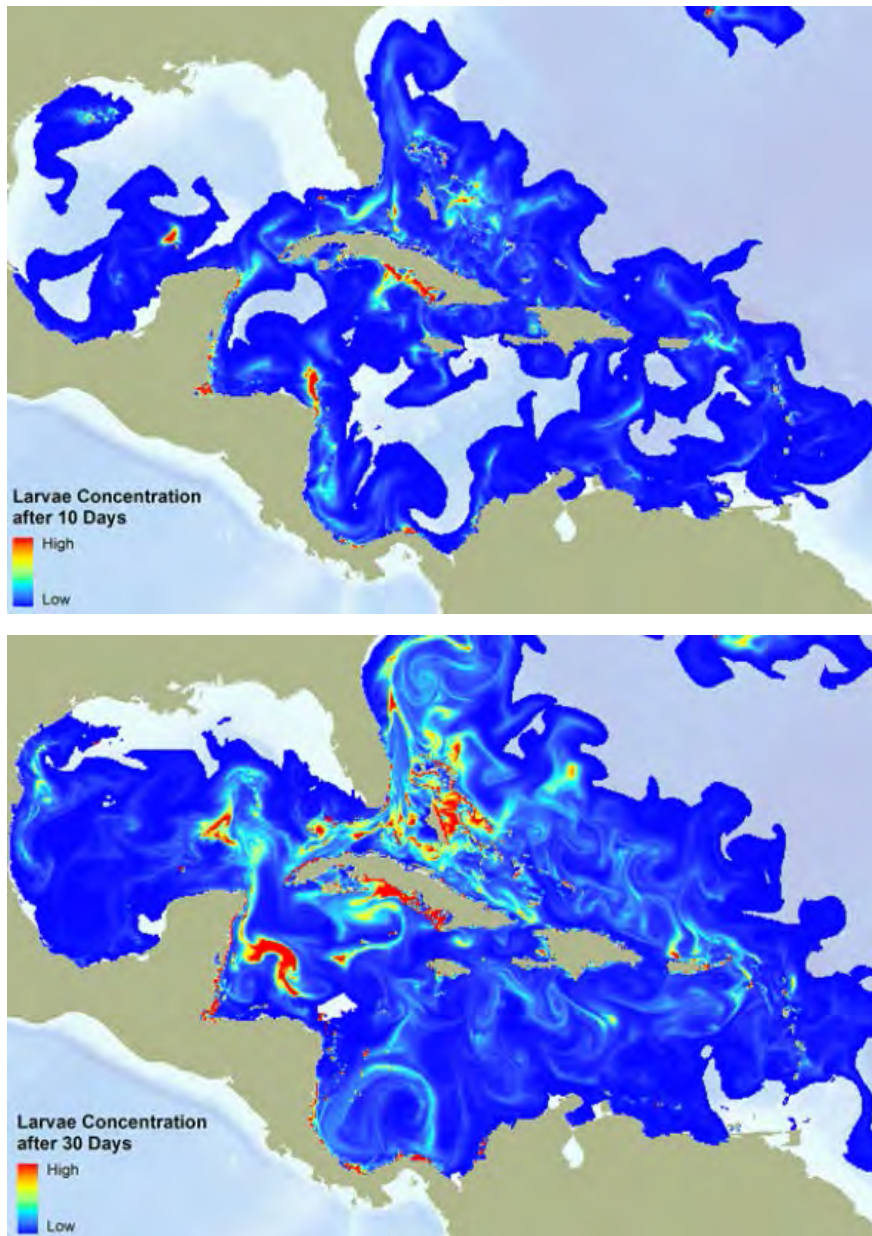


Figure 30. Model of coral spawning events (10-day and 30-day larvae duration) in the Caribbean region (Schill et al. 2015).

Sea turtles

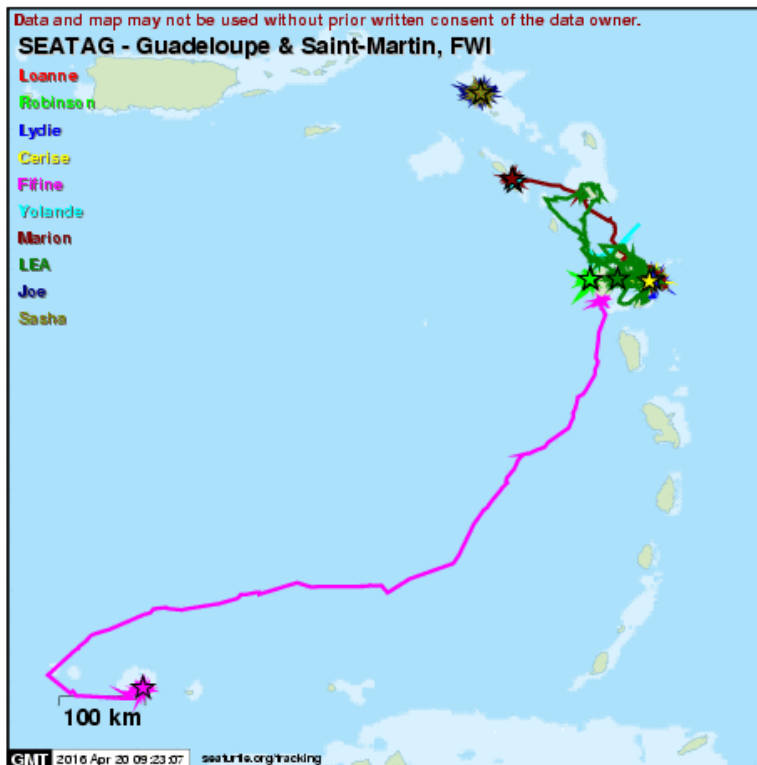
Sea turtles are migratory species that travel between their foraging and nesting grounds. Six out of the 7 sea turtles occur in the WCR with 3 of them frequently observed while foraging and nesting in the Eastern Caribbean islands: the Hawksbill (*Eretmochelys imbricata*-CR), the Green turtle (*Chelonia mydas*-EN) and the Leatherback (*Dermochelys coriacea*-VU).

Numerous studies use satellite tracking devices and encompass multiple spatial and temporal scales in order to provide comprehensive insights on the ecology, habitat use and migration patterns of these threatened marine migrants.

The following maps give some examples of satellite tracking projects conducted among the 15 EU overseas entities and provide information on the migration corridors across the WCR.

- In **Guadeloupe** and **Saint-Martin**, the SeaTag project (2013 to 2015) is a project of the Réseau Tortues Marines Guadeloupe in partnership with ONCFS, the Guadeloupean's NGOs TiTé and Kap'Natiral, the Réserve Naturelle of St-Martin and the CNRS.

In Guadeloupe, three nesting sea turtles (Fifine, Léa and Marion) showed migratory pathways from Guadeloupe to St Kitts-Nevis, Montserrat-Antigua and one of them reached the coasts off Venezuela (Fig. 31).



In St-Martin, the 2 immature Green turtles remain within their foraging area between St-Martin and Anguilla (Fig. 31) (SeaTag project 2013-2015, <http://www.seaturtle.org/>).

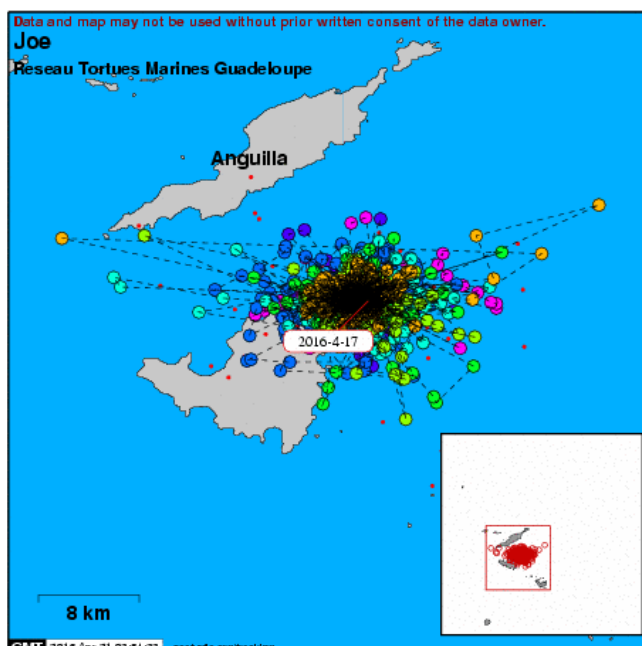


Figure 31. Migratory pathways of Green sea turtles tagged in (a) Guadeloupe and in St-Martin (b) (SeaTag project, <http://www.seaturtle.org/>).

- In **Martinique**, satellite tags were set on 20 immature Green turtles (Chambault et al. publication in revision, CNRS-IPHC). Among these sea turtles, 14 Green turtles remained within Martinique waters and showed a high fidelity to their foraging grounds. Five sea turtles migrated to the Caribbean region, southern America and Florida with one of them that crossed the Atlantic to the African coasts (Fig. 32) (Chambault et al., Institut Pluridisciplinaire Hubert Curien (IPHC), CNRS).

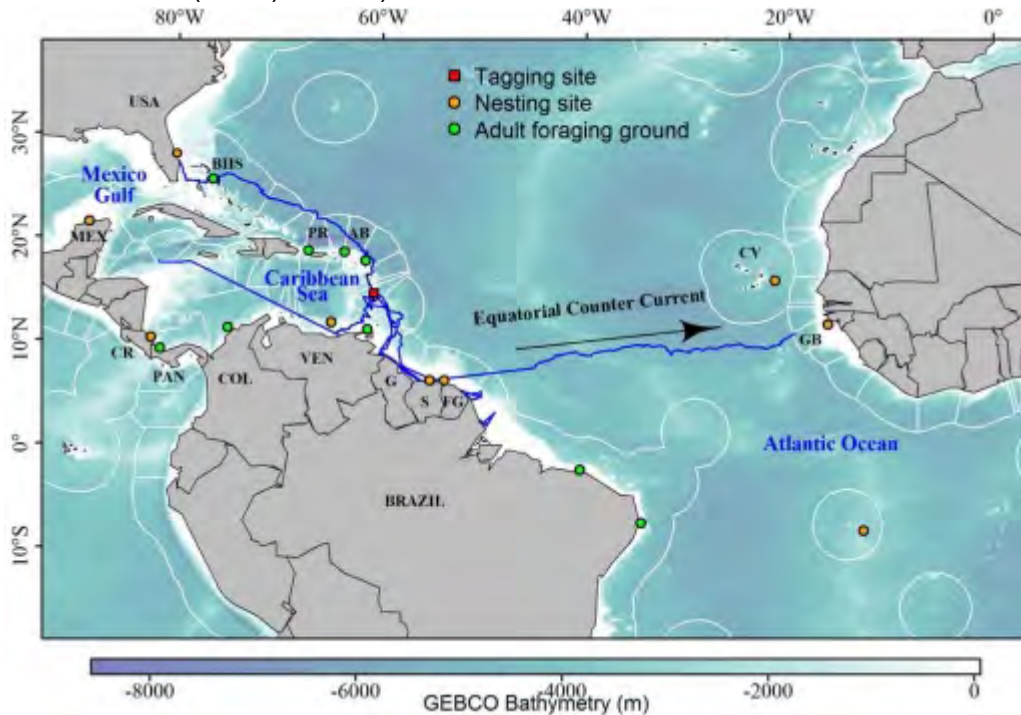


Figure 32. Migration pathway of 5 Green turtles tagged in Martinique.

- In **St.Eustatius**, a female hawksbill tagged after nesting on Zeelandia beach swam over 700 km in 40 days towards St-Barthélemy, St-Maarten/St-Martin, Anguilla and the US Virgin Islands, showing a strong connectivity between the northern Lesser Antilles and Virgin Islands (Fig. 33) (Harrison 2006, STENAPA, <http://www.seaturtle.org/>).

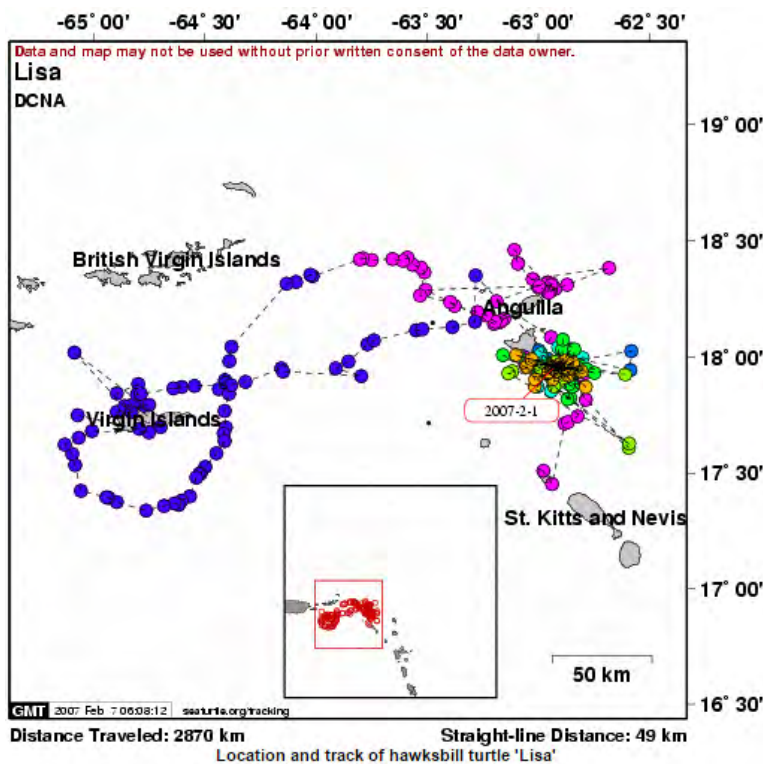
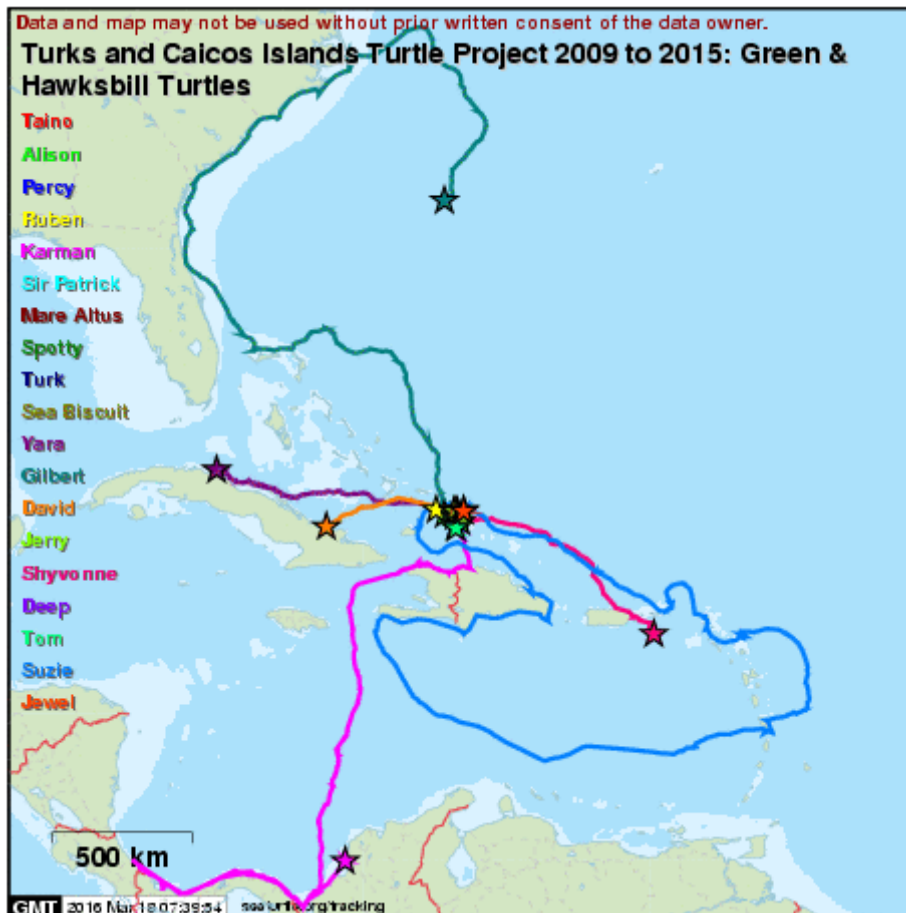


Figure 33. Migration pathway of an Hawksbill sea turtle tagged in St. Eustatius (Harrison 2006, STENAPA, <http://www.seaturtle.org/>).

- The **TCI Turtle Project** was a research collaboration between the TCI Department of Environment and Maritime Affairs (DEMA), the Marine Conservation Society, the Marine Turtle Research Group at the University of Exeter Cornwall Campus, the School for Field Studies and the Amanyara Resort. The satellite tracking of Green and Hawksbill sea turtles showed a high fidelity for all the Hawksbill turtles within the TCI's waters that provide year-round foraging habitat for locally breeding and foraging adult hawksbill turtles (Fig. 34) (Stringell et al. 2015).

The tracked adult and subadult green turtles appear to occur on a seasonal pattern in the TCI waters and to travel between the TCI, the Lesser and Greater Antilles (i.e. Dominican Republic, Cuba) and to Central America and northern America (Richardson et al. 2010, Stringell et al. 2015, <http://www.seaturtle.org/>). Among those tagged turtles, the adult green turtle Suzie showed a migration pattern of about 6,000 km between the Greater and Lesser Antilles (Fig. 34) (Richardson et al. 2010).



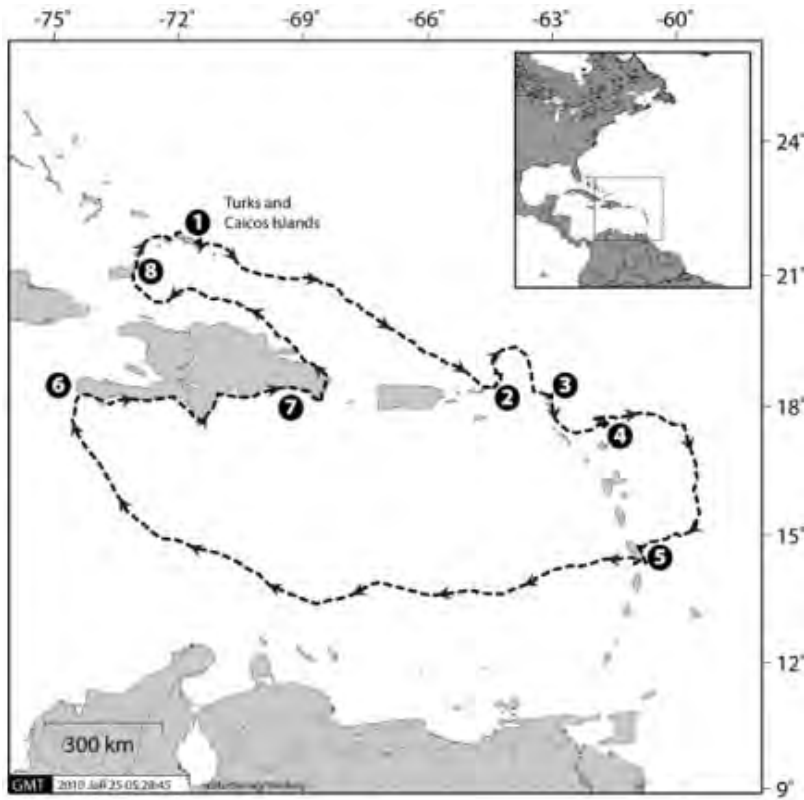
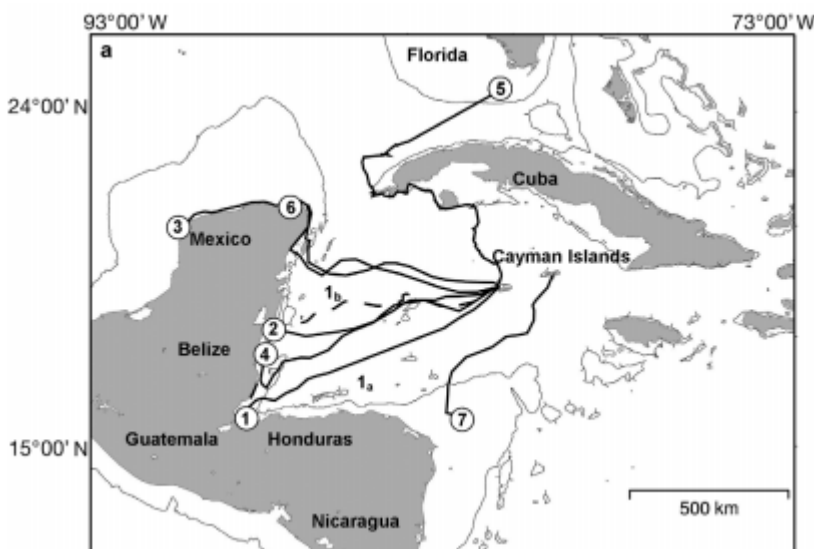


Figure 34. TCI Turtle Project: (a) Green turtles migration pathways from the TCI to the Caribbean region and Northern Atlantic, (b) Suzie's green turtle migration path.

- In the **Cayman Islands**, nesting sea turtles have been tagged from Grand Cayman to their foraging areas in Nicaragua for loggerheads and to Guatemala and between Belize and Mexico for the 2 adult green turtles (Fig. 35) (Blumenthal et al. 2006).

Genetic analyses performed on sea turtles reveal that young hawksbills that occur in the waters of the **Cayman Islands** territory were born in distant parts of the Caribbean region (Central America, Cuba, Lesser Antilles) and migrate overseas when they mature (Blumenthal et al. 2010a).



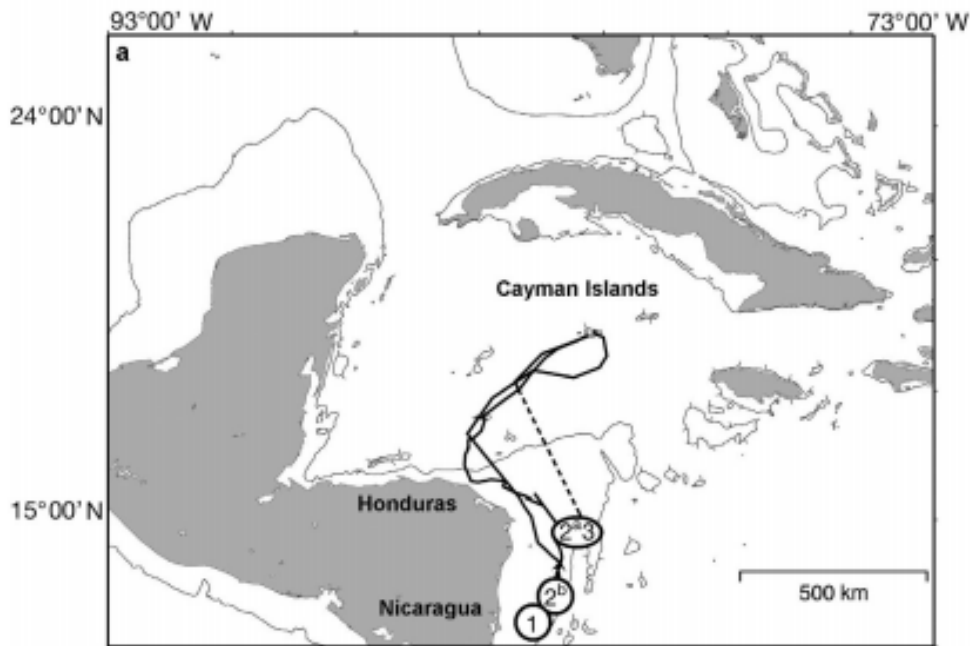


Figure 35. Map of (a) Green and (b) Loggerhead sea turtles migration between Cayman Islands and Central America (Blumenthal et al. 2006, Cayman Islands DoE, Marine Turtle Satellite Tracking Project, <http://www.seaturtle.org>)

In **Bonaire**, each year during the nesting season, the local NGO Sea Turtle Conservation Bonaire monitors sea turtles migration patterns using satellite transmitters (data loggers collecting GPS positions and depth information) in order to study their feeding and breeding areas.

A satellite-tracking program of 24 sea turtles breeding showed a strong connectivity across the Caribbean region for green, hawksbill and loggerhead sea turtles from Bonaire island to

ABC islands, Venezuela's coasts, Panama, Nicaragua, Mexico, Cuba, Dominican Rep., Puerto Rico, Virgin Islands (Fig. 36) (Stapleton et al. 2013).

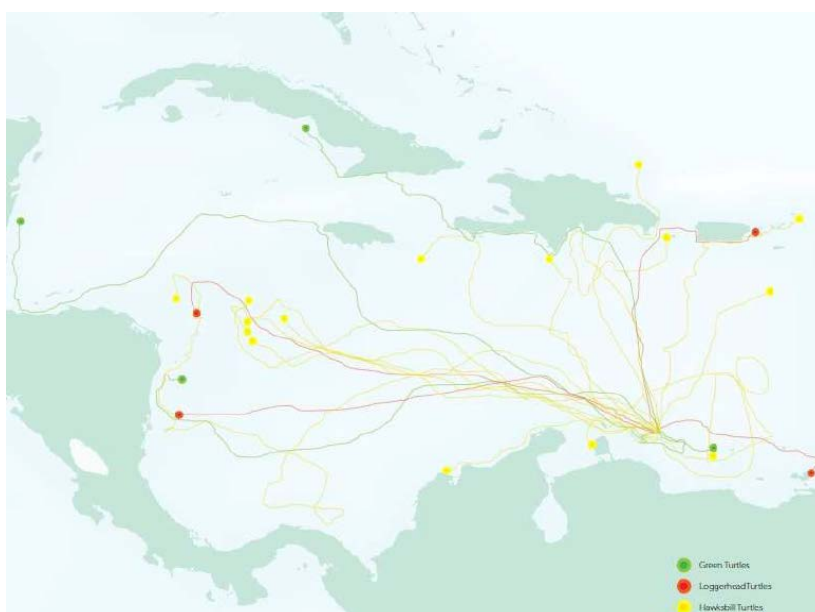


Figure 36. Map of the migration patterns of sea turtles tracked in 2013 from Bonaire island (Stapleton et al. 2013, Sea Turtle Conservation Bonaire)

For example, a post-nesting female hawksbill turtle was satellite-tracked in 2013 from Bonaire to Honduras. The turtle passed through six national territorial waters to reach a general area proven to be important foraging grounds for Bonaire breeding turtles. The waters between Nicaragua, Honduras and Colombia has proven to be of great importance as foraging areas for sea turtles breeding on Bonaire (Stapleton et al. 2013).

Migratory birds



The Eastern Caribbean Islands are important resting and foraging areas for **Neotropical migratory birds** (winter or summer transient species) that spend the summer in their breeding area in North America and migrate to South America in winter (nonbreeding area).

The Eastern flyway of these migratory bird species encompasses Greater and Lesser Antilles, including EU overseas entities (Fig. 37- black and orange arrows).

Figure 37. Northern and southern migrations of Neotropical migratory birds between North and South America (<http://www.borealbirds.org/>). Terrestrial and coastal areas

Important connectivities occur between the IBAs designated in the 15 EU overseas entities, and more generally between the IBAs of the Eastern Caribbean region.

- **Anguilla** is the most northern island of the Lesser Antilles, it is believed to be one of the first resting area for birds during their southern migration and of the last stops on their way back north (Lloyd and Mukhida 2013). A connectivity between the network of ponds is highlighted for the bird populations (**AIA-Corridor 2**).

- In the **TCI**, the mosaics of wetland habitats scattered across the islands and un interrupted upland habitats, such as those found on IBAs of East Caicos, Middle Caicos and North Caicos, function as important ecological corridors for migrating bird species (**TCA-corridors 1 to 6**). For bird populations, the connectivity between Turks and Caicos Banks is relatively limited.

- Terrestrial and coastal ecological corridors have been pointed out between the **IBAs** of Curaçao (CUW-Corridor 2), Saba (SAB-Corridor 1), Statia (STA-Corridor 1), Sint-Martin/St-Martin (SXM-MAF-Corridor3), Martinique (MTQ-Corridor 2), Guadeloupe (GLP-Corridor 1-3), TCI (TCA-corridors 1 to 6), BVI (VGB-corridors 1 to 3), Cayman Islands (CYM-corridors 1 to 3), Montserrat (MSR-corridor 1), Anguilla (AIA-Corridor 2) (Table 21).

Marine areas

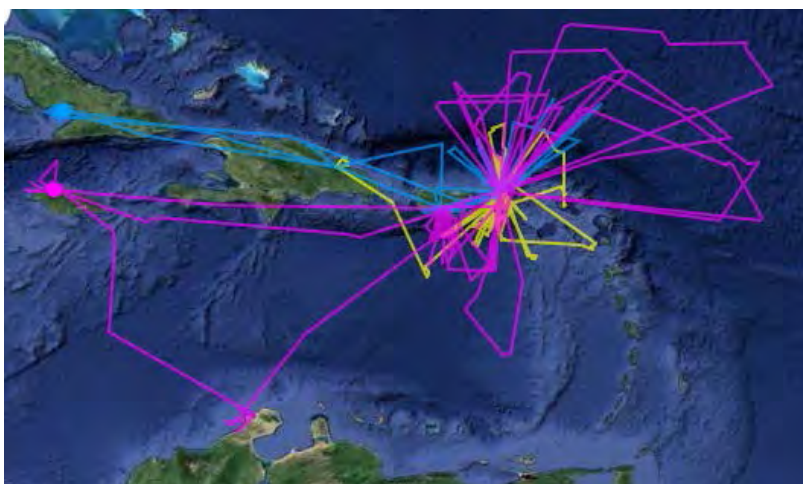
Several important **marine foraging areas** for seabird species (Masked Boobies, Brown Boobies, Magnificent Frigatebirds, Terns) have been highlighted as ecological corridors in Anguilla's waters (**AIA-corridor 3**) (Louise Soanes pers. comm. 2015, ANT, BirdLife International), in Aruba (**ABW-corridor 3**), the BVI (**VGB- corridor 4**)

- In Guadeloupe, an ecological corridor occurs for migrating Procellariidae bird species (*Puffinus puffinus*, *P. gravis*, *Calonectris diomedea*) between the offshore islands of Petite-Terre and La Désirade (**GLP-Corridor 4**).

The **Atlantic Seabird Tracking programme** aims to enhance the understanding of seabird movement patterns and habitat-use in the Western Atlantic and Caribbean regions by using tracking devices (such as satellite tags or geolocators) (<http://www.atlanticseabirds.org/>).

Among the EU overseas entities, projects occurred in **St.Eustatius** with the study of breeding and foraging ecology of Red-billed Tropicbirds (funded by US Fish & Wildlife Service, USGS, and BirdsCaribbean through a grant from the National Fish and Wildlife Foundation) and in the **BVI** (funded by USGS, Avian Research and Conservation Institute, UK Overseas Territory Project Fund, BVI Office of the Governor, and the UK Darwin Initiative) with a study on Magnificent Frigatebirds movement patterns.

- In the **BVI**, the Atlantic Seabird Tracking project has been conducted through a partnership between Jost Van Dykes Preservation Society (local NGO), South Carolina Cooperative Research Unit, Avian Research and Conservation Institute and University of Liverpool (UK) and aimed to identify foraging tracks and migration patterns of Magnificent Frigatebirds (VGB- corridor 4).



Significant connectivity has been pointed out for this species between the Virgin Islands, the Greater Antilles (Cuba, Jamaica, Dominican Republic) and northern South America (Venezuela coasts) (Fig. 38) (Susan Zaluski (JVDPS), pers. comm. 2015).

Figure 38. Distribution patterns of three satellite-tagged Magnificent Frigatebirds from the BVI (Atlantic Seabird Tracking project: Conservation of Magnificent Frigatebirds in the Virgin Islands; <http://www.atlanticseabirds.org/>).

Marine Mammals

At least 33 marine mammal species have been documented in the Wider Caribbean Region (WCR), with nearly 25 of them reported in the Lesser Antilles and Dutch Leeward islands (AAMP 2012, Bédél and Sèbe 2015, Debrot et al. 2011, Ricart et al. 2015) (Table 22, Fig. 39).

For many of these species, Caribbean waters serve as primary habitat for critical activities including feeding, mating and calving. During the winter, **Humpback whales** (*Megaptera novaeangliae*) migrate from the high-latitude feeding areas of the Northern Atlantic and congregate to mate in the Eastern Caribbean region (i.e. from Cuba to the Lesser Antilles arc), which represents the main breeding area for the population of the northern Atlantic (Fig.39).



Thus, the **breeding population** of Humpback whales is considered in this profile as a species outcome as these cetaceans come seasonally along the Antillean Island reproduce.

Figure 39. Marine mammal species commonly observed in the Eastern Caribbean (©AAMP-Sanctuary Agoa).

All marine mammals species are listed in the App. 2 of the **SPAW Protocol** of the Cartagena Convention. Baleen whales are listed in App.1 of **CITES** and remaining cetacean species in App. 2 of CITES.

Although some species have been extensively studied, data remain scarce regarding the biology, distribution and life history of most cetaceans.

Table 22. Marine mammal species reported in the Lesser Antilles and Leeward islands.

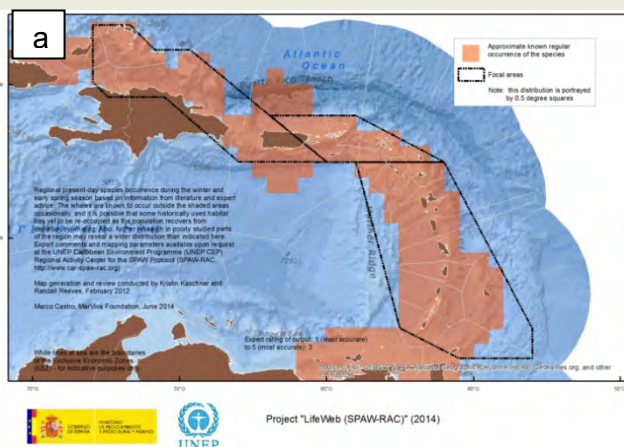
Order	Species name
ODONTOCETI or TOOTHED WHALES	
Gervais' beaked whale	<i>Mesoplodon europaeus</i>
Blainville's beaked whale	<i>Mesoplodon densirostris</i>
True's beaked whale	<i>Mesoplodon mirus</i>
Cuvier's beaked whale	<i>Ziphius cavirostris</i>
Dwarf spermwhale	<i>Kogia sima</i>
Pygmy sperm whale	<i>Kogia breviceps</i>
Fraser's dolphin	<i>Lagenodelphis hosei</i>
Atlantic spotted dolphin	<i>Stenella frontalis</i>
Pantropical spotted dolphin	<i>Stenella attenuata</i>
Spinner dolphin	<i>Stenella longirostris</i>
Short-beaked common dolphin	<i>Delphinus delphis</i>
Striped dolphin	<i>Stenella coeruleoalba</i>
Clymene dolphin	<i>Stenella clymene</i>
Rough-toothed dolphin	<i>Steno bredanensis</i>
Risso's dolphin	<i>Grampus griseus</i>
Short-finned pilotwhale	<i>Globicephala macrorhynchus</i>
Common bottlenose dolphin	<i>Tursiops truncatus</i>
Melon-headed whale	<i>Peponocephala electra</i>
Pygmy killer whale	<i>Feresa attenuata</i>
False killer whale	<i>Pseudorca crassidens</i>
Killer whale	<i>Orcinus orca</i>
Sperm whale	<i>Physeter macrocephalus</i>
MYSTICETI or BALEEN WHALES	
Humpback whale	<i>Megaptera novaeangliae</i>
Fin whale	<i>Balaenoptera physalus</i>
Common minke whale	<i>Balaenoptera acurostrata</i>
Bryde's whale	<i>Balaenoptera edeni</i>
Sei whale	<i>Balaenoptera borealis</i>
MANATEES	
West Indian Manatee	<i>Trichechus manatus</i>
Antillean Manatee	<i>Trichechus manatus ssp. manatus</i>

In grey: potential occurrence. References: AAMP 2012, Bédel and Sèbe 2015, Debrot et al. 2011

Marine mammal Sanctuaries

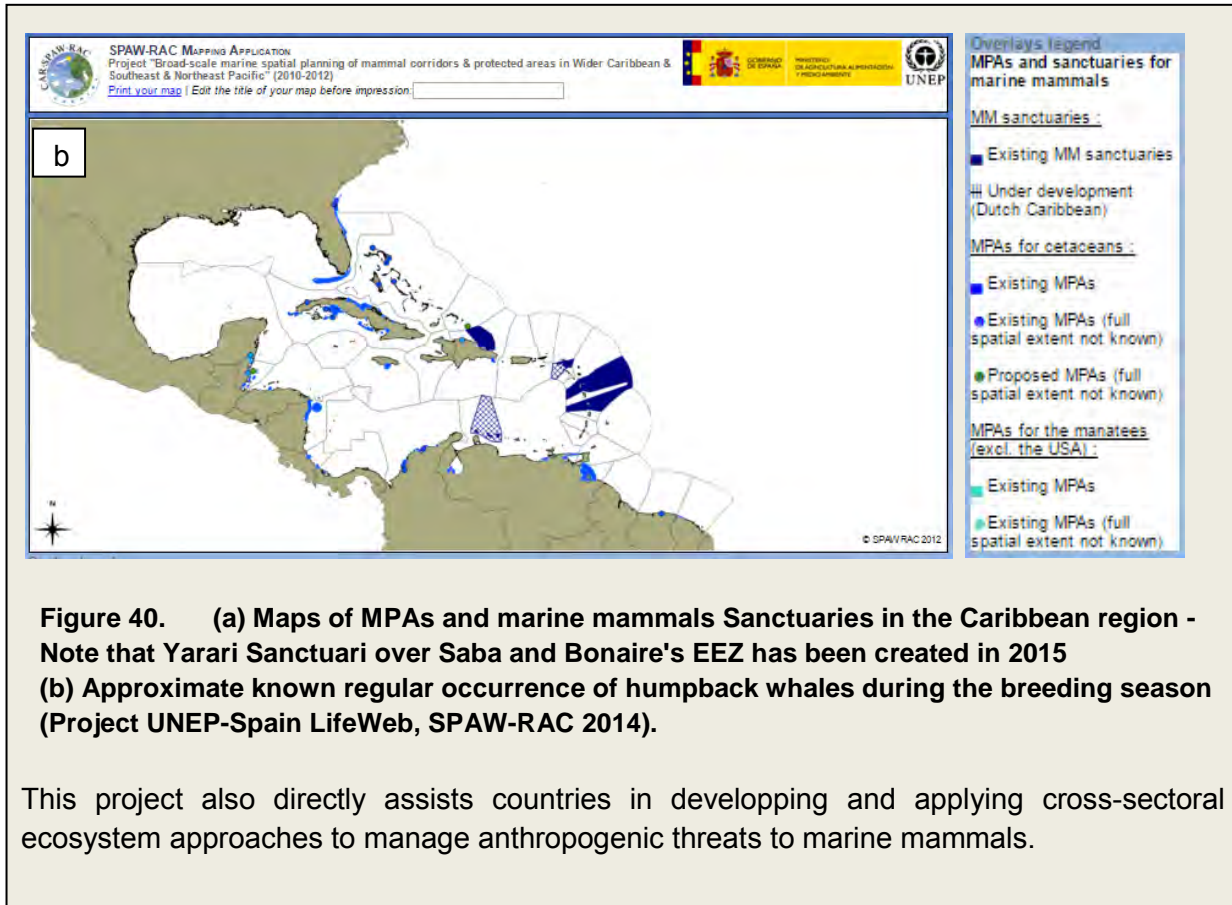
The marine mammal Sanctuary **Agoa** is a MPA created in 2010 over all the French Antilles EEZ and has been recognized as a SPAW area in 2012 (Fig. 40).

In 2015, the **Yarari** marine mammals and sharks Sanctuary has been officially established over the EEZ of the Dutch OTs of Saba and Bonaire.



Marine mammals Lifeweb project

Launched in 2010 with financial support from the Government of Spain, the two and a half year UNEP/Spain LifeWeb Project "Broad-scale Marine Spatial Planning of Mammal Corridors and Protected Areas in Wider Caribbean and Southeast & Northeast Pacific" was conceived with the goal to support implementation of Marine Mammal Action Plans of the Regional Conventions of UNEP's Regional Seas Programmes for the Wider Caribbean (Cartagena Convention).



Visual surveys

To study North Atlantic Humpback whales (*M. novaeangliae*) distribution patterns in the Eastern Caribbean region, several studies involving satellite tracking devices occurred between 2008 and 2015 in Silver Bank (Dominican Republic) (Kennedy et al. 2014), in Guadeloupe island (Kennedy et al. 2014) and in the northern Lesser Antilles (St.Martin/St.Maarten, Anguilla, Saba, St.Barthélemy, St.Eustatius) (Fossette et al. 2014, project MEGARA 2014).

These research projects showed that some animals remained for multiple days near their tagging location highlighting important connectivities through inter-islands movements within the breeding range of the Humpback whales (Fossette et al. 2014, project MEGARA 2014) (Fig.41-42).



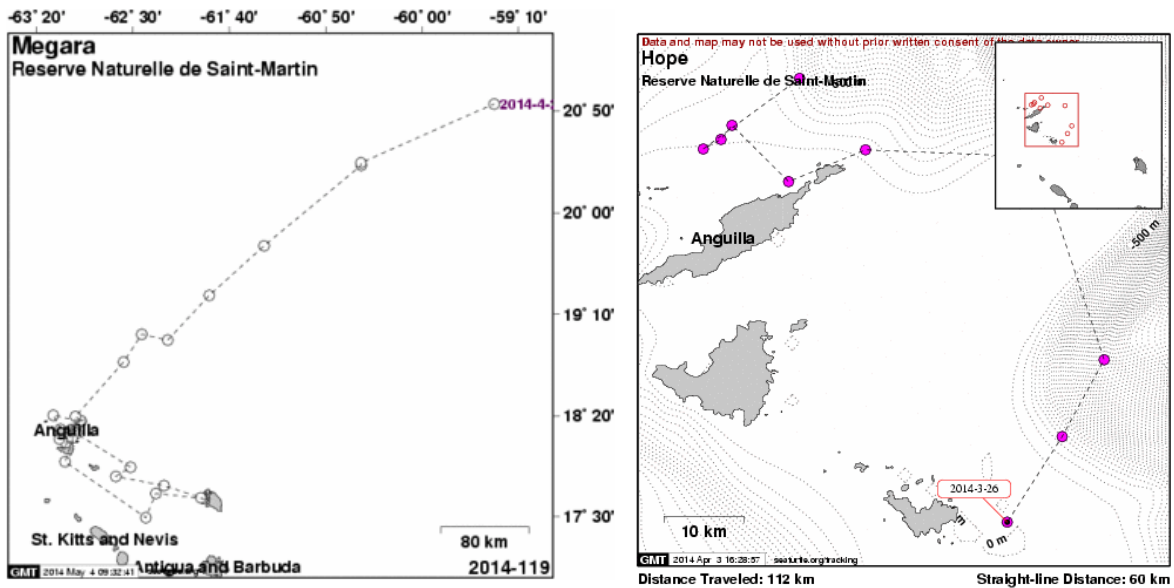
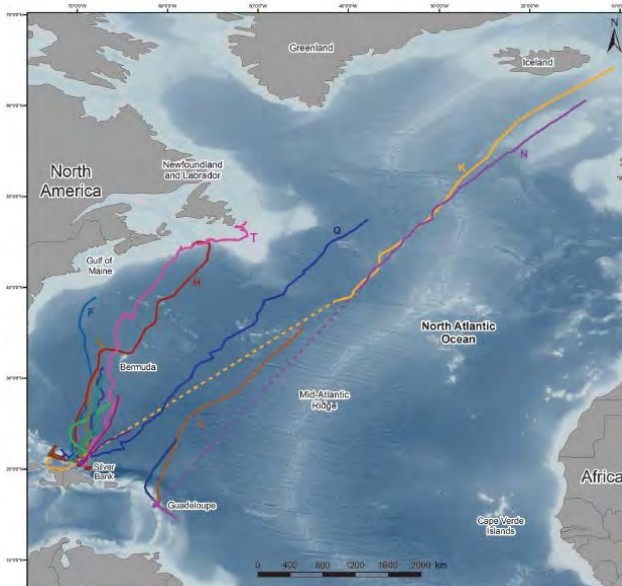


Figure 41. Movement of Humpback whales tracked from the Northern Lesser Antilles to the Greater Antilles and Atlantic region (Fossette et al. 2014, MEGARA 2014, <http://www.seaturtle.org/>).

Some individuals visited marine habitats along the coasts of the northern Lesser Antilles, the Dominican Republic and Haiti and the Turks and Caicos Islands before beginning their migration to the northern Atlantic region (Fig. 41-42).



Kennedy et al. (2014) provided detailed description of migratory corridors used by North Atlantic humpback whales towards multiple foraging destinations: Gulf of Maine (USA), Canada and eastern North Atlantic (Iceland, Norway) (Fig.42).

Figure 42. Movement patterns of humpback whales tracked from Guadeloupe and Dominican Republic (Kennedy et al. 2014).

These researches highlighted that humpback whales **from multiple feeding grounds** of the northern Atlantic region migrate to the Antilles for the breeding season. These cetaceans use an area broader than the existing boundaries of marine mammal sanctuaries, which should stress some justification for trans-boundaries regional cooperation and sanctuaries expansion (Kennedy et al. 2014, Fossette et al. 2014).

Aerial surveys

Aerial surveys conducted in 2013 in the EEZ of ABC islands (Dutch OCTs) showed a relative low density of marine mammals (probably due to the low survey effort) but a high diversity (Geelhoed et al. 2014) (Fig. 43).

Aerial surveys conducted within the French Lesser Antilles EEZ enabled to identify 12 different taxa including 9 marine mammal species. Delphinidae, humpback whales and sperm whales were the most commonly encountered species and cetaceans seem more frequent over the insular shelf area, the Caribbean slope and islands' Atlantic sides. This study showed that the zones covered by the survey have a large specific diversity but a relative low density at the scale of the entire EEZ (Van Canneyt et al. 2009) (Fig. 43).

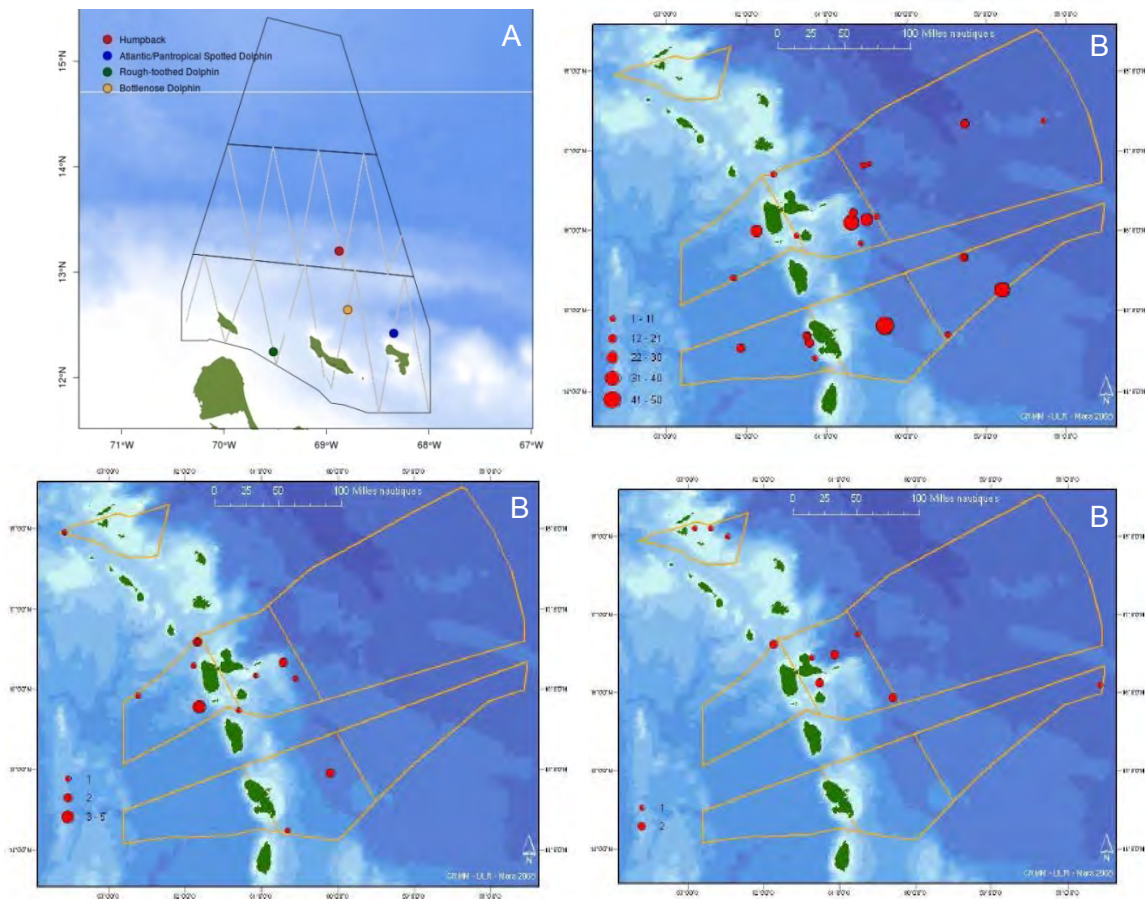


Figure 43. Sightings of marine mammals in the (a) ABC islands'EEZ (Geelhoed et al. 2014) and (b) the French Lesser Antilles EEZ (Van Canneyt et al. 2009).

Surveys in the Agoa Sanctuary

Within the **Sanctuary Agoa** and the neighbouring islands of Anguilla, Saba, St. Eustatius, five **scientific surveys** were performed between 2012 and 2014 in order to assess the distribution, the relative abundance and density of cetaceans around those islands using the distance sampling method. These data information were completed with data from aerial surveys, cetaceans observation during research projects (Karubenthos 2015, Akuo Energy 2015, Port Autonome de Guadeloupe, observations from local NGOs) (Fig. 44) (Ricart et al. 2015, Laran et al. 2016- AAMP, Sanctuary Agoa).

These surveys provided distribution maps of cetaceans gathered in 4 groups: baleen whales, dolphins, other odontoceti (sperm whales, pilot and beaked whales), and odontoceti of the Globicephalinae family (Fig. 44) (Laran et al. 2016- AAMP, Sanctuary Agoa).

Juvenile cetaceans have been regularly observed, mainly represented by Delphinidae species, Sperm whales and Humpback whales. A north to south gradient of cetacean diversity seems to appear among islands of the Sanctuary Agoa, with higher diversity recorded around Martinique island due to the presence of rare species (Ricart et al. 2015- AAMP, Sanctuary Agoa).

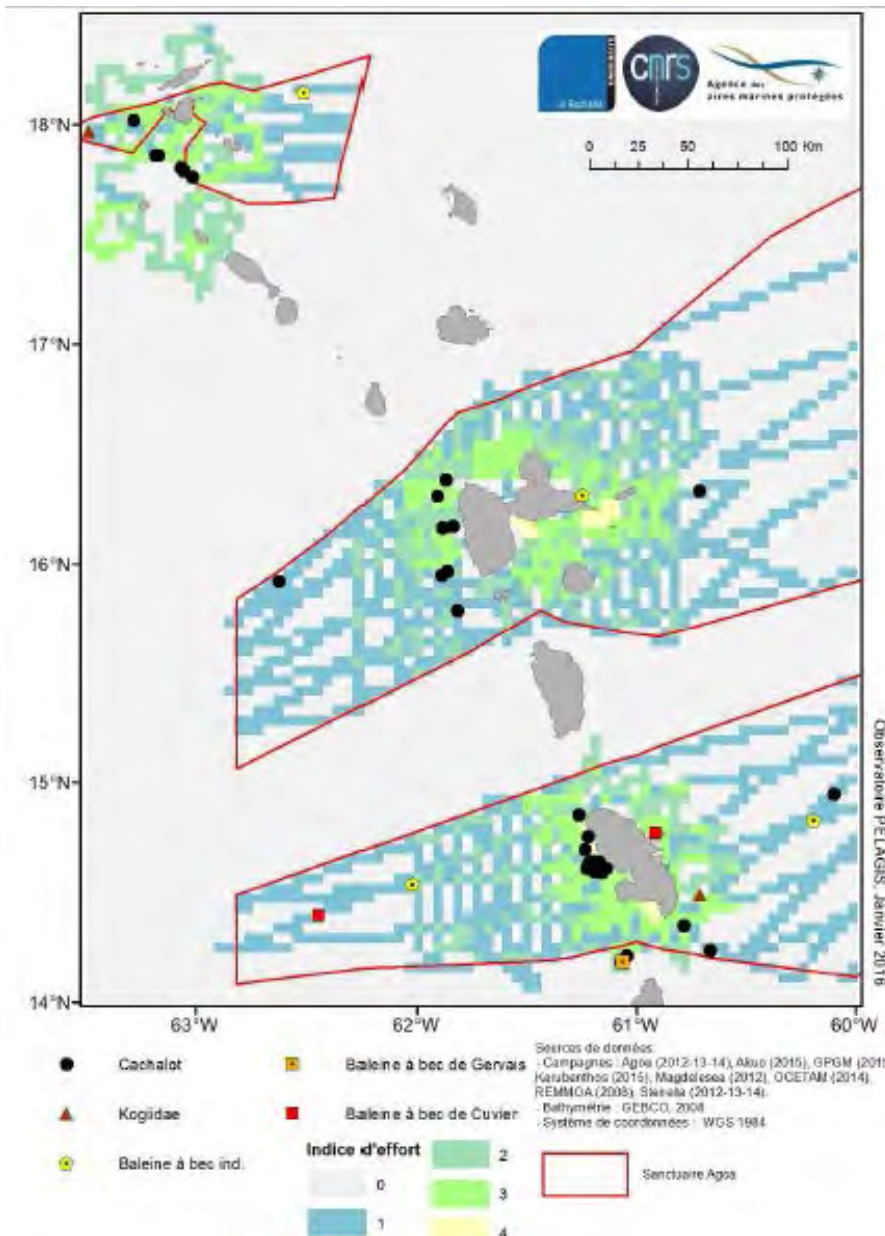


Figure 44. Sighting distributions of marine mammals within the Agoa Sanctuary (Laran et al. 2016, AAMP-Sanctuary Agoa)

Figure 44

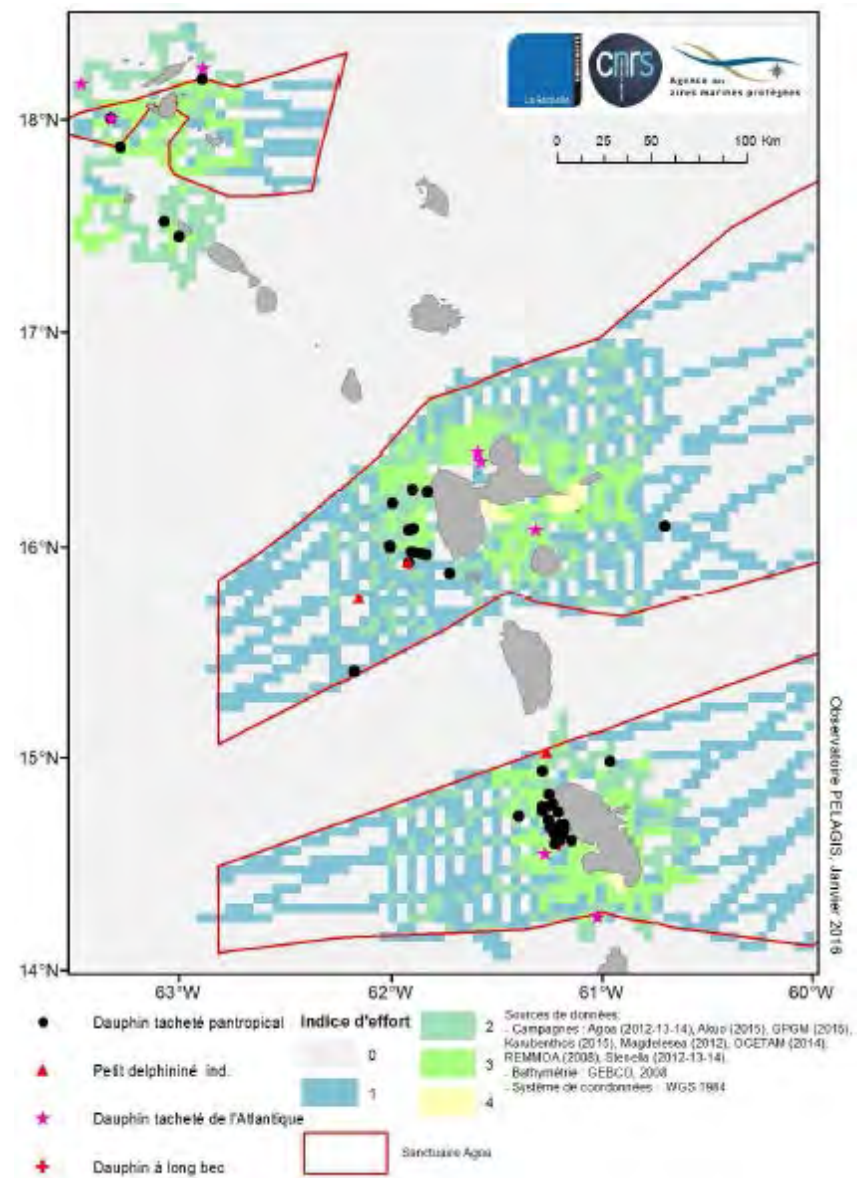
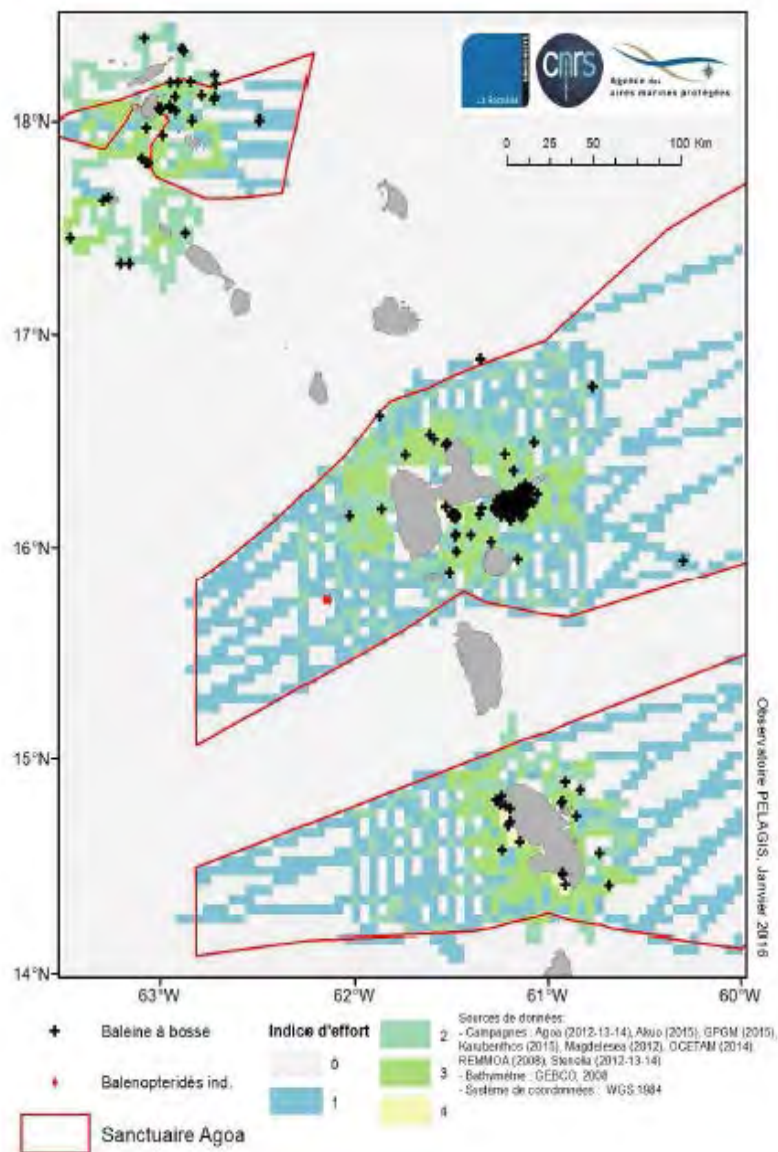
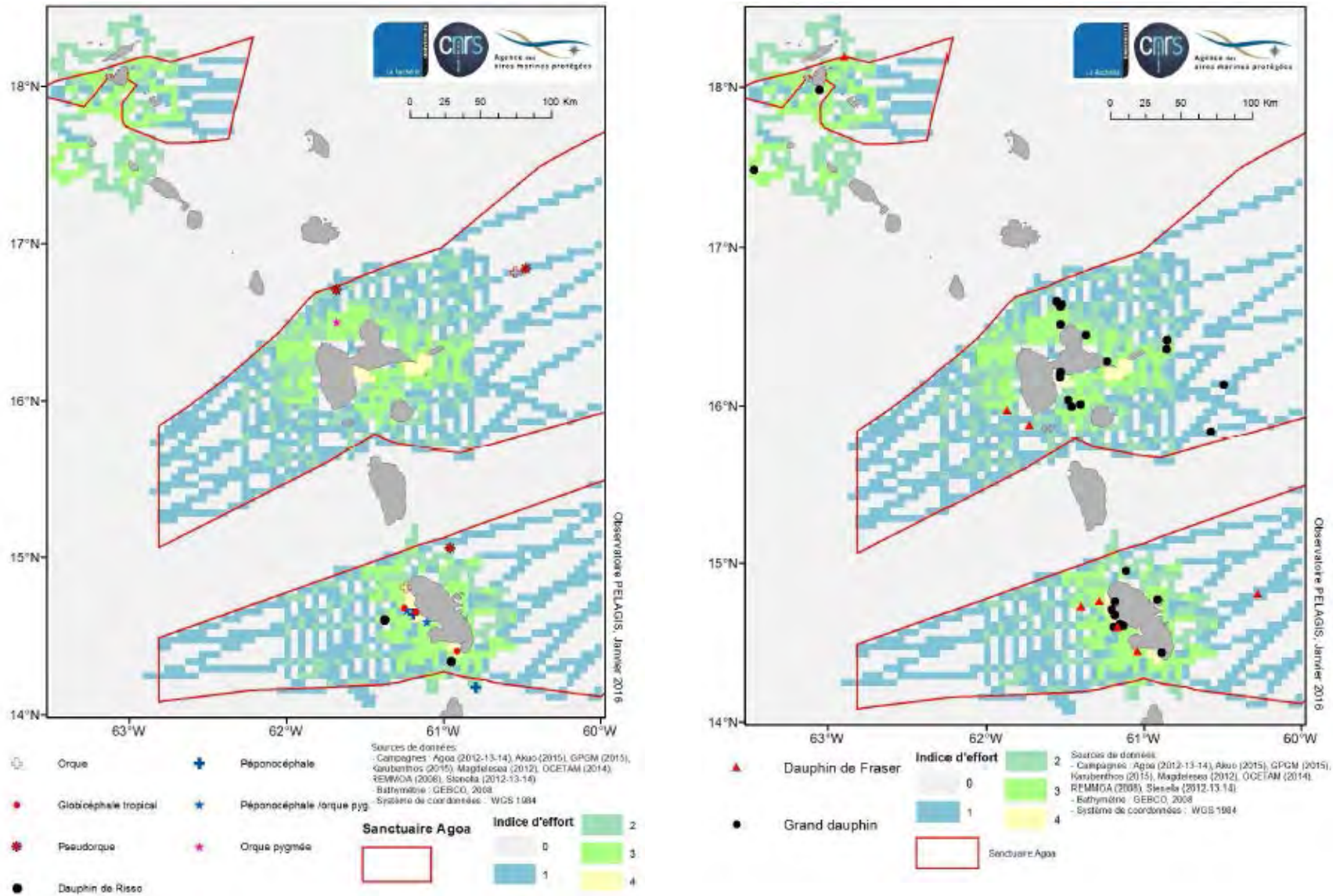


Figure 44



5. SOCIO-ECONOMIC CONTEXT

EU islands population ranges from 1,990 inhabitants in Saba to 405,739 inhabitants in Guadeloupe. Population of the French and Dutch entities account respectively for 64% and 25% of the total population occurring in the 15 EU islands (Table 23).

Population density is highly variable among the 15 EU overseas islands and varies from 63 inhabitants/km² in Bonaire to about 1,030 inhabitant/km² in the island of St-Maarten/St-Martin. In general, population density is higher in the Dutch and French overseas entities with 7 out of the 15 islands having more than 250 inhabitants/km² (Table 23).

In the 5 UK OTs, the BVI and Cayman Islands have a population density with more than 200 inhabitants/km² although about 80% of the population of these island is located on Tortola and Grand Cayman, respectively.

Table 23. Key geographic facts and statistics for EU ORs and OCTs in the Caribbean region.

EU ORs & OCTs	Land area (km ²)	EEZ (km ²)	Population	Inhab./km ²	GDP/capita (€)
Dutch islands					
Aruba	193	25,287	107,394 (2014)	556	23,000 (2011)
Bonaire	288	13,188	18,250 (2014)	63	19,940 (2013)
Curaçao	444	30,398	156,971 (2015)	354	16,700 (2012)
St-Maarten	39	489	38,247 (2015)	980	15,259 (2014)
Saba	13	8,033	1,990 (2012)	153	14,600 (2012)
St-Eustatius	21	1,107	3,897 (2012)	186	22,500 (2012)
French islands					
Guadeloupe	1628	90,528	405,739 (2013)	250	19,810 (2012)
Martinique	1128	47,640	386,486 (2014)	343	21,527 (2013)
St-Martin	54	5,088	36,992 (2014)	698	14,700 (2014)
St-Barthélemy	25		8,938 (2010)	370	26,000 (2013)
UK islands					
Anguilla	102 ¹	92,178	15,754 (2013)	170	18,200 (2011)
British Virgin Islands	153	80,117	31,912 (2013)	208	26,600 (2012)
Cayman Islands	262	119,137	55,036 (2014)	210	38,600 (2012)
Montserrat	102 (44 km ² inhabitable)	7,582	4,922 (2011)	113	8,400 (2012)
Turks and Caicos Islands	430	154,068	31,458 (2012)	73	21,000 (2012)

¹including islets

(References: Central Bureau Statistics of the Caribbean Netherlands, IEDOM, INSEE, European OCTs Environmental profile 2015b - Caribbean region, Pelembe and Cooper 2011)

Most of the Caribbean islands showed a significant increase of their population during the past decade with average annual population growth ranging from +0.1% for Guadeloupe, +2.7% for the Cayman Islands to +4.5% for the Turks and Caicos islands (World Bank datasets, IEDOM).

Several islands showed particularly fast-growing populations, such as TCI, BVI, Aruba or St.Martin/St.Maarten. This trend is a result of the expanding tourism industry and population growth has been particularly pronounced on some islands within these overseas territories,

such as Providenciales in the TCI, Tortola in the BVI or Grand Cayman in the Cayman Islands. In Aruba, for instance, the population has almost doubled since the 1960s and the tourism activities are mainly located in the north-western part of the island.

The following economic sectors rely on biodiversity and conservation outcomes and contribute significantly to the islands GDP.

- **Tourism**

Tourism (with associated services and construction industries) is one of the main economic sector for the Caribbean islands and accounts for an important part of islands' GDP.

The number of visitors / year is highly variable among islands, between 10,300 visitors/ year in Saba, 118,000 tourists/year in Anguilla, 842,000 visitors/year in the BVI, to more than 1 million visitors/year in the TCI, 1.5 million of tourists/year in Aruba and more than 2 million of tourists/year in St.Maarten/St.Martin.

In Aruba, St.Maarten and the BVI, the tourism sector accounts for at least 80% of the islands' GDP: 88.4% for Aruba (with about 1.5 million of tourists / year), 85.9% in the BVI (with 842,000 visitors/year) and 80% for St.Maarten (with more than 2 million of tourists / year). This sector is also particularly important for Anguilla (61% of the island's GDP and 118,000 visitors/year) and the TCI (45% of the territory's GDP, 1 million visitors/year) (World Travel and Tourism Council 2014, Central Bureau of Statistics - Dutch OCTs).

In addition to land-based tourists, cruise ship tourism brings day-visitors in most Caribbean islands and several of the EU islands, such as Aruba, Bonaire, St.Maarten/St.Martin, BVI, Martinique, Guadeloupe, Cayman Islands, TCI.

In 2014, the Caribbean Tourism Organisation (CTO) estimated that about 23.9 millions of cruise ship tourists went in the Caribbean region. The CTO ranked St.Maarten/St.Martin and the Cayman Islands within the 5 destinations (with the Bahamas, the Yucatan and the USVI) having more than half of the cruise ship visitors that visit the Caribbean region. The island of St.Maarten/St.Martin is one of the main destination with about 2.5 millions of tourists reported for the year 2014, including 2 millions of cruise ship visitors (Caribbean Tourism Organisation data information).

In Bonaire, the tourism sector is mainly centered on scuba-diving in the Marine Park and the Dutch OT is listed in the top five destination for diving in the Caribbean region.

The volcanic activity in Montserrat has severely affected the local economy of the island (destruction of the airport, restricted areas...) with a significant decrease of the number of visitors. Prior to 1995, the tourism sector accounting for a third of the island's GDP with about 32,000 visitors/year. This frequentation dropped below 10,000 visitors/year between 1996-1998. The development of nature tourism is seen as an important component for tourism's redevelopment (European OCTs Environmental profile 2015b - Caribbean region).

- **Agriculture and Livestock**

With generally rich soils, the islands of Guadeloupe, Martinique and Montserrat are particularly suitable for agriculture and livestock breeding (European OCTs Environmental

profile 2015b - Caribbean region). In Guadeloupe and Martinique, cane sugar, banana cultivations and market gardening constitute the main sectors of production (IEDOM). On Montserrat island, agriculture production was severely affected by volcanic activities as most of the fertile agricultural lands were located in the volcanic Exclusion Zone. Due to the particular topography of Saba farming and cattle breeding activities are restricted to small parts of the island.

Conversely, due to the aridity and poor soil very small areas of soil are cultivated in the islands of Anguilla, St-Martin/St-Maarten, Aruba, Bonaire, Curaçao. For instance, arable lands represent only 4% of the land areas in the Cayman Islands and 10% of the land surfaces of Curaçao and Aruba (European OCTs Environmental profile 2015b - Caribbean region).

Since the 1960s, most of the UKOTs have diversified away from their traditionally agriculture-based economy towards tourism and there is almost no records on the land area that is used for agriculture (DEFRA 2012).

- **Fisheries and aquaculture**

Fisheries constitute an important sector for most of the Caribbean islands, particularly for Guadeloupe, Martinique, Anguilla, Saba, BVI and TCI. Fisheries income from the Saba Bank is estimated to contribute to 8% of the island economy.

The number of professional fishermen is highly variable among islands, from 300-400 fishermen in Anguilla, 500 fishermen in the TCI to more than 1,000 fishermen for either Guadeloupe and Martinique.

Local fisheries mainly target fishes (mostly reef species and pelagic fishes), spiny lobsters, and Queen conch.

Aquaculture activities include both marine and freshwater farms. About 6 and 13 aquaculture farms occur in the islands of Guadeloupe and Martinique, respectively. This sector is threatened in Guadeloupe by the impact of pesticides that affects an important part of the freshwater and marine resources.

- **Industry Manufacturing**

Several EU overseas islands have oil trans-shipment and oil storage facilities (Bonaire, Curaçao, Aruba (before 2012), St.Eustatius). In Aruba, the oil refinery has been a major economic activity but its shutdown in 2012 impacted directly the local economy. These oil storage facilities constitute a high level of potential threats to biodiversity and ecosystems.

A part of Bonaire island income is generated by solar salt farm industries and part of Saba's revenues come from a stone crusher facility located in the south of the island.

6. LEGAL AND POLITICAL CONTEXT

This chapter provides an overview of the political and institutional context for the 15 European Overseas entities in the Caribbean region, as well as a description of sites of international importance and the network of protected areas.

6.1. Overview of the Political and Institutional Context

- **Dutch OCTs**

Since October 2010, the Kingdom of the Netherlands consists of four autonomous countries: the Netherlands and the 3 Dutch Overseas Countries of **Aruba, Curaçao, and St. Maarten**. These Dutch OCs have their own government and parliament, which are empowered to enact legislation related to the countries' own affairs.

In **Aruba**, the **Directorate of Nature and Environment (DNM)** created in 2012 develops policies, does research and enforces legislation on nature and environment. Since January 2014 the DNM is part of the **Ministry of Economic Affairs, Communications, Energy and Environment**. Within the same Ministry, the Department of Environmental Statistics aims to collect and analyze information to provide integrative socio-economically and environmentally sound policy.

In **Curaçao**, the **Ministry of Public Health, Environment and Nature**, comprising the Department of Environmental Affairs and the Department of Agriculture, Animal Husbandry and Fisheries, is responsible for the environment and nature management. The Minister formulates environmental policy, proposes new laws and is responsible for their implementation on the island.

In **St. Maarten**, the **Ministry of Public Housing, Spatial Planning, Environment and Infrastructure (VROMI)** is in charge of the environment and nature, the spatial planning and infrastructure (including waste management) on the Dutch side of the island.

The **OTs of Saba, St. Eustatius and Bonaire**, also known as BES islands, became special municipalities within the Kingdom of the Netherlands and have the status of public bodies (with the meaning of the Dutch Constitution).

The **National Government and the BES Islands' Governments** are primarily responsible for nature policy and its implementation. The National Government bears final responsibility for the protection of special areas and species referred to in the international Treaties and Conventions to which the Kingdom of the Netherlands is signatory. The **Ministry of Economic Affairs (EZ)** of the Kingdom of the Netherlands bears direct responsibility for the management of areas that fall outside the island's jurisdiction but within the Kingdom's, such as the Exclusive Economic Zone.

The **Nature Conservation Law BES** delegates the primary responsibility for the conservation and management of nature on the islands to the BES Islands' Governments. In each of the BES islands, nature conservation is mandated by the island governments to non-

governmental nature conservation organisations that are in charge of the development and implementation of the management plans and have enforcement authority.

In 2013, the **Ministry of Economic Affairs** (EZ) approved a **Nature Policy Plan (2013-2017) for the BES islands** that is based on the BES Principles of Nature Protection and Management Act. This Plan offers a framework for the management and sustainable use of nature in the Dutch OTs (Ministry of Economic Affairs & Direction Nature and Biodiversity 2013).

The **National Office for the Caribbean Netherlands** (RCN) represents the Dutch Ministries in the three OTs, each of them have their own center.

- **UK OTs**

Worldwide, there are 14 OTs which retain a constitutional link with the UK, including 5 OTs in the Caribbean region: TCI, Cayman Islands, BVI, Anguilla and Montserrat (cf. Chapter 3.1). UKOTs have their own identity and governing structure and all have separate constitutions made by Order in Council. All have **Governors or Commissioners** (UK Civil Servants) who represent both Her Majesty the Queen in the Territory and the Territory's interests to Her Majesty's Government in London. The OTs Directorate in the Foreign and Commonwealth Office (FCO) takes the overall lead on managing the UK's relationship with its OTs, but all Government Departments have a responsibility towards the OTs (DEFRA 2012).

The responsibility for environmental management in the UKOTs has been devolved to the **UKOTs' Governments** (Table 24), but the UK Government recognises that many UKOTs lack sufficient funding and /or personnel capacity to ensure the protection of the local environment and therefore require additional support (DEFRA 2012).

Three UK Government Departments support UKOTs on environmental issues: **Department for Environment, Food and Rural Affairs** (Defra), **Department for International Development** (DFID), and the **Department for Energy and Climate Change** (DECC). The **Foreign and Commonwealth Office** (FCO) leads on overall Government's policies on the UKOTs.

Defra leads on developing and implementing a biodiversity strategy with the UKOTs. Defra chairs an Overseas Territories' Biodiversity Group (OTBG) which meets quarterly to discuss progress on the UKOT Biodiversity Strategy. Three Defra's Agencies work with the UK Government Department to deliver environmental policy in the UKOTs: the **Joint Nature Conservation Committee** (JNCC) that is Defra's statutory adviser on environment issues; the **Food and Environment Research Agency** (Fera), and the **Centre for Environment, Fisheries and Aquaculture Science** (Cefas).

Table 24. Ministries and Departments of the UK Islands' Governments related to environment and conservation.

Ministry / Department	Description
Anguilla	
Ministry of Home Affairs, Natural Resources, Lands and Physical Planning	
Department of Environment (DoE)	Formally established in 2006, the DoE is in charge of providing the framework for holistic environmental management and conservation of biodiversity and working to improve and maintain the quality of life and the sustainable use of natural resources.
Department of Fisheries and Marine Resources (DFMR)	Created in 1991, the DFMR is in charge of the development and management of the Marine Parks and fisheries (including data collection, fish stock assessment, and enforcement).
Department of Agriculture (DoA)	It is in charge of promoting the use of natural resources through sustainable management to achieve import substitution and, inspecting plants and animal materials and issuing Phytosanitary Certificate and import permits for plants.
Department of Physical Planning (DPP)	It is responsible for spatial land use planning and coordinates the development control process.
Department of Health Protection	It operates the Government Laboratory and is responsible for monitoring of drinking and recreational water quality, approves permits for tourism facilities (sewage treatment, food, etc.), and is responsible for solid waste management.
BVI	
Ministry of Natural Resources and Labour: Ministry in charge of the development of environmental policy and natural resources management.	
Agriculture Department	The Department designates protected areas to protect watersheds, prevent deforestation, and protect water sources. It manages 6 watershed protected areas and 1 forestry protected area.
Conservation and Fisheries Department (CFD)	CFD is responsible for biodiversity conservation including environmental monitoring and fisheries management. The Department manages 14 fisheries protected areas. The CFD includes several divisions such as Planning and Policy (responsible for the maintenance of the coastline, surveillance and protection of beaches); Coastal Zone Management (responsible for monitoring the natural, terrestrial and marine issues and natural and man-made changes and activities); Environmental Information Division which comprises two sections - Geographic Information Systems (GIS) and Environmental Education and Public Awareness; and Fisheries Management (responsible for data collection and research, fisheries extension services and surveillance and enforcement support).
Town and Country Planning Department (T&CPD)	This Department, within the Premier's Office, manages the development of the territory and is in charge of the execution of the Physical Planning Act.
Montserrat	
Ministry of Agriculture, Trade, Lands, Housing and Environment (MATLHE): Lead Ministry for development of policy on environment and natural resources management. It has 6 major sections including Administration, Environmental Management, Agriculture, Lands and Survey, Physical Planning and Housing.	
Department of Environment (DOE)	The DOE is responsible for the: direction and implementation of environmental policy; biodiversity conservation and research; management of protected areas; climate change; sustainable forestry and watershed management; public education and outreach and collection and management of environmental data.
Montserrat Land Development Authority	It was established under the MALHE in 1971 to promote efficient and economic utilization of land.
Department of Agriculture	It is responsible for food production, protection/management of coral reefs, sea grasses and supporting the regulation of sport fishing, dive establishments and water sports.
Physical Planning Unit (PPU)	This Unit is responsible for the orderly and progressive development of land, for the acquisition, preservation and management of historic buildings and sites, for restricting the export of artefacts and for matters connected therewith.
TCI	
Ministry of Environment and Home Affairs (MEHA): It comprises inter alia the Planning Department, the	

Ministry / Department	Description
Department of Agriculture (DOA) and the Department of Environment and Maritime Affairs (DEMA).	
Department of Environment and Maritime Affairs (DEMA)	DEMA is mandated to ensure sustainable utilization of the natural resources of the TCI, through biodiversity conservation, managing protected areas and maintaining economic prosperity through sustainable development approaches. DEMA is divided in three divisions: Protected Areas Division oversees the management of national parks, nature reserves, sanctuaries and historic areas; the Fisheries Division responsible for the management and conservation of fish populations and habitats; the Maritime Affairs Division mandated to protect and improve the fisheries.
Planning Department	Its role is to facilitate sustainable development of TCI through effective land use planning and regulation to ensure optimizing utilization of the countries limited land resources. It is also the Planning Departments roll to collaborate with other government agencies, private sector agencies and residents in respect of environmental stewardship, economic development and social progress.
Department of Agriculture (DOA)	The DOA is responsible for agricultural oversight and regulation, aquaculture, animal welfare, animal and plant health (APHIS), biosecurity.
Ministry of Health - Department of Environmental Health	Department responsible for monitoring water supplies and solid waste collection and disposal. The Public Environmental Laboratory, the main laboratory within the National Public Health Laboratory System, monitors environmental quality.
Cayman Islands	
Ministry for Financial Services, Commerce and Environment (FS, C & E)	
Department of Environment (DoE)	The DoE is the main government agency responsible for the management and conservation of the environment and natural resources in the Cayman Islands and the implementation of the CBD and other MEA commitments. The DoE has established, and monitors, several marine parks around the islands, and has drafted legislation (currently pending) to enable the establishment of a series of terrestrial national parks. The DoE is subdivided into Research and Assessment, Operations and Enforcement.

- **French ORs and OT**

Among the French West Indies (FWI), Guadeloupe, Martinique and St-Martin are recognized as European ORs and St-Barthélemy is an European OT.

The State is represented in the Overseas entities by the Prefet in Guadeloupe and Martinique, and a delegated Prefet for the Overseas Collectivities of St-Martin and St-Barthélemy.

Guadeloupe is an Overseas Department and Region (DROM - Département et Région d'Outre-Mer) administrated by a departemental and regional councils.

St-Martin, St-Barthélemy (since 2007) and **Martinique** (formely a DROM that became a COM in 2015) are Overseas Collectivity (COM) administrated by a Territorial Council.

The **Ministère de l'Environnement, de l'Energie et de la Mer** (Ministry of the Environment, Energy and the Sea) is responsible for the State Environmental Policy.

As a State service, the **Direction de l'Environnement, de l'Aménagement et du Logement (DEAL** - Direction of Environment, Land Use Planning and Housing) implements national environmental policies and is the competent authority in terms of environment in Guadeloupe, Martinique and in the oversea collectivity of St-Martin.

The service *Natural Resources* (RN-Ressources Naturelles) of the DEAL is in charge of missions related to biodiversity and knowledge, the protection of water and biodiversity, as

well as the interministerial coordination of environmental enforcement (MISEN- Mission Inter-service de l'Eau et de la Nature).

The service *Mission for Sustainable Development and Environmental Evaluation* (MDDEE - Mission Développement Durable et Évaluation Environnementale) is in charge of the evaluation of local policies and promotes actions related to the National Strategy on Ecological Transition towards a Sustainable Development (Stratégie Nationale de Transition Ecologique vers un Développement Durable-SNTEDD).

The public forest areas are managed by the **Office of the National Forestry** (ONF - Office National des Forêts), a public institution with industrial and commercial characteristics under the responsibility of the Agriculture Ministry. The **Conservatoire de l'Espace Littoral et des Rivages Lacustres** (CELRL), a public administrative institution, is in charge of the protection of coastal areas entrusted to it or assigned by public or private owners.

The oversea collectivity (COM) of **St-Barthélemy** is the competent authority for the environment in its territory. The Agence Territoriale de l'Environnement de St-Barthélemy (Territorial Environment Agency) is the public body in charge of the management of environment in the territory.

6.2. International and Regional Environmental Agreements

Several Multi-lateral Environmental Agreements (MEAs) have been ratified by the Kingdom of the Netherlands, the United Kingdom and France and concerned their Overseas entities (Table 25).

These 3 EU countries are signatories to the "Rio Conventions": **Convention on Biological Diversity** (CBD), which aims to prevent further loss of biodiversity whilst using its components sustainably and sharing benefits equitably; the **Climate Change Convention** (United Nations Framework Convention on Climate Change or UNFCCC), which seeks to address global warming through the reduction of greenhouse gas emissions; and the **United Nations Convention to Combat Desertification** (UNCCD).

At the 10th Conference of the Parties (COP) to the CBD in Japan in 2010, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. Following the goals of the Strategic plan and Aichi targets, the European Union adopted its EU Biodiversity Strategy (EUBS) in May 2011 to halt the loss of biodiversity and ecosystem services in the EU by 2020.

The **Inter-American Convention** for the Protection and Conservation of Sea Turtles (IAC) is an intergovernmental treaty that provides the legal framework for countries in the Americas and the Caribbean to take actions for the benefit of sea turtles. IAC has been ratified for Curaçao, St. Maarten and the 3 Dutch OTs (i.e. Saba, St. Eustatius, Bonaire). Representation of these entities to the COP are expected to come from the OCs themselves and from the Netherlands for the OTs.

Table 25. Multilateral international and regional Treaties and Conventions

	Kingdom of the Netherlands	United Kingdom	France
Convention on Biological Diversity (CBD)	√	√ - not ratified in Anguilla, Montserrat and TCI	√
Ramsar Convention on Wetlands of International Importance	√	√	√
Cartagena Convention	√ ¹ - ratified for the 6 Dutch OCTs	√ ²	√ - ratified for the French Lesser Antilles
Cartagena Convention - Protocol SPAW concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region	√		√
Cartagena Convention - Protocol concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region	√	√	√
Cartagena Convention - Protocol LBS concerning Pollution from Land-Based Sources and Activities			√
Bonn Convention (Convention on Migratory Species of Wild Animals (CMS))	√	√	√
CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)	√	√	√
Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)	√ ¹ - ratified for Bonaire, Curaçao, St. Maarten, Saba, St. Eustatius		
UNESCO World Heritage Convention for the protection of sites of international cultural or natural significance	√ - acceptance for Saba, St. Eustatius, Bonaire and Curaçao	√	√

¹ These Conventions were ratified by the Kingdom of the Netherlands and concerns some of its OCTs.

² This Convention has been ratified for the Cayman Islands and Turks and Caicos Islands (1986) and extended to the British Virgin Islands (1987). The UK has not ratified these Protocols.

More than 110 sites have been internationally or regionally recognized for their natural habitats and wildlife (Table 26).

Table 26. International and regional recognition of natural habitats and wildlife

	Dutch OCTs	UKOTs	French ORs & OT	Total
IBAs	23	41	25	89
Ramsar sites	10	3	3	16
Areas recognized under SPAW Protocol	3		5	8

The National Park of Guadeloupe is recognized as a **Man and Biosphere Reserve** (UNESCO).

In St. Maarten, 6 sites are proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme: Fort Amsterdam, Mullet Pond, Great Salt Pond, Emilio Wilson Estate, Geneve Bay and Little islands and the MOWS Marine Park.

Several sites in Martinique (FR), Bonaire (Bonaire National Marine Park, NL) and Curaçao (West's Curaçao Plantation Area, NL) are on the provisional list to be nominated as **UNESCO World Heritage Sites**.

Bonaire National Marine Park is designed as **UNEP Demonstration Site** for sustainable protected area management.

In 2013, Saba Bank has been designated by the the International Maritime Organisation as a **Particularly Sensitive Sea Area** (PSSA), one of the only thirteen such areas in the world.

Several sites have been or still are under evaluation for their implementation under **Ramsar or SPAW labels**, such as: Anegada Eastern Ponds and the Horseshoe reef and Fat Hogs and Bar Bays in the BVI; Centre Hills and the forested ghauts and the north-western shallow marine areas in Montserrat; 4 proposed Ramsar sites in the Cayman islands (Salina Reserve in Grand Cayman, MPA and wetlands in Little Cayman, Barker's wetlands, Central Mangrove wetlands) (Pienkowski 2005).

In the TCI, a review and consultation process for the Ramsar site delineation is in progress (DEMA, pers. com. 2016). In Anguilla, the National Trust is currently updating Ramsar information with several proposed Ramsar sites for submission to the Foreign Commonwealth Office. In St. Maarten, the Mullet pond Ramsar site (in Simpson Bay Lagoon) will be officially designated in 2016.

In Curaçao, the **4 Ramsar sites** of Malpais/Sint Michiel, Muizenberg, Northwest Curaçao and Rif-Sint Marie are managed and considered as protected areas with specific enforcement of regulations. Management plans will be implemented for these Ramsar sites (Mark Vermeij, pers. com. 2015).

A beach on Klein Bonaire ("No name beach") is listed as a **sea turtle index beach** by Inter-American Convention for the protection of Sea Turtles (IAC).

Winthin the Wider Caribbean region (WCR), the Saba Bank, in particular, and the Lesser Antilles, in general, have been recognized by the Parties to the Convention on Biological Diversity as **Ecologically or Biologically Significant Marine Areas** (EBSAs) that serves important purposes to support healthy functioning oceans.

Regional level

At the regional level, the main agreement is the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (WCR) or **Cartagena Convention** that is a comprehensive, umbrella agreement for the protection and development of the marine environment (Fig. 45). The Convention was adopted in Cartagena, Colombia on 24 March 1983 and entered into force on 11 October 1986, for the

legal implementation of the Action Plan for the Caribbean Environment Programme (CEP). The Regional Coordinating Unit (UNEP-CAR/RCU), established in 1986, was designated to be the Secretariat to the Convention. This Secretariat is based in Kingston, Jamaica.

The Cartagena Convention presently has been ratified by 25 United Nations Member States in the Wider Caribbean Region and its Protocols constitute a legal commitment of these countries to protect, develop and manage their common coastal and marine resources individually and jointly. These technical agreements or **Protocols** concern Oil Spills; Specially Protected Areas and Wildlife (SPA) (Fig. 45b) and Land Based Sources of Marine Pollution (LBS).

The Protocol concerning **Specially Protected Areas and Wildlife (SPA Protocol)** was adopted in 1990, and entered into force in 2000. The objectives of the SPA Protocol are to protect, preserve and manage in a sustainable way: 1) areas and ecosystems that require protection to safeguard their special value, 2) threatened or endangered species of flora and fauna and their habitats, and 3) species with the objective of preventing them from becoming endangered or threatened. Among European Overseas, France and the Kingdom of the Netherlands ratified the SPA Protocol. The Regional Activity Centre (RAC) for the SPA Protocol is based in Guadeloupe in the premises of the Parc National.

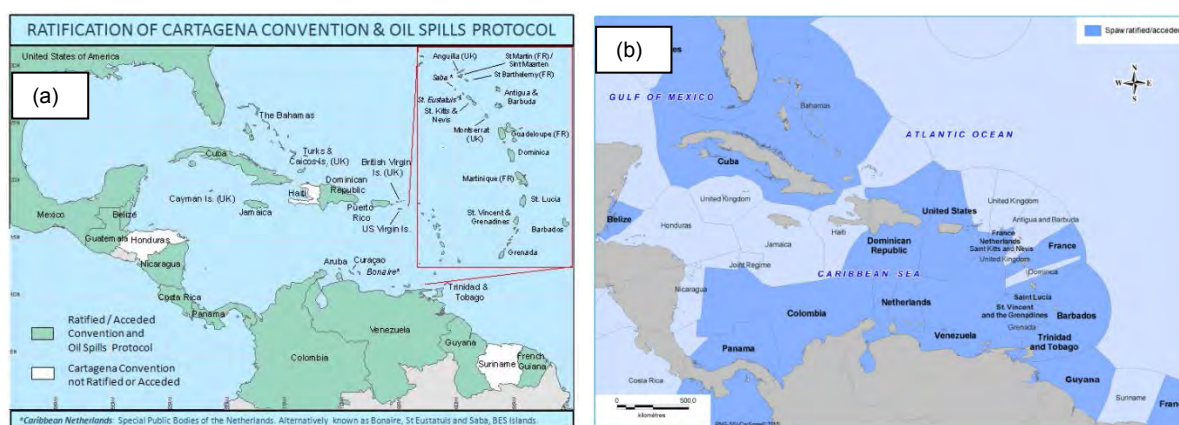


Figure 45. Maps of the Contracting Parties to the Cartagena Convention (a) and the SPA Protocol (b).

At the regional level, there are several Strategies and Programmes related to environmental organisations and institutions (cf. Chapter 7.2).

The Cartagena Convention was ratified by the Kingdom of the Netherlands for the 6 Dutch OCTs of the Caribbean region, this Convention does not apply to the Kingdom of the Netherlands itself. The 6 Dutch overseas entities are therefore expected to represent themselves at the COP of the Cartagena Convention and their decisions have then to be approved by the Kingdom Council of Ministers, consisting of the Dutch Council of Ministers plus one representative Minister of each Dutch OCs (i.e. Aruba, Curaçao, Sint-Maarten).

6.3. Environmental Policy Framework

- Dutch OCTs

The obligations under the international agreements are incorporated in national legislation. For Bonaire, St. Eustatius and Saba (also known as the BES islands) this national legislation is the **Nature Conservation Framework Act BES**. This Act also provides the division of roles and responsibilities between the National Government and the islands' governing bodies.

Every five years, the Minister of Economic Affairs approves a **Nature Policy Plan** for the Caribbean Dutch overseas entities (2013-2017) in consultation with the islands' governing bodies taking into account the islands' spatial developments plans. This Nature Policy Plan sets the framework for nature policy that should at least include:

- The objectives for nature and landscape to be realised within the planning period and a survey of the priorities that need to be addressed;
- The nature values to be protected and to be taken into account in implementing the policy;
- A list of the terrestrial and marine national parks, which have been designated as protected areas by island ordinance or by ministerial decree.

The **Fisheries Act BES** and the **Maritime Management Act BES** complement the legislation. The **Public Housing, Spatial Planning and Environmental Protection Act BES** of the Ministry of Infrastructure and Environment will come into force to protect the environmental values.

Table 27. Dutch OCTs National environmental legislations and strategies dealing with biodiversity and conservation.

National environmental legislations and strategies (agreement, policy, act)	Environmental policy framework in the 5 UKOTs
Biodiversity Strategy & Action Plan	<p>- Aruba: National Integrated Strategic Plan (NISP) (2010-2013); Spatial or zoning legislation- Island Zoning plan (in revision); Nature Conservation Ordinance (1995); Marine Environment Ordinance; Policy Plan for Nature and Environment by the Government of Aruba; Nature and Environment Policy (in progress); Multiyear plan for development cooperation (2006-2009); Environmental Management Policy (2003)</p> <p>- Curaçao: National Nature and Environmental Policy Plan, Curaçao National Development Plan, Spatial planning law (1995), Fishing National ordinance, National Ordinance on principles conservation and protection</p> <p>- St.Maarten: Development planning ordinance, Marine Park Management Plan (2011)</p> <p>- BES islands: Nature protection and management law BES, Spatial development planning BES, St Eustatius National Marine Park Management Plan (2007), St. Eustatius Quill - Boven National Park and Miriam C. Schmidt Botanical Garden Management Plan (2009), Saba Marine Park management plan (1999), Special Marine Area management plan Saba Bank (2008), Bonaire National Marine Park Management Plan (2006)</p>

National environmental legislations and strategies (agreement, policy, act)	Environmental policy framework in the 5 UKOTs
Legislations and strategies with specific objectives on species and habitats	<ul style="list-style-type: none"> - Aruba: Conservation Action Plan for the Aruba Island rattlesnake; Bat research and Conservation Plan for ABC islands; Sea Turtle Recovery Action Plan (1993); Directive Spatial Management Beaches (2014); Ordinance on the Protection useful species - Curaçao: Island ordinance for the protection of sea turtles - St.Maarten: Nature Conservation ordinance (2001), St. Maarten beach and hillside policies - BES islands: Nature protection and management law, Nature Policy Plan, Environmental legislation, Nature Conservation Framework, Fisheries Act
Management & Protected areas legislations	<ul style="list-style-type: none"> - Aruba: National Decree National Park Arikok - Curaçao: Marine Park ordinance - St.Maarten: Marine Park ordinance - BES islands: Nature protection and management law, Environmental legislation, Terrestrial and marine Parks ordinances
Climate Change Policy	<ul style="list-style-type: none"> - Aruba: Nature and Environment Policy Plan 2004-2007, National Integral Strategic Plan (NISP) - Curaçao : Curaçao National Development Plan - St.Maarten: Coral bleaching response plan (2010), Climate change response plan - BES islands: Nature Policy Plan
Exotic and invasive species	<ul style="list-style-type: none"> - Aruba: National Decree waivers protected non- indigenous flora and fauna - St.Maarten: Lionfish Response plan (2010), <i>Halophila stipulacea</i> report (2013) - BES islands: Nature Policy Plan, St Eustatius National Marine Park Lionfish Response Plan (2009), Saba Lionfish response plan (2010)

- **UK OTs**

The **UK Post-2010 Biodiversity Framework** covers the period from 2011 to 2020, and was developed in response to the Convention on Biological Diversity's (CBD) Strategic Plan for Biodiversity 2011-2020 and 20 'Aichi Biodiversity Targets' and to the EU Biodiversity Strategy (EUBS).

The CBD acts as the main international treaty for guiding terrestrial conservation activity, informing national level legislation such as the Physical Planning Act (2004).

Each of the 5 UKOTs in the Caribbean region has developed an **Environmental Charter that was signed with the UK Government**. These Charters are formal, individual

agreements, listing commitments to develop and implement sound environmental management practices in the UKOTs and clarifying the roles and responsibilities in terms of environment of the UK Government, Overseas Territory Governments, the private sector, NGOs and local communities.

The **Overseas Territories Biodiversity Strategy** (UKOTBS) for UK OTs is a key tool to enable the UK and OTs Governments to meet their international obligations for the conservation and sustainable use of biodiversity in the OTs. This Strategy delivers strategic priorities, provides an assessment of financial support to address these priorities and improve communication and engagement (UK Government-DEFRA-FCO-DFID 2014).

The 5 UK OTs have several environmental legislations and strategies that provide overall policy guidance on environmental protection, management and biodiversity conservation (Peleme and Cooper 2011, Gardner et al. 2008). Several of these **National legislations and strategies** that are dealing with protected areas, biodiversity and conservation are described in Table 28.

St Georges Declaration of Principles for Environmental Sustainability

The UK OTs of Montserrat, Anguilla and the BVI are members of the Organisation of East Caribbean States (OECS) that developed the **St George’s Declaration of principles for Environmental Sustainability in the OECS** (SGD), which was signed by the OECS Ministers of the Environment in 2001. The SGD is structures around 21 principles providing guidance to Member States in the review of **National Environmental Management Strategies** (NEMS). Among the principles of the SGD, some policy statement concern the assessment of the causes and impacts of climate change (principle 8) and the Protection and conservation of Biological Diversity (principle 13).

Table 28. UK OTs National environmental legislations and strategies dealing with biodiversity and conservation.

National environmental legislations and strategies (agreement, policy, act)	Environmental policy framework in the 5 UKOTs
Biodiversity Strategy & Action Plan	<ul style="list-style-type: none"> - Anguilla: Anguilla National Biological Diversity Strategy and Action Plan (NBSAP) (2009); National Environmental Management Strategy and Action Plan (NEMS); National Environmental Management Strategy and Action Plan (2005-2009); Biodiversity and Heritage Conservation Act; Strategic Country Programme (SCP -2003) - BVI: National Environmental Action Plan (NEAP-2004) - Montserrat: National Environmental Management Strategy (NEMS); Biodiversity Research Protocol; Sustainable Development Plan (2008-2020) - Cayman Isl.: Biodiversity Action Plan (BAP 2009), including 19 Habitat Action Plans and 30 Species Action Plans; National Sustainable Development Strategy (NSDS); National Environment Policy Framework (2002); Cayman Islands Development Plan - Turks & Caicos Isl.: Wildlife and Biodiversity Conservation Bill

National environmental legislations and strategies (agreement, policy, act)	Environmental policy framework in the 5 UKOTs
Legislations and strategies with specific objectives on species and habitats	<p>These agreement and policy establish the need for the protection and conservation of key habitats and species in the 5 UK OTs.</p> <ul style="list-style-type: none"> - Anguilla: Native Plant and Animal Habitat Conservation (Biodiversity) Policy (2001); 3 Acts related to the protection and access to beaches; 4 Acts related to species protection (wild birds, plants, fisheries, trade of endangered species) - BVI: Endangered Animals and Plants Ordinance (1987); Wild Bird Protection Ordinance (1959); Anegada Iguana Species Recovery Plan (2014-2017); Anegada Biodiversity Action Plan (2006); National Wetland Policy - Wetland Management Plan; Beach Protection Act (1985); Coastal Conservation and Management Act (1991); Protected Areas and Wildlife Act (1987); Beach Protection Act - Montserrat: Endangered Animals and Plants Act (1982); Beach Protection Act (1980); Turtles Act (1952); Fisheries Act (2000); Plant Protection Act (1941); Forestry Policy; Species Action Plans (SAPs) developed on 6 species - Cayman Isl.: Biodiversity Action Plan (BAP 2009), Animals Law (2003 revision); Endangered Species (Trade and Transport) Law, 2004 - Turks & Caicos Isl.: Coast Protection Ordinance 1998; Endangered Species Act; Plant Protection Ordinance 1998; Minerals (Exploration and Exploitation) Ordinance (1998)
Management & Protected areas legislations	<ul style="list-style-type: none"> - Anguilla: Anguilla National Trust Act; Marine Park act - BVI: National Parks Act (2006); British Virgin Islands Protected Areas System Plan (2007–2017); Fishing priority areas and protected areas Order (2011); Fisheries Regulations (2004) - Montserrat: Montserrat Forestry, Wildlife, National Parks and Protected Areas Act (1996); Montserrat National Trust Act (1970); Montserrat Conservation and Environmental Management Act (2014) - Cayman Isl.: National Conservation Law (2013); Marine Conservation (Marine Parks) Regulations (2007); National Trust Law (1997 revision) - Turks & Caicos Isl.: National Parks Ordinance 1998; National Trust Ordinance 1992; Fisheries Protection Ordinance 1998; Protected Areas Act.
Climate Change Policy	<p>This policy sets out territory's action plan to mitigate and adapt to the impacts of climate change and provides to guide the work of local governments, statutory, private sector, NGOs and research institutions.</p> <ul style="list-style-type: none"> - Anguilla: Climate Change Policy (2012) and Comprehensive Disaster Management Policy (2013); principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - BVI: British Virgin Islands Climate Change Policy (CCP) (2013)

National environmental legislations and strategies (agreement, policy, act)	Environmental policy framework in the 5 UKOTs
	& Comprehensive Disaster Management (CDM) Policy (2009-2013); principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - Montserrat: Montserrat Climate Change Adaptation Policy (2011-under revision) & Disaster Preparedness and Response Act (1999); principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - Cayman Isl.: Cayman Islands' Climate Change Policy (2011) - Turks & Caicos Isl.: Climate Change Green Paper (2011)
Exotic and invasive species	Strategy and policy providing specific recommendations regarding ports of entry, new invasive species, assessment and management of established invasive species and local community involvement. - Anguilla Invasive Species Strategy & Lionfish Response Plan (2009); principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - BVI: one guiding principle in the BVI Environment Charter that aims to safeguard and restore native species and to control or eradicate invasive species. Principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - Montserrat: principles within the St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS - Cayman Isl.: the Nature Conservation Law includes provision against the introduction of exotic species. - Turks & Caicos Isl.: Guiding principle within the Environment Charter; Plant Protection Ordinance

- **French ORs and OT**

The French **Ministry of the Environment, Energy and the Sea** (Ministère de l'Environnement, de l'Energie et de la Mer) is in charge of the elaboration of the **National Biodiversity Strategy** (NBS) (2011-2020) (Stratégie Nationale pour la Biodiversité -SNB) representing the outcome of French commitments under the Convention on Biological Diversity (CBD). The NBS, which is reinforced by the Grenelle Environment, is a key instrument for national mobilisation to protect and enhance biodiversity in mainland France and in overseas territories.

The **Grenelle Environment** Laws (Grenelle Environment Forum, Grenelle Sea Forum) are national commitments that aim to define key points of Government policy on ecological and sustainable development issues. Several articles related to the Grenelle Environment commitments are directly related to biodiversity conservation, in particular: the conservation of biodiversity, ecosystems and the natural habitats; the prevention of risks to the environment; reducing the effects of climate change.

The **Green and Blue networks**, one of the flagship commitments of Grenelle Environment, aim to rebuild and maintain ecological connectivity in order to ensure the survival of animal and plant species through their foraging, reproducing, migrating and resting activities. This network also contributes to the maintenance of ecosystem services which contribute to biodiversity (e.g. water quality, pollination, flood prevention...).

The **National Strategy of Ecological Transition towards a Sustainable Development** (SNTEDD) (2015-2020) replaces the National Sustainable Development Strategy (SNDD) (2010-2013) by providing a new path to sustainable development with key objectives dedicated to the conservation of biodiversity and the sustainable use of ecosystems.

In terms of water management, French overseas entities are divided into hydrographic basins (including Guadeloupe and Martinique) which all consist of a basin committee, a Water Agency (Agence de l'Eau) and a governing board. Water plans and strategies known as **Schemas Directeurs d'Aménagement et de Gestion des Eaux** (SDAGE- Water Development and Management Master Plan) outline the overall strategic directions in each catchment area.

In overseas entities, the Regional Councils support planning and development actions by implementing the **Regional Development Scheme** (SAR - Schéma d'Aménagement Régional), the **Scheme for Sea Development** (SMVM- Schéma de Mise en Valeur de la Mer) and the **Regional Scheme for Climate, Air and Energy** (SRCAE- Schéma régional du climat, de l'air et de l'énergie).

The **Regional ecological consistency scheme** (Schéma Régional de Cohérence Ecologique - SRCE) is the tool governing the regional implementation of the green and blue belts. It must include 1/100,000-scale mapping of regional ecological connectivity and an action plan.

Local land-use plans (PLU- Plan Local d'Urbanisme) are planning documents that, at the level of a municipality or an inter-municipal grouping, establish an overall planning and development project, and accordingly sets out the general rules of land use for the relevant area.

A number of **international and national conventions, labels and protection tools** aim to highlight, protect and/or enhance the protection of species, habitats and ecosystems:

- at the **international level**: UNESCO Natural or Heritage site, Ramsar sites, Biosphere Reserve (UNESCO), Agoa Marine mammal Sanctuary (over the Lesser Antilles EEZ).
- at the **national level**: National Parks, National Nature reserves, Marine National Park, Biological Reserves, National Hunting and Wildlife Reserves, Classified and Registered Sites, Conservatoire du littoral sites.
- at the **regional and local level**: Regional Natural Park, Regional Nature Reserve, Biotope Protection Order (APB), Natural areas of special ecological, faunal and floral value (ZNIEFF).

Guadeloupe, Martinique, St-Martin (French ORs)

The legal framework of French protected areas (PAs) is based on various legislative and regulatory instruments that are part of the **Environmental Code**.

In 2013, the Regional council of Guadeloupe launched the **Regional Observatory for Energy and Climate** (Observatoire Régional de l'Energie et du Climat -OREC) in partnership with DEAL, ADEME, Météo France and EDF Archipel Guadeloupe. It provides data information on energy and climate to collectivities, companies and government services.

In 2013, the Regional Council of Guadeloupe published the **Atlas des paysages de l'archipel Guadeloupe** (Atlas landscapes of the archipelago Guadeloupe) that aims to provide a comprehensive approach of Guadeloupe landscapes by taking into account the major outcomes of the archipelago.

The same year, the Regional Council of Guadeloupe launched the **Schéma Régional du Patrimoine Naturel et de la Biodiversité** (SRPNB) (Regional Scheme of Natural Heritage and Biodiversity) that aims to provide a decision support tool to identify the outcomes in terms of preservation and enhancement of natural heritage and biodiversity.

In 2014, the General Council of Guadeloupe, with the ONF as the assistant project manager, provided the **Diagnostic des forêts** (Forests Diagnostic), a GIS document that aims to assess the outcomes related to forest ecosystems in Guadeloupe.

St-Barthélemy (French OT)

Since 2007, the oversea collectivity of St-Barthélemy is the competent authority for the environment in its territory. A **Local Environmental Code**, voted by the Territorial Council, is under the jurisdiction of the collectivity and covers several principles related to environment and biodiversity conservation: Management and sustainable development plan for the territory; Natural areas; Major natural hazards; Protection of flora and fauna (European Commission 2015b).

6.4. Network of Protected Areas

In the 15 EU overseas entities, there is about 150 protected areas (terrestrial and marine) that including two marine mammal Sanctuaries and one shark Sanctuary.

- **Dutch OCTs**

A total of **13 protected areas** (6 terrestrial and 7 marine) have been designated in the 6 Dutch OCTs (DCNA 2012; Dilrosun et al. 2012, STINAPA 2005, 2006) (Table 29).

Table 29. Protected areas within the 6 Dutch OCTs in the Caribbean region.

Name	Area	Description
Saba		
Saba Terrestrial Park	35 ha and 6 ha with the Mount Scenery Reserve (created in 1999)	Saba's terrestrial protected areas consist of 35 ha of national Park located in the north-eastern side of the island to the cloud forest at the peak of Mt Scenery, the highest point of the Kingdom (887m). It includes also 16 historic trails and 6 ha-area around Mt Scenery above 550m (property of the local government of Saba) where no dwellings can be constructed. The area was donated by the Sulphur Mining Company to a US NGO called "Friends of Saba Conservation Foundation" that

Name	Area	Description
		supports conservation project on Saba. In 1999, the property was officially turned over to the Saba Conservation Foundation who manages the area.
Saba National Marine Park	1,300 ha (created in 1987)	The Marine Park, managed by the Saba Conservation Foundation , surrounds the island (from high tide mark to 60m deep) and protects seagrass beds and spectacular coral pinnacles. This MPA includes several marine no-take zones.
Saba Bank National Park	Over 268,000 ha (created in 2010)	Management has been mandated by the Dutch Ministry of Economic Affairs to Saba Conservation Foundation through the Saba Bank Management Unit . Saba Bank is located 4 km offshore from Saba island and measures 40 by 60 km. It is considered a coral atoll, though wholly submerged, and it is the 3rd largest atoll in the world. It forms a flat-topped seamount rising 1,800 meters from the sea floor, crowned by a ring of growing coral reef on its fringes. The summit never reaches the water's surface. Most of the bank lies at depths of 20 to 50 meters, but a large area to the east lies between 10 and 20 meters. About one-third of the Saba Bank lies within Saban territorial waters with the rest in the Exclusive Economic Zone waters.
Yarari Sanctuari	Saba EEZ	Yarari marine mammals and sharks Sanctuary has been officially established in 2015 over the EEZ of the Dutch OTs of Saba and Bonaire.
St. Maarten		
Man of War Shoal Marine Park (MOWS MP)	3,100 ha (created in 2011)	The Marine Park is managed by St. Maarten Nature Foundation and includes St.Maarten's most ecologically and economic important marine habitats, such as coral reefs and seagrass beds, over an area known as Proselyte Reef. The Marine Park includes 2 zones: a <i>Conservation zone</i> in which several activities are prohibited (such as the use of water scooters, fishing, sailing with a vessel with a draft of more than 6m, removing live or dead animals or plants, feeding animals) and a <i>Traffic zone</i> that must remain open to shipping at any time.
St. Eustatius		
Quill/Boven National Park	540 ha (created in 1997)	The Park consists of 2 sub-sectors: the Quill mountain (220 ha, everything above 205 m is protected), a dormant volcano of 602 m located in the southern part of the island; and Boven sector (320 ha) located on the northern tip of the island (also called the Northern Hills). These National Parks are managed by STENAPA and cover about 25% of the island's land surface area.
St. Eustatius National Marine Park	2,750 ha (created in 1996)	This area managed by STENAPA comprises a marine park around the entire island (from high-tidemark to 30m deep) and 2 managed marine reserves (no-take zones where fishing and anchoring are prohibited). These 2 no-take zones were established to promote dive tourism and sustainable fisheries.
Curaçao		
Christoffel Park	2,300 ha (created in 1978)	This Park (managed by CARMABI) is the largest national park of the island and has the highest diversity of flora and fauna of the ABC islands, with many endemic and rare species including a population of the White-tailed deer, an endemic sub species. Eight hiking trails cross the Park with one of them reaching Christoffel mountain (378 m), the highest peak of Curaçao. The

Name	Area	Description
		Christoffel Park also harbors unique vegetation types, such as one of the largest contiguous areas of woodland vegetations remaining on the island.
SheteBoka Park	470 ha (created in 1994)	This second Park (managed by CARMABI) is located on the island's rocky north coast and has been designated to protect pocket beaches (also known as "bokas") that constitute important sea turtle nesting sites. In 2012, CARMABI merged the management of SheteBoka and Christoffel Parks to increase park efficiency, reduce the costs and to improve income generation.
Curaçao Underwater Park	600 ha of marine area and 436 ha of inland bay habitats (created in 1983)	It is located in the southeastern part of the island (from high-water to 60m deep) and extends 21 km from the eastern outskirts of Willemstad. It covers 12 km of coastline harboring pristine fringing coral reefs, seagrass beds, mangroves and a high diversity of fish species (c. 350 fishes). The local NGO CARMABI also manages this Underwater Park. One of the main issues is the low level of enforcement in the MPA, mainly due to lack of Government funding.
Bonaire		
Washington Slagbaai National Park	Over 5,600 ha (created in 1969)	The first and largest terrestrial park of Dutch Caribbean. It encompasses the greatest geographic relief of the island, including the highest point (Mount Brandaris) and is managed by STINAPA . This terrestrial Park cover about 19% of the island land area. However, this terrestrial park has never been legally established as a protected area other than through an island zoning plan designation and does not actually have the National Park status (Paul Hoetjes, pers. comm. 2015).
Bonaire National Marine Park	2,700 ha (created in 1979)	The Marine Park is the first marine protected area of the Dutch Caribbean and has been declared as a National Park in 2012. It extends around all Bonaire island and Klein Bonaire, an uninhabited island of 600 ha located c. 1 km off Bonaire's western shore. The Marine Park is managed by STINAPA and extends from high-waters to 60m deep. Since 2008, two no-take zones and 2 no-diving zones are designated within the Marine Park. The Marine Park consists of Bonaire surrounding waters and the mangroves, seagrass beds and coral reefs. The Marine Park is considered as a world leader in conservation management and has been designated a UNEP/ICRAN Demonstration Site for the Caribbean .
Yarari Sanctuari	Bonaire EEZ	Yarari marine mammals and sharks Sanctuary has been officially established in 2015 over the EEZ of the Dutch OTs of Saba and Bonaire.
Aruba		
Parke Nacional Arikok	3,400 ha (created in 2000)	The Park is managed by Fundacion Parke Nacional Arikok . This land area covers about 18% of the island, includes Mount Jamanota (island's highest peak, 188m) and significant areas of cactus scrubs. There are 15 privately owned plots of land within the Park.

Yarari marine mammals and sharks Sanctuary has been officially established in 2015 over the EEZ of the Dutch OTs of Saba and Bonaire (Figure 7, Dutch Caribbean Nature Policy Plan 2013-2017, Debrot et al. 2011).

Yarari Sanctuary is part of the network of marine mammal sanctuaries in the western Atlantic region, with Agoa Sanctuary in the EEZ of the French Lesser Antilles, Silver Banks

Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the Gulf of Maine (USA).

On going projects

Curaçao

- In **Curaçao**, 5 areas will be designated as no-fishing zones (from the shore to 150 m off coast) and will encompass about 30% of the island's coastline: Oostpunt, Spanish Water Bay, St Marie, Lagun and North East.

- **Oostpunt reef conservation:** Proposal for the establishment of a National Park (*Proposed plan for Parke Nashonal Oostpunt*) in the southern part of the island that will include the area of Oostpunt (project leads by CARMABI).

Aruba

- The Government of Aruba with the local NGO Aruba Birdlife Conservation highlighted **16 terrestrial areas** in the Spatial development Plan for the island that are proposed to become terrestrial protected areas ("natuurgebied", Ruimtelijk Ontwikkelingsplan Aruba (Planbeschrijving 2009: Spatial development Plan established by National Decree in 2009). These natural areas are widespread on the island, with some sites located within or in the continuity of Parke Nacional Arikok, the Ramsar site and the 4 IBAs.

This motion has been unanimously approved by the Parliament of Aruba and the Government of Aruba is in the process of implementing the protection of these areas by 2016 (Gisbert Boekhoudt, Robert Kock, Directorate of Nature and Environment pers. com. 2016, Greg Peterson pers. com. 2016).

- Project of creation of a **Marine Park in Aruba:** Currently, there is no MPA around Aruba, therefore four marine areas have been identified in the Island Zoning policy document of 2009 to be managed as marine protected areas (Ruimtelijk Ontwikkelingsplan Aruba - Planbeschrijving 2009). These 4 marine areas gather important coral reefs and seagrass beds, including: coastal and marine areas contiguous to Parke Nacional Arikok, coral reefs close to Oranjestad, "Eastern Cape" Sero Colorado and Mangel Halto-Isla di Oro (Directorate of Nature and Environment, pers. com. 2016).

- Designation (in 2010) and implementation of **Linear Park phase one** (2011). This recreational park is contiguous to the urban areas along the western part of the island and aims to create a vegetated area improving healthy lifestyle (Gisbert Boekhoudt, Robert Kock, pers. com. 2015).

SSS islands

- In **St. Maarten**, a project is under study to establish a **terrestrial park** in order to form, with the Marine Park, a national park system. Several sites are under study for this project: Emilio Wilson Estate, Geneve-Back Bay and the Hill Tops that covers the hillside area from Williams Hill to Sentry Hill (*St Maarten proposed Land Parks management plan*, St Maarten Nature Foundation 2009).

- Another on-going project concerns the extension of the marine protected area on the eastern side of St Maarten (up to Oyster Pond) to include an area of 100 m around the eastern islets (proposed as conservation zones). With this project, the Dutch MPA would be

connected to the French MPA of the Réserve Naturelle Nationale de Saint-Martin, thus creating a transboundary MPA.

- In **Saba**, the island government is considering the possibilities to extend the area of the terrestrial National Park and to establish the North Coast National Park over the entire northern quarter of the island (from the coast to the top of Mt. Scenery).

- **UK OTs**

The 5 UK OTs encompass a diverse network of protected areas with about 900 km² of terrestrial PAs and more than 80,000 km² of MPAs (Table 30). The network of MPAs in the BVI, TCI and the Cayman Islands is currently under revision.

Table 30. Protected areas within the 5 UK OTs in the Caribbean region.

Name	Area	Description
Anguilla		
Marine Park of Anguilla	10750 ha	<p>Marine Parks were created in 1991 and are managed since 1993 by the Department of Fisheries and Marine Resources (DFMR). The Marine Park network comprises 7 zones (Hodge 2011): Dog Island; Sandy Island; Sombrero Island; Prickly Pear Cays and Seal Island Reefs; Junks Hole; Little Bay; Shoal Bay and Island Harbour Reefs. The Marine Parks cover only marine areas around the islets, except for Sombrero Island that is a land-sea reserve (Wynne 2013). The islets of Dog Island, Scrub and Prickly Pear East are privately owned, however licenses and permission for construction must be technically granted by the Government of Anguilla (Hodge et al. 2008).</p> <p><i>Conservation of specific sites</i></p> <p>- 2 wreck sites are protected as “Areas of Historic Interest” under the 1982 Antiquities Ordinance.</p>
East End Pond Conservation Area	5.2 ha	A terrestrial protected area managed by the Anguilla National Trust (ANT) that has been setting up to protect vegetation or ecosystem.
Other terrestrial areas	7.2 ha	<p>Private land owners donate a parcel at Seafeathers in the eastern part of the island and a land along the ironshore in Elsie Bay to the ANT to be managed for conservation purposes (Farah Mukhida, pers. com. 2015).</p> <p>The ANT also has two heritage sites that are protected: Fountain Cavern (approx. 4.86 ha with approx. 0.5 ha vested to and managed by the ANT) and Big Spring. The Fountain Cavern was initially investigated by the Archaeological and Historical Society.</p> <p>The Department of Environment manages 3 ha of land as a scientific and research reserve located in The Valley (Valley Bottom).</p>
Montserrat		
3 terrestrial protected areas	1152 ha	<p>The PAs represent 11% of the total land area and 30% of the volcano safe zone:</p> <ul style="list-style-type: none"> - Centre Hills protected area (1116 ha) - Silver Hills Forest Reserve (30.4 ha) - Foxes Bay Bird Sanctuary (6.1 ha)

Name	Area	Description
		- The Pond Wildlife Reserve and associated conservation area (0.8 ha) have been infilled due to volcanic activity.
BVI		
Terrestrial Protected Areas	15300 ha	- A network with 19 national parks, 20 bird sanctuaries, 1 forestry reserve (Sage Mountain National Park) and 6 watershed protected areas. - The Anegada Nature Reserve: salt pond of over 445 hectares on the Western end of Anegada island. The National Parks Trust of the Virgin Islands (NPTVI) manages 21 terrestrial protected areas, including the national parks and 5 bird sanctuaries. The remaining bird sanctuaries are managed by NPTVI, Jost Van Dyke Preservation Society and the BVI Conservation Department. The Agriculture Department manages 6 wetlands and watershed protected areas and 1 forestry protected area.
MPAs	8,275,900 ha	There is 15 declared MPAs comprising 14 fisheries PAs managed by the Conservation and Fisheries Department and 1 Marine Park managed by the NPTVI. <i>There is presently an on-going project with the pending designation of a new network of MPAs (Gardner et al. 2008).</i>
TCI		
35 PAs: 5 terrestrial PAs and 28 MPAs	71714 ha	- A total of 35 PAs that are mainly managed by the Department of Environment and Maritime Affairs (DEMA) and some of them by the TCI National Trust: - 11 national parks - 11 nature reserves - 4 designated sanctuaries - 9 areas of historic interest <i>The network of MPAs is in revision.</i>
Cayman Islands		
MPAs	10255 ha	- A <i>network of Marine Protected Areas</i> established by the Cayman Islands Department of Environment (DoE): - The MPAs consist of different types of regulations according to the area: Environmental zone (1020 ha), Grouper Hole (766.8 ha), Marine Park (1527.6 ha), No dive zone (263.2 ha), No scuba zone (23.6 ha), replenishment zone (5007 ha) and wildlife interaction area (563.3 ha, zone that restricts interaction with marine fauna such as feeding). Among these zones, the Environmental zone, replenishment zone and Marine Park area specifically protect the marine habitats and species (7554 ha). <i>The network of PAs is in revision.</i>
Terrestrial protected areas	1940 ha	- Terrestrial PAs encompass Animal Sanctuaries (104.2 ha, in Grand and Little Cayman), National Trust properties (1189 ha, in the 3 Cayman Islands) and Environmental zones (established by the Cayman Islands Government, 647 ha in Grand Cayman). - The National Trust PAs include significant areas of the Mastic forest (403 ha in Grand Cayman), 187 ha of the Bluff forest as the Brac Parrot

Name	Area	Description
		Reserve (Brac Cayman) and shrublands of the Salina Reserve in Grand Cayman (252 ha). <i>The network of PAs is in revision.</i>

On going projects

Blue Halo Montserrat (2015-2016): the Waitt Institute partners with the local government of Montserrat to develop and implement science-based and community-driven solutions for sustainable ocean management. The objective is to benefit coastal communities while restoring fish populations and habitats.

Montserrat currently does not have any ocean zoning aside from the Maritime Exclusion Zone, which restricts access to the waters adjacent to the volcano.

The Government of the **British Virgin Islands**, in conjunction with the National Parks Trust has compiled Protected Areas System Plan 2007–2017 that has been approved by Cabinet in 2008. It aims to update the management strategy with the growing complexity of the network of protected areas and to align with the multilateral agreements of BVI. (Gardner et al. 2008).

In the **TCI**, a project is pending for a **new network of Protected Areas** (both terrestrial and marine). The review and consultation process for the proposed amendments to the National Park ordinance (including delineation of boundaries) is in progress and coordinated by DEMA (2015-2016).

- **French ORs and OT**

The 4 French Overseas entities have diverse categories of protected areas that provide a diversity of tools following their conservation objectives (Table 31).

Table 31. Protected areas within the 4 French Overseas entities in the Caribbean region.

Name	Area	Description
Marine Mammal Sanctuary Agoa	143,256 km ²	The overall EEZ of the French Lesser Antilles constitute the Agoa Sanctuary, a marine mammal Sanctuary that has been designated in 2012 to protect marine mammals. Agoa is the second largest French marine protected area. The Agoa Sanctuary is recognized under the SPAW Protocol.
St-Martin		
National Nature Reserve of St Martin	3054 ha	The National Nature Reserve of St-Martin (Réserve Naturelle Nationale de St-Martin-RNSM) has been designated by decree in 1998 and encompasses an area of 3054 ha, including 2796 ha of marine areas, 154 ha of terrestrial areas and 104 ha of ponds (Etang aux Poissons, Salines d'Orient). The RNSM is managed by a local NGO, l'Association de gestion de la RNSM.
Sites of the Conservatoire du Littoral	360 ha	In St-Martin, the Conservatoire du Littoral sets up a partnership with the RNSM for the management of the sites.
Biotope	198 ha	The 16 ponds of St-Martin are protected under Biotope Protection

Name	Area	Description
Protection Order (APB)		Order (APB - Arrêté de Protection du Biotope). These ponds are also recognized as Ramsar sites.
Ramsar sites	2997 ha	- 14 ponds and the marine area of the National Nature Reserve of St Martin.
St-Barthélemy		
National Nature Reserve of St-Barthélemy	1200 ha	The National Reserve (created in 1996) is exclusively marine and encompasses 5 areas: 2 sites are contiguous to the main island and 3 areas are located around islets. Two out of these 5 areas constitute no-take zones and have a highly level of protection ("zones de protection renforcée").
Sites of the Conservatoire du Littoral	1.3 ha	Site of Fort Karl managed by the Agence de l'Environnement de St-Barthélemy.
APB	5.4 ha	1 Biotope Protection Order (APB) on Etang St-Jean.
Guadeloupe		
Man and the Biosphere Reserve (MAB)		The National Park of Guadeloupe has been established within the framework of UNESCO's Man and the Biosphere (MAB) programme.
National Park of Guadeloupe	246715 ha	- Cœurs de Parc National (21850 ha) - Aire optimale d'adhésion (94 065 ha) - Aire maritime adjacente (130 800 ha)
National Nature Reserves	1052 ha	- National Nature Reserves of Petite-Terre (990 ha) - National Nature Reserve of La Désirade (62 ha)
Sites of the Conservatoire du Littoral	1930 ha	
APB	1183 ha	11 Biotope Protection Order (APB) in Guadeloupe archipelago
Classified and Registered Sites		4 Registered Sites (Sites Inscrits) and 6 Classified Sites (Sites Classés)
Ramsar site	29500 ha	Lagoon of the Grand Cul-de-Sac Marin
Martinique		
Regional Nature Park of Martinique	79613 ha	The area of the Regional Park includes 16167 ha of natural areas identified as the Coeur de Nature (Nature's heart) in which occurs a particular réglementation regarding human activities.
National Nature Reserves	392 ha	- National Nature Reserves of the Caravelle (387 ha) - National Nature Reserves of St-Anne islets (5.8 ha)
Regional Nature Reserve of Prêcheur	In progress	- The designation of this Regional Reserve is in progress and encompasses an area of 603 ha (without buffer zones).
Réserve Biologique Intégrale (RBI - Biological Reserve)	6885 ha	3 RBIs occur in the northern part of the island: - RBI de la Montagne Pelée (2285 ha) - RBI du Prêcheur-Grand'Rivière (758 ha) - RBI des Pitons du Carbet (3842 ha)
APB	427 ha	23 Biotope Protection Order (APB)
Sites of the Conservatoire du Littoral	3300 ha	
Classified and Registered Sites		12 Registered Sites (Sites Inscrits) and 4 Classified Sites (Sites Classés)

On going projects

- In Guadeloupe and Martinique, the initiatives REDOM (Réseau Ecologique des Département d'Outre-Mer- Ecological Network for French Overseas Departments) and SRCE (Schéma Régional de Cohérence Ecologique- Regional Scheme for Ecological Coherence) are in progress following the objectives of the Grenelle de l'Environnement and aim to identify and map habitats and species that are ecologically important at a local level (Initiative Trame Verte et Bleue).

- In Guadeloupe, several projects have been or are under study, such as the creation of a Natural National Reserve in Marie-Galante, a Réserve Biologique Dirigée in Grande-Terre, a Réserve Biologique Intégrale in the forest of Basse-Terre, the recognition under SPAW Protocol of Folle-Anse (Marie-Galante).

- Creation of the Biodiversity Observatory in Martinique (Observatoire Martiniquais de la Biodiversité -OMB).
- Several sites encompassing hills and the volcano of Martinique are on the provisional list to be nominated as UNESCO World Heritage Sites.
- In Martinique, the designation or extension of several protected areas are under study: Regional Natural Reserve of the Baie of Génipa, project of extension of the National Natural Reserves of the Caravelle and St-Anne islets, study mission for the creation of a Marine Park within Martinique EEZ.

7. CURRENT STATUS OF THE CONSERVATION COMMUNITY

7.1. International Organisations

Several international NGOs are active in the Caribbean region and have programmes focusing on biodiversity and conservation within the 15 EU overseas entities. These international conservation NGOs work most of the time with the local network of actors and stakeholders or have local branches managed primarily by nationals of the countries where they are based.

An indicative list of the main international NGOs is provided hereafter (this list is not exhaustive and a focus on the concerned EU overseas entities is underlined):

- **BirdLife International** (based in Cambridge, England) is a global network of nongovernmental organisations that focus on bird conservation. In the European entities in the Caribbean region, BirdLife is represented by the **Royal Society for the Protection of Birds** (RSPB) for the UK OTs, by **Vogelbescherming Nederland** for Dutch OTs, by the **Ligue pour la Protection des Oiseaux** (LPO) for French ORs and OT. The BirdLife partnership supports the conservation of bird species and their habitats by the identification of **Important Bird Areas (IBAs)**. A total of 89 IBAs are recognized among the 15 EU overseas entities.

- **Royal Botanic Gardens KEW** (KEW RBG) is an international botanical research and education institution based in the UK and is working with partners in the UKOTs, such as Government Departments, NGOs and civil society, to enable the conservation and sustainable management of their plant diversity and to strengthen local capacities. RBG Kew provides policy advice, technical and practical botanical support with the overall aim of helping UKOTs to implement the Global Strategy for Plant Conservation (GSPC) under the Convention on Biological Diversity.

- **Fauna and Flora International** (FFI) is a global conservation organisation based in the UK and has been active in the Eastern Caribbean since 1995 (FFI's Americas & Caribbean Programme). FFI works in partnership with local communities to protect key species (threatened species, flagship of keystone species) and habitats through conservation programmes. FFI is helping local actors to play a stronger role in management of the natural resources - both terrestrial and marine - on which they depend and to improve their livelihoods. In the 15 EU overseas entities, FFI supported biodiversity projects in Anguilla, BVI, Montserrat, Saba, St. Eustatius and has been particularly involved in invasive species eradication projects.

- **Durrell Wildlife Conservation Trust** is an international conservation organisation based in Jersey (UK). Since 1970s, Durrell has been active in the Lesser Antilles with an office based in St. Lucia. Durrell carries out species-led conservation projects and focuses in the Caribbean region on threatened island ecosystems. For instance, in **Montserrat**, DWC Trust was involved, in partnership with the Department of Environment, in projects focusing on the Mountain Chicken recovery and the Montserrat oriole (*Icterus oberi*). DWC Trust was also involved in the Centre Hills Biodiversity Assessment Project to inform the design of a Management Plan for the Centre Hills and led a 3-year initiative with Defra and Darwin initiative (£237,000) to support the island's biodiversity.

In the **Cayman Islands**, DWC Trust is a partner of the Blue Iguana Recovery Program. In **Anguilla**, DWC Trust has been involved in a project focusing on the Lesser Antillean iguanas.

- **World Wildlife Fund** (WWF) is an international conservation organisation with the global mission is to stop the degradation of the world's natural environment and to build a future in which humans live in harmony with nature, by: conserving the world's biological diversity ensuring that the use of renewable natural resources is sustainable promoting the reduction of pollution and wasteful consumption. The network of WWF offices encompasses WWF-France, WWF-Netherlands and WWF-United Kingdom. WWF-Netherlands's conservation strategy (2013-2016) focuses also in the Dutch OTs of the Caribbean region (Saba, St. Eustatius, Bonaire) with the main objectives to manage protected areas, to promote nature education and to reduce footprint on biodiversity.

- **The Nature Conservancy** (TNC): an international conservation organization that works around the world with in-country organisations in many activities with biodiversity benefits and conservation outcomes, such as the protection and conservation of lands and waters, protected areas management or the control of invasive species. The main office is based in Virginia (USA) and is governed by a worldwide volunteer Board of Directors. TNC was instrumental in organizing the **Caribbean Challenge Initiative** (CCI) gathering 10 countries and territories, including the BVI, in order to take collaborative actions to protect and sustainably manage their marine and coastal environment.

- The **International Coral Reef Initiative** (ICRI) is a global partnership between Nations and organisations that aims to preserve coral reefs and related ecosystems worldwide. The main objectives are to: encourage the adoption of best practices in sustainable management of coral reefs and associated ecosystems; build capacity; and raise awareness at all levels on the plight of coral reefs around the world.

The **Global Coral Reef Monitoring Network** (GCRMN) works as the global network of stakeholders, coordinated by regional "nodes", for the management and conservation of coral reefs. Main goals of the GCRMN are: to strengthen scientific understanding of the global status and trends of coral reefs; to strengthen communication among GCRMN members and provide information on network activities, identify opportunities to participate in regional and global reporting, share information on relevant meetings and involve GCRMN members in future monitoring; to make coral reef monitoring data publicly available online.

Netherlands Antilles Coral Reef Initiative (NACRI) is the national initiative of the Kingdom of the Netherlands that brings together a broad range of organisations and groups to preserve coral reefs.

The **French Initiative for Coral Reefs** (IFRECOR) is the French National Action of ICRI and is by the Ministry of the Overseas and the Ministry of the Environment, Energy and the Sea. This initiative is composed by a national committee and 8 local committees representing the French OTs and ORs.

7.2. Regional and National Organisations and Programmes

The 15 EU overseas entities in the Caribbean region are members or associate members of several regional and national NGOs and programmes related to environmental and sustainable development (Table 32).

Table 32. Major regional and national Organisations and Programmes involving the EU overseas entities in the Caribbean region (References: European Commission 2015ab - EU OCTs Environmental profiles, organisations' websites)

Name	Members*	Objectives
Association of Caribbean States (ACS)	<p>- 32 Contracting States, Countries and Territories of the Greater Caribbean.</p> <p><u>- Associate Members:</u></p> <p>- Aruba, Curaçao, St. Maarten, NL (on behalf of Bonaire, Saba, St. Eustatius)</p> <p>- France (on behalf of St. Martin, Guadeloupe, Martinique, St.Barthélemy)</p> <p>- Turks and Caicos Islands</p>	<p><u>Goals:</u> To strengthen regional co-operation and integration, create an enhanced economic space, preserve the environmental integrity of the Caribbean region, promote the sustainable development of the Greater Caribbean.</p> <p>5 main areas of concern: 1- preservation and conservation of the Caribbean Sea. 2- Sustainable tourism. 3- Trade and economic external relations. 4- Natural disasters. 5- Transport: efficient and viable intraregional air and maritime routes.</p>
Association of Marine Laboratories in the Caribbean (AMLC)	- 27 marine research organisations and institutions, including the School of Field Studies (TCI), CARMABI (Curaçao), CIEE (Bonaire)	This NGO is a confederation of 27 marine research, education, and resource management institutions that aims to encourage the production and exchange of research and resource management information, advance the cause of marine and environmental education in the region, and facilitate cooperation and mutual assistance among its membership.
BirdsCaribbean & eBirds	Insular Caribbean	One of the largest regional NGO (founded in 1988) dedicated to the conservation of wild birds their habitats in the insular Caribbean. With eBirds , it serves as the Caribbean's primary forum to promote on-the-ground conservation action by increasing human capacity, raising awareness, and promoting sound science.
Caribbean Regional Co-ordinating Unit (CAR/RCU)	Wider Caribbean region	The CAR/RCU, located in Kingston (Jamaica), was established in 1986 and serves as Secretariat to the CEP and the Cartagena Convention. The United Nations Environment Programme (UNEP) established the Caribbean Environment Programme (CEP) in 1981 within the framework of its Regional Seas Programme. The CAR/RCU provides the programmatic framework for the Cartagena Convention and its 3 Protocols.
SPAW-RAC	Wider Caribbean region - Countries ratified the	The SPAW RAC aims to assist with the implementation of the SPAW Protocol of the Cartagena Convention.

Name	Members*	Objectives
	SPAW Protocol	This Protocol, signed in 1990, constitutes a legally binding regional environmental agreement protecting marine, coastal and terrestrial ecosystems and wildlife in the Caribbean region. Its objectives are (i) the protection, preservation and sustainable management of areas of particular ecological interest; (ii) the protection and preservation of threatened species; and (iii) the prevention from becoming endangered species in a particular region. SPAW-RAC is hosted by France in Guadeloupe.
Caribbean Marine Protected Areas Managers and Network Forum (CaMPAM)	MPAs in the wider Caribbean region	Initiative created under the framework of UNEP-CEP and SPAW-RAC that brings together MPA researchers, administrators, managers, and educators from governmental entities and non-governmental organizations as well as the private sector in an inclusive network to exchange ideas and lessons learned on MPAs.
Caribbean Natural Resources Institute (CANARI)	CANARI's geographic focus concerns all Caribbean islands, including the 13 independant countries.	This regional non-governmental and multi-disciplinary institute aims to promote equitable participation and effective collaboration in managing the natural resources critical to development. It has provided environmental education and capacity building through the Caribbean Environmental Program. The objectives are laid out in CANARI's Strategic Plan 2011-2016, including the <i>Forests, Livelihoods and Governance</i> and <i>Coastal, Marine Livelihoods and Governance</i> Thematic Programmes; and the <i>Climate Change and Disaster Risk Reduction</i> Issue Programme. CANARI is the Regional Implementation Team (RIT) for the Critical Ecosystem Partnership Fund (CEPF).
CARIBSAVE (INTASAVE Caribbean)		Caribbean non-profit organisation that aims to work with, and support societies, economies, communities and environments in responding to a changing climate; to provide innovative, dynamic and evidence-based tools and solutions. CARIBSAVE is part of the INTASAVE-CARIBSAVE Group, a global non-profit organisation which includes Groups in Africa, Asia-Pacific and UK Europe. Their work is focused on 4 areas: (1) Climate Change Risk and Resilience; (2) Low Carbon Development and Renewable Energy; (3) Society and Sustainable Livelihoods; (4) Biodiversity, Ecosystems and Marine Conservation.
Forum of the Caribbean ACP States (CARIFORUM)	- 16 independant countries in the Caribbean region.	The Forum brings together Caribbean ACP countries with the objective to coordinate policy dialogue between the Caribbean region and the EU and to promote integration and cooperation in the Caribbean.

Name	Members*	Objectives
	<ul style="list-style-type: none"> - <u>EU OCTs and ORs are observers:</u> - Anguilla, BVI, Cayman Islands, Montserrat, TCI - Saba, St Eustatius, Bonaire, Aruba - Guadeloupe, Martinique 	<p>CARIFORUM comprises the Economic Partnership Agreement (EPA) Implementation Unit and the Development Co-operation and Programming Unit.</p>
Caribbean Community (CARICOM)	<ul style="list-style-type: none"> - <u>15 Member States</u>, including Montserrat - <u>5 Associate Members</u>, including: Anguilla, BVI, TCI, Cayman Islands 	<p>CARICOM's main purposes are to promote economic integration and cooperation among its members, to ensure that the benefits of integration are equitably shared, and to coordinate foreign policy.</p> <p>CARICOM Climate Change Task Force aims to advise on policy directions, support CARICOM Member States in their preparations for key regional and other global forums and in their negotiations with international development partners.</p>
Caribbean Community Climate Change Centre (CCCCC)	<ul style="list-style-type: none"> - <u>15 Member States</u>, including Montserrat - <u>5 Associate Members</u>, including: Anguilla, BVI, TCI, Cayman Islands 	<p>The Centre coordinates, as a Centre of Excellence, the region's response to climate change and provides climate change-related policy advice and guidelines to the Caribbean Community (CARICOM).</p>
Caribbean Disaster Emergency Management Agency (CDEMA)	<ul style="list-style-type: none"> - 18 Participating States, including Anguilla, Montserrat, TCI, BVI. 	<p>A regional inter-governmental agency in the Caribbean Community (CARICOM) for disaster management. The Agency seeks to reduce the risk and loss associated with natural and technological hazards and the effects of climate change to enhance regional sustainable development.</p>
Caribbean Environmental Health Institute (CEHI)	<ul style="list-style-type: none"> - <u>15 Member States</u>, including Montserrat - <u>5 Associate Members</u>, including: Anguilla, BVI, TCI, Cayman Islands 	<p>A Technical Institute of the CARICOM that aims to address environmental concerns and further the sustainable development of the region. The Institute's environmental health mandate focuses on the impacts of human activity on the environment and the consequent effects on human health and the socio-economic development of CARICOM States.</p>
Caribbean Tourism Organization (CTO)	<ul style="list-style-type: none"> 30 Member states, including: - 5 UK OTs - NL: St. Maarten, St. Eustatius, Curaçao, Bonaire - FR: St. Martin, Martinique 	<p>The region's tourism development agency that aims to develop sustainable tourism for the economic and social benefit of Caribbean people.</p> <p>It is made up of government and private sector representatives involved with tourism across the Caribbean.</p>
On-	<ul style="list-style-type: none"> - 6 Dutch OCTs 	<p>Non-profit and non-governmental organisation created to assist and support the local Dutch NGOs that have been mandated to manage the protected areas. The DCNA constitute a regional network of nature conservation organisations that provides assistance in terms of research, database management, meetings, training, work plans. DCNA builds local capacity and</p>

Name	Members*	Objectives
		represents regional interests, it also manages a trust fund which, when capitalised, will cover all operational costs for the protected areas within the Dutch OCTs.
Joint Nature Conservation Committee (JNCC)	All UK Overseas Territories and Crown Dependencies	JNCC (public body) is Defra's statutory adviser on environment issues and has an Overseas Territories and Crown Dependencies (CD) Programme which aims to give advice and support to UK, OT and CD governments on nature conservation. JNCC supports an OT network which assists the Territories to identify and support their own biodiversity research and training priorities.
Nature Caribé	Network of 10 Caribbean organisation, including: - CANARI - CARMABI (Curaçao)	A network of Caribbean environmental organisations that are working on joint strategies related to Sustainable livelihoods, Biodiversity conservation, Environmental governance and through practical actions, research, knowledge sharing, capacity building, advocacy, education and outreach.
Association for Overseas Countries and Territories of the European Union (OCTA)	22 members, including the 12 OCTs in the Caribbean region	Non-profit organisation registered in Belgium gathering 22 members (including inhabited EU OCTs and TAAF-French Southern and Atlantic Lands) that aims to promote partnerships among the OCTs, to ensure the promotion of OCTs' interests in Brussels at a political level and to strengthen OCTs' internal communication for reaching out to partners, including the European Union.
Organisation of Eastern Caribbean States (OECS)	- 9 <u>Member States</u> , including Montserrat - 3 associate members represented by Martinique (since 2016), Anguilla and the BVI.	<u>Objectives:</u> Inter-governmental organisation created in 1981 that aims to promote co-operation among its Members and to support their economic integration into the global economy while maximizing the benefits accruing from their collective space. The OECS developed the St George's Declaration of principles for Environmental Sustainability in the OECS (SGD), providing principles that guide the review of National Environmental Management Strategies. <u>Activities:</u> there is an Environment and Sustainable Development Unit (OECS-ESDU) and a Reduce Risks to Human and Natural Assets Resulting from Climate Change Project (RRACC). As part of this project, the EU is financing a 2014 'Global Climate Change Alliance Project on Climate Change Adaptation and Sustainable Land Management in the Eastern Caribbean' for € 10.6 million for Implementation of specific physical adaptation measures, including soil and land stabilisation, river and sea defence, forest and ecosystem restoration.
Small Island Developing States (SIDS)	Member states in the Caribbean region: Anguilla, BVI, Montserrat, Cayman Islands,	Small Island Developing States (SIDS) were recognized as a distinct group of developing countries facing specific social, economic and environmental vulnerabilities at the United Nations Conference on

Name	Members*	Objectives
	St.Maarten, Aruba, BES islands	<p>Environment and Development (UNCED) at the United Nations Conference on Environment and Development (Earth Summit, Rio de Janeiro 1992). The Barbados Programme of Action was produced in 1994 to assist the SIDS in their sustainable development efforts.</p> <p>Three geographical regions have been identified for the location of SIDS, namely, the Caribbean, the Pacific and the Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS).</p> <p>SIDS tend to confront similar constraints in their sustainable development efforts, such as a narrow resource base depriving them of the benefits of economies of scale; small domestic markets and heavy dependence on a few external and remote markets; high costs for energy, infrastructure, transportation, communication and servicing; long distances from export markets and import resources; low and irregular international traffic volumes; little resilience to natural disasters; growing populations; high volatility of economic growth; limited opportunities for the private sector and a proportionately large reliance of their economies on their public sector; and fragile natural environments.</p>
UK Overseas Territories Conservation Forum (UKOTCF)	All UK Overseas Territories and Crown Dependencies	<p>The forum was created in 1987 and formally constituted as a charitable company in 1996. It brings together, as its Members and Associates, conservation and science bodies in the UK Overseas Territories (UKOTs) & Crown Dependencies (CDs) and works with governments and NGOs to assess needs, identify strategies and find funding for conservation activities.</p> <p>It provides assistance in the form of expertise, information and liaison between NGOs and governments, both in the UK and in the Overseas Territories.</p> <p>It aims to promote the coordinated conservation of the diverse and threatened plant and animal species and natural habitats of the UK Territories Overseas.</p>
Wider Caribbean Sea Turtle Conservation Network (WIDECAST)	WIDECAST country coordinators from more than 40 countries and territories in the Caribbean region, including the 15 EU OCTs and ORs.	<p>Regional Activity Network of the UNEP Caribbean Environment Programme comprising scientific volunteer country coordinators (sea turtle experts and community-based conservationists), an international Board of Scientific Advisors, and partner organizations in more than 40 Caribbean States and territories.</p> <p>WIDECAST seeks to bring the best available science to legislation and policy related to the conservation of sea turtles. It is also involved in education, training and outreach programmes and conducts in situ research and population monitoring.</p>

* *Members* focus on the 15 EU overseas entities of the Caribbean region that are concerned by this ecosystem profile.

7.3. National and Local Institutions and Organizations

Each EU overseas entity has several local institutions and NGOs with a mission linked to biodiversity and conservation, with about 20 local institutions and organisations that have management responsibilities for protected areas.

National and local institutions and NGOs perform critical actions on the ground that concern diverse thematics, such as: inventories and ecological monitoring, the creation and management of protected areas, enforcement, participation to research projects, capacity building, awareness, educational campaign and training, natural resources preservation and development.

The list provided hereafter presents the main institutions and NGOs dedicated to biodiversity and conservation and is not exhaustive. See Chapter 6.4 for the description of the network of protected areas.

- **Dutch OCTs**



Nature Conservation in the Dutch OCTs is mandated to non-governmental nature conservation organisations, with one dedicated NGO on each of the 6 Dutch island (Table 33): STINAPA Bonaire National Parks Foundation, Caribbean Research and Management of Biodiversity Institute (CARMABI), Fundacion Parke Nacional Arikok in Aruba, STENAPA St. Eustatius National Parks, Saba Conservation Foundation (SCF) and St. Maarten Nature Foundation.



The mandates of these nature conservation NGOs are anchored in regulations and management agreements. Apart from being responsible for the development and implementation of the management plans, these organisations also have enforcement authority and educational programmes.


The **DCNA** is the regional network created to assist and support the work of these 6 non-governmental nature conservation organisations.



In addition to these 6 NGOs, there is about 25 local NGOs dedicated to the protection of specific areas and/or species (Table 33).

Table 33. Local NGOs in the Dutch OCTs.

NGOs	Description
	<p>Non-profit and non-governmental organisation created to assist and support the local Dutch NGOs that have been mandated to manage the protected areas. The DCNA constitute a regional network of nature conservation organisations that provides assistance in terms of research, database management, meetings, training, work plans. DCNA builds local capacity and represents regional interests, it also manages a trust fund which, when capitalised, will cover all operational costs for the protected areas within the Dutch OCTs.</p>
Curaçao	
	<p>The Caribbean Research and Management of Biodiversity Institute (CARMABI) has been created in 1955 to manage the protected areas and to provide facilities and logistical support to researchers and students. CARMABI is involved in education programmes for schools and manages several nature parks on Curaçao such as the</p>

NGOs	Description
	Christoffel and SheteBoka Parks. This NGO works in partnership with research institutions in the Netherlands and worldwide (USA, Australia,...). CARMABI also conducts research and monitoring programmes in Bonaire and Aruba.
Foundation Uniek Curaçao	Local NGO that aims to maintain and improve the physical and social environment of the island. Its mission is to promote the island in the most ecological and sustainable way. The foundation manages several areas by maintaining hiking trails and organizes educational and public awareness programmes.
Amigu di Tera Curacao (Friends of the Earth)	Amigu di Tera was founded in 1989 to raise awareness on principles of sustainable development and biodiversity in a small island environment. The NGO work focusses on island zoning plans, loss of terrestrial and marine biodiversity, wastes and pollution.
Defensa Ambiental Foundation	Local environmental NGO that aims to preserve Curacao's nature and environment.
Foundation Reef Care Curacao	Local NGOs created in 1992 for the protection and preservation of coral reefs.
Foundations Korsou Limpi i Bunita, Green Force Curacao	Local NGO that brings together local community and schools in volunteer efforts to restore and clean natural environments.
Bat Conservation Curacao - PPRABC	This local NGO promotes and supports specific management actions and legislation for the protection of bat populations by involving institutions and the civil society. It is part of the Latin-American Bat Conservation Network RELCOM (Red Latinoamericana para la Conservación de los Murciélagos).
Bonaire	
STINAPA Bonaire National Park Foundation 	STINAPA is legally mandated by the Island Government to manage Terrestrial and Marine Parks. The NGO has a co-management structure with stakeholders, conservationists and local interest groups represented on the Board.
Foundation Sea Turtle Conservation Bonaire (STCB)	This local NGO ensures since 1991 the protection and recovery of sea turtle populations on the island. Its aims to monitor sea turtle nesting areas, tag sea turtles and conduct public outreach events.
Echo	This local NGO is involved in parrot population monitoring (including nest and chicks monitoring program), parrot habitat, reforestation and the conservation of flora and fauna from Bonaire. It is also involved in educational programs to raise awareness on this threatened bird species and the loss of its natural habitat on the island. Echo is based in Dos Pos over an area of about 1 ha (with a project of extension to 3 ha). Echo conducts bird surveys overall Bonaire island every 2 years and habitat surveys every 5 years.
Jong Bonaire	The Jong Bonaire youth development program provides young people the chance to learn new skills, find potential career paths and receive guidance from professional youth leaders. Environmental activities range from beach cleanups and seagrass protection to the Junior Park Ranger program, gardening and animal husbandry.
Boneiru Duradero	Local NGO created in 2012 named "Sustainable Bonaire" involved in sustainable awareness and activity on Bonaire.
Coral Restoration Foundation (CRF) Bonaire	Non-profit organization founded in 2012 in Bonaire that has a broad expertise in coral restoration programs. It aims to develop affordable, effective strategies to protect coral reefs and train and empower local communities to implement those strategies.
Aruba	
Fundacion Parke Nacional Arikok 	The NGO manages the National Park and is in charge of biodiversity conservation, outreach and communication events (46 members in 2012). The park is engaged with the local community through events and a Junior Ranger programme. The Foundation also acts as advisory body for projects that may impact the environment.
Aruba Marine Park	This local NGO has been created in 2010 to ensure a sustainable use of marine

NGOs	Description
Foundation	resources and to strengthen the protection of the marine environment and wildlife. This NGO seeks to protect the island's marine environment through the establishment of a marine park. The foundation concentrates efforts on the national lionfish control programme and the implementation of a new public mooring programme.
Aruba BirdLife Conservation Foundation	Local NGO (created in 2010) involved in grassroots nature awareness, with focus on bird wildlife of Aruba; Nature conservation lobby work (16 additional areas to PNA); Bird monitoring; Works together with other local NGOs.
StimAruba	Local NGO with more than 300 members and a general nature awareness program. It organizes educational nature walks, outreach events and participate to research on flora and fauna on the island
FANAPA	Fundacion Arubano pa Naturalesa y Parke (FANAPA - Aruba's Foundation for Nature and Parks) has been created in 1971 and is involved in the protection of nature and the environment in Aruba.
Turtugaruba Foundation	Local NGO for the Protection and Conservation of Sea Turtles, focussing on conservation, monitoring, research, education and public awareness.
Aruba Marine Mammal Foundation	AMMF was founded in 2002, for the conservation of wild dolphins and whales and their habitat in Aruba waters, by means of protection, education and research. AMMF is the co-founder of the Wider Caribbean Orca Project, a regional institutional data base cooperation, to collect, consolidate, and analyse data of Orca and other marine mammal species in the Caribbean Region, and collectively publish scientific papers. AMMF coordinates local marine mammals strandings and necropsies; collects sighting data; protects marine mammals at sea; produces conservation awareness education programs and scientific research-projects. AMMF works in alliance with the Aruba Coast Guard (ACG), Aruba Department of Fisheries, the Aruba Veterinary Department (Cites –section), local fishermen.
Aruba Sustainable Development Foundation	Aims to collaborate with local, regional and international partners in addressing barriers and challenges to the sustainable development in Aruba and other island communities around the globe. It is funded jointly by the Aruban and Dutch governments to administer development funds.
St Maarten	
St. Maarten Nature Foundation 	Management of the MOWS Marine Park. The NGO aims to preserve and enhance the natural environment of the island through proper management, education, public awareness, law enforcement, scientific research and monitoring relating to all aspects of the terrestrial, wetland and marine surroundings.
Environmental Protection in the Caribbean (EPIC)	NGO for environmental education and awareness based in the US and St. Maarten. It is the local coordinator of the Blue Flag labels for beaches and marinas, and Green Key Program awarding tourism facilities. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects have included bird research, wetland restoration and conservation, and environmental outreach and education. The NGO conducts bird surveys and is involved in conservation programmes in several Dutch OCTs (Bonaire, St.Eustatius) and in Anguilla.
Emilio Wilson Estate Foundation (EWEF)	NGO dedicated to the protection and conservation of Emilio Wilson Estate and all associated man-made as well as natural monuments in order to maintain the integrity of St. Maarten's history, culture and natural environment for the benefit of present and future generations.
Be The Change Foundation	Charity fundraising group that assists St. Maarten NGOs with raising fund needed for a particular cause while also promoting the mission and objectives of that NGO to encourage volunteerism.

NGOs	Description
St Maarten PRIDE Foundation	Environmental awareness and anti-littering foundation dedicated to the protection, conservation and proper management of St. Maarten's natural resources, its ecological and environmental functions as well as the safeguarding of man-made monuments in order to retain the integrity of St. Maarten's history, culture and natural environment.
St Maarten National Heritage Foundation	NGO in charge of the maintenance of Sint Maarten Museum, the protection and promotion of nature, natural monuments, culture and environment, the promotion of archaeological and historical research.
Sint Maarten Archaeological Center (SIMARC)	NGO created in 1993 that aims to protect and promote the island heritage. The NGO is involved in the identification and mapping of monument national trees.
Saba	
Saba Conservation Foundation (SCF) 	NGO managing Saba National Marine Park, Saba Bank National Park and Saba National Terrestrial Park. This local NGO is also in charge of managing the Saba Trails and the Trail information center. The Saba Bank Management Unit (SBMU) is a separate unit within the Saba National Marine Park. Management falls under the responsibility of the Ministry of Economic Affairs, Agriculture and Innovation (EL&I) and has been mandated by the Ministry to the Saba Conservation Foundation (SCF), which has formed the Saba Bank Management Unit for this task. A steering group consisting of SCF manager, EL&I and the island government is responsible for the overall management and planning.
Sea and Learn Foundation	Non-profit foundation involves in educational programmes that brings together the local community, nature experts, scientists and visitors to understand the value of nature and biodiversity, both worldwide and locally on Saba.
Saba Archaeological Center (Sabarc)	NGO that strives for the preservation of Saba's cultural heritage. Involvement of youth and local community in archaeology and heritage programs and surveys.
St Eustatius	
St.Eustatius National Parks Foundation (STENAPA) 	This local NGO is the only organization on the island with a mandate for environmental protection. STENAPA is legally mandated by the Island Government to manage the Terrestrial and Marine National Parks. Its mission is to preserve, protect and manage island's protected areas; to make these areas accessible to the public and to coordinate scientific research and educational programs. STENAPA also manages the Miriam C. Schmidt Botanical Garden (5.3 ha) that is adjacent to the southern slopes of the Quill National Park. The land is leased by the Island Government to STENAPA and is not subject to any regulations. A fence prevents entry by roaming goats and cows (MacRae and Esteban 2009).

- **Future for Nature Foundation:** This Netherlands-based NGO recognises the protection of species of wild animals and plants and the conservation of nature in general. The **Future for Nature Award** aims to stimulate a new generation of nature conservation leaders. The award is made to candidates of any nationality or residence, not older than age 35, who have achieved substantial and long-term benefit to the conservation status of one or more animal and/or plant species, or that of a specific population. Work related to the conservation and protection of endangered species is a priority. Burgers Zoo in Arnhem, the Netherlands, is the main sponsor of the Future for Nature Award. Burgers Zoo in Arnhem (Netherlands) is the main sponsor of the Future for Nature Award.

- **French ORs & OT**

In the French overseas entities, a high diversity of national and local institutions, organisations and public bodies have missions related to biodiversity and conservation:

- Agence des Aires Marines Protégées (AAMP) - Antenne Antilles - Marine mammal Sanctuary AGOA
- Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME)
- Agence des 50 pas géométriques
- Bureau de Recherches Géologiques et Minières (BRGM)
- Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)
- Centre national de la recherche scientifique (CNRS)
- Comités Régionaux des Pêches Marines et des Elevages Marins de Guadeloupe et Martinique (CRPMEM)
- Conservatoires Botaniques de Guadeloupe et Martinique
- Conservatoire de l'Espace Littoral et des Espaces Lacustres (CELRL)
- Institut français de recherche pour l'exploitation de la mer (IFREMER)
- Institut National de la Recherche Agronomique (INRA)
- Institut de recherche pour le développement (IRD)
- National Museum of Natural History (NMNH)
- Office National de la Chasse et de la Faune Sauvage (ONCFS)
- Office National des Forêts (ONF)
- Office de l'Eau et Comité de Bassin
- National Botanic Conservatories
- University of the Antilles

In addition, numerous local organisations are involved in biodiversity and environment in the French entities. A synthesis of the local organisations per thematic is provided Table 34 and the list of local actors is provided in the Ecosystem profile Factsheets for each EU overseas entity (App. 2).

Table 34. Complementary list of local organisations in the 4 French ORs and OT.

French Overseas entities	Local NGOs
Saint-Martin	
Association de gestion de la Réserve Naturelle de St-Martin	Local NGO in charge of the management of the Natural National Reserve of St-Martin.
Other NGOs	Mon Ecole, ma Baleine (My School, my Whale) - St.Martin Antenna Les fruits de mer (Terrestrial biodiversity)
Saint-Barthélemy	
Agence Territoriale de l'Environnement (Territorial Environment Agency) - Oversea Collectivity of Saint-Barthélemy	Public body in charge of the management of the environment (terrestrial and marine) in the territory, in charge of the management of the Natural National Reserve of St- Barthélemy.
Other NGOs	St-Barth Essentiel St-Barth Environnement et Développement Durable Association pour la Protection des Oiseaux (APO) (Birds) Association ALSOPHIS (Terrestrial biodiversity)
Guadeloupe	
Parc National de Guadeloupe (National Park of Guadeloupe)	Administrative public entity that manages the 246 715 ha of the National Park.
Association Ti-Té	Local NGO that co-manages with the Office National des Forêts

French Overseas entities	Local NGOs
	(ONF) the 2 National Natural Reserves of Petite-Terre and La Désirade.
Terrestrial vertebrates / Bird populations	AMAZONA Association pour l'Etude et la protection des Vertébrés et Végétaux des Petites Antilles (AEVA) Association pour la Sauvegarde et la réhabilitation de la Faune des Antilles (ASFA) Institut Guadeloupéen d'Etudes et de Recherches Ornithologiques de la Caraïbe (IGEROC) Le GAIAC
Biodiversity and Environment (general thematics)	Association Conseil Environnement Développement Durable (ACED) EcoLambda Guadeloupe Nature Environnement Nature Kulture 971 Terre d'Avenir
Plant species / invertebrates	Association Guadeloupéenne d'Orchidophilie (AGO) Association pour l'Etude et la protection des Vertébrés et Végétaux des Petites Antilles (AEVA) Antilles Mollusques (Invertebrates)
Terrestrial vertebrates / Bird populations	AMAZONA Association pour l'Etude et la protection des Vertébrés et Végétaux des Petites Antilles (AEVA) Association pour la Sauvegarde et la réhabilitation de la Faune des Antilles (ASFA) Institut Guadeloupéen d'Etudes et de Recherches Ornithologiques de la Caraïbe (IGEROC) Le GAIAC
Marine mammals / Sharks / Sea Turtles / Marine Environment	BREACH - Antenne Antilles (Marine mammals) Observatoire des Mammifères Marins de l'Archipel Guadeloupéen (OMMAG) (Marine mammals) Mon Ecole, ma Baleine (Marine mammals) Stenella (Marine mammals) Caribbean Lagoons Association Evasion Tropicale (Marine mammals) Ecole de la Mer - Aquarium de Guadeloupe Kap'Natirel - ReguaR (Sea turtles and sharks) Le GAIAC (Sea turtles) Prepasub (underwater archeology) Tamata Terre d'Avenir
Martinique	
Parc Naturel Régional de Martinique (Regional Natural Park of Martinique)	In charge of the management of terrestrial and marine protected areas.
Biodiversity and Environment (general thematics)	Association Entreprises & Environnement Association pour la sauvegarde du patrimoine martiniquais (ASSAUPAMAR) Association pour la Protection de la Nature et de l'Environnement (APNE) Association Mémoire et Patrimoine de St-Anne (AMEPAS) Association pour la Protection et la Défense des Ilets de la Martinique Association Ravelo Association SEVE Carbet des Sciences Eastern Caribbean Coalition for Environmental Awareness (ECCEA) Institut Caribéen pour la Nature et la Culture (ICNC) Société pour l'Etude, la Protection et l'Aménagement de la Nature à la Martinique (SEPANMAR)

French Overseas entities	Local NGOs
Plant species / invertebrates	Association pour la Valorisation des Plantes Médicinales de la Martinique (AVAPLAMMAR) Association Martinique Entomologie Société entomologique Antilles-Guyane (SEAG)
Terrestrial vertebrates / Bird populations	Association Ornithologique de la Martinique (AOMA) Association Le Carouge
Marine mammals / Sharks / Sea Turtles / Marine Environment	Association KAWAN (Sea turtles) Association OCEANvironnement Carbet des Sciences Eastern Caribbean Coalition for Environmental Awareness (ECCEA) Mon Ecole, Ma Baleine - Antenne de Martinique Observatoire du Milieu Marin Martiniquais (OMMM) Société pour l'Etude, la Protection et l'Aménagement de la Nature à la Martinique (SEPANMAR)

Scientific and technical institutions provide biodiversity data information, knowledge dissemination and professional training benefiting institutions and organisations in charge of the management of protected areas.

- The **Technical Workshop for Natural Areas** (ATEN - Atelier Technique des Espaces Naturels) is a network created by the Ministry of Environment to foster managers and stakeholders' professional development. This network offers training programmes, advising on management methods and tools and facilitating technical exchange between managers.
- The **National Botanic Conservatories** (Conservatoire Botanique National) are in charge of inventories of wild flora and natural habitats.
- The **National Museum of Natural History** (Natural Heritage Service) provides overall expertise regarding biodiversity, and manages the National Natural Heritage Inventory (INPN - Inventaire National du Patrimoine Naturel), which includes a reference database on species, habitats and protected areas.

In each oversea region, the **Regional Scientific Council of Natural Heritage** (CSRPN- Conseil scientifique régional du patrimoine naturel) is a body of experts, appointed by the regional prefect and the president of regional and territorial councils, which provide its advices and feedbacks for questions related to biodiversity conservation and management of regional natural heritage. The CSRPN encompasses each discipline of life science and earth for terrestrial, aquatic and marine ecosystems.

- **UK OTs**

Every UK OT has a National Trust organisation. The Trusts play a key role in the management of state-owned properties, with some of them having a historical or cultural value, and are involved in public-oriented activities.

In addition, about 22 local NGOs have an activity related to the conservation of biodiversity and the sustainable use of ecosystems (Table 35).

Table 35. Local NGOs in the 5 UKOTs.

NGOs	Description
BVI	
National Parks Trust of the Virgin Islands (NPTVI)	The Trust has been established in 1961 following the National Parks Ordinance (replaced by the National Parks Act in 2006) and is a Statutory body

NGOs	Description
	under the Ministry of Natural Resources and Labour that is legally responsible for managing the terrestrial and marine protected areas system of the BVI. The Trust manages 19 land-based national parks (5 of which are bird sanctuaries) and one marine park. It proposes the 2007-2017 System Plan, in which more protected areas are proposed. The work includes preservation of all flora and fauna within the parks, maintenance, upgrading of trails and picnic sites and scientific research.
Jost Van Dyke Preservation Society (JVDPS)	NGO (founded in 2004) that aims to promote the conservation of Jost Van Dyke island, its adjacent smaller cays and marine systems through education, research, restoration and monitoring programmes. Since 2013, JVDPS is involved in seabird tracking projects (migrations, mapping of foraging grounds).
Virgin Islands Environmental Council (VIEC)	NGO founded in 2007 that aims to take action to address development issues, to protect wildlife and precious salt pond, creek and mangrove habitats within the BVI.
Caribbean Youth Environmental Network BVI Chapter	The CYEN is a non-profit, civil society, charitable body that focuses its resources on empowering young people and their communities to develop programmes/actions to address socio-economic and environmental issues.
BVI Heritage Conservation Group	A local NGO led by BVI citizens and supported by visitors that aims to preserve BVI's natural resources, history and culture. It provides information about pending development projects in the BVI and about ecofriendly, sustainable solutions.
Green VI	NGO founded in Tortola to help eliminate solid waste in the BVI.
Anguilla	
Anguilla National Trust (ANT)	The NGO (established in 1995 based on the Anguilla National Trust Ordinance) manages lands and sites vested to it for natural, historic or cultural preservation as well as the terrestrial protected areas. It is also involved in environmental education programmes, the development of marine parks management plans, wetlands and terrestrial species monitoring. The ANT relies on volunteers and the public to build local knowledge on species, habitat health, and conservation issues.
Youth Environmental Society of Anguilla (YESA)	Established in 2011, this NGO aims to involve youth community in all aspects of environmental protection and promotion.
Environmental Club at A.L.H.C.S.	The NGO (A.L.H.C.S. Albena Lake Hodge Comprehensive School) aims to promote environmental awareness among young people through various programmes and activities focused on environment (hikes, community and school clean-up, beautification projects). It supports activities of other organizations such as the ANT in the conduct of their educative programmes.
Anguilla Beautification Club	Created in 1999, this NGO is in charge of outreach and educational programmes and is involved in a project of Botanical Garden (under study).
Montserrat	
Montserrat National Trust	Conserve and/or rehabilitate the natural and cultural heritage to include historical sites, artefacts, documents, biodiversity and aesthetics. Public awareness and outreach. Acquisition of property for the benefit of the island. Fund-raising in support of programmes. Provision of advice.
Montserrat Fishermen's Cooperative	Represent concerns of membership. Procure equipment for members; oversee fisheries activities of members; access project funding.
Montserrat Boat Owners / Fishermen Association and Cooperation	Local NGOs representing boat owners and fishermen.
Inspirational Volunteer Journeys	This local NGO is a unique exchange of wisdom, culture, learning and skills that tackle global poverty and truly changes lives.
Montserrat Farmer's Association	Represent concerns of farmers; provides agricultural inputs for resale at competitive prices; access project funding to address priorities
Montserrat Volcano Observatory (MVO)	The observatory monitors air quality and the activity of the volcano, and raises alerts when necessary.

NGOs	Description
Coral Cay Conservation	Coral Cay Conservation is a UK NGO that aims to help to collect data to develop and implement effective grass-roots conservation solutions. An expedition is occurring in Montserrat where the NGO is working since 2013 in partnership with the Government of Montserrat and the RSPB. The project has a holistic approach, with scientific survey programmes to collect data from both tropical forests and coral reefs, accompanied by community education programmes and local capacity building.
Blue Halo Initiative - Waitt Institute	The Waitt Institute is a non-profit organization that endeavors to ensure ecologically, economically, and culturally sustainable use of ocean resources. The Institute partners with governments committed to developing and implementing comprehensive, science-based, community-driven solutions for sustainable ocean management. Our goal is to benefit coastal communities while restoring fish populations and habitats. Our approach is to engage stakeholders, provide the tools needed to design locally appropriate policies, facilitate the policymaking process, and build capacity for effective implementation and long-term success.
TCI	
Turks and Caicos National Trust (TCNT)	TCNT is a non-profit, non-governmental organization created by ordinance in 1992 and is governed by a Council which includes representatives from all the inhabited islands in the TCI. Its mandate is to safeguard the cultural, historical and natural heritage of TCI. The Trust is supported by membership fees, private sponsorship and project grants and fulfils its mission by implementing a range of sustainable projects and initiatives, some of which are revenue generating and used to finance new programs.
Turks and Caicos Reef Fund (TCRF)	The TCRF has been established to preserve and protect the marine and terrestrial environment of the TCI. Funds are generated by selling diving tags, wristbands.
Turks and Caicos National Museum	The National Museum focuses on the islands culture and history. It also manages a Botanical Garden with endemic and endangered plant species.
School of Field Studies	A study abroad organisation committed to study and preserve the ecological health and sustainability of terrestrial and marine ecosystems. The SFS is involved in field-based learning and research through educational programs addressed to students.
Cayman Islands	
National Trust for the Cayman Islands	The National Trust is a statutory body that has powers to buy, lease, sell, hold or deal property of any nature. The Trust has steadily been purchasing lands, currently about 800 ha which have been secured through direct purchase, gifted or by Crown transfer.
Cayman Islands Bird Club	The Club gathers group of individuals with a common interest in bird populations, it conducts annual bird monitoring on Grand Cayman and is involved in bird-related projects.
Cayman Nature	This NGO aims to promote the natural history and environment of Cayman Islands, including flora and fauna.
Cayman Islands Orchid Society	This society is dedicated to preserve Cayman's native orchids and educate members and public on orchid conservation and orchid culture.
Central Caribbean Marine Institute (CCMI)	Created in 1998, CCMI's goal is to conduct and facilitate research, education, outreach and conservation programmes that will sustain marine biodiversity. CCMI is incorporated as a US nonprofit organization, a UK charity and Cayman Islands charity. CCMI programmes provide a solid foundation in education and awareness for students and researchers.

7.4. Research sector

While several research organisations and institutions are based within the 15 EU Overseas entities, a significant part of the research occurring in the region is carried out by research institutions and researchers based in independent states of the Caribbean region, Europe or North America, with a partnership with local universities and research institutions.

Table 36 synthesizes the research institutions, research stations and universities that are based within the 15 EU Overseas entities. Note that these lists are not exhaustive and focus on research dedicated to biodiversity conservation.

Table 36. Research institutions based within the 15 EU Overseas entities.

Overseas entities	Research sector
Dutch OCTs	
National research institutions / Public bodies / Universities	<ul style="list-style-type: none"> - NIOZ Royal Netherlands Institute of Sea research: NIOZ is the national oceanographic institution for the Netherlands, it facilitates and supports fundamental as well as applied marine research and education in the Netherlands (including in the overseas) and Europe. - Institute for Marine Resources and Ecosystem Studies (IMARES) based in Wageningen (NL): The Institute is involved in scientific surveys and environmental monitoring in the Netherlands and its overseas in the Caribbean region. - Naturalis - National Museum of Natural History of the Netherlands: The museum gathers an important collection of species and is involved in research programs in the Netherlands and the OCTs and in an educational program. - Zoological Museum of the University of Amsterdam (Inventories of waterbirds, terrestrial birds and fishes on Curaçao and Bonaire) - University of Aruba, University of Curaçao, University of St. Maarten
Research Stations	<ul style="list-style-type: none"> - CIEE Research Station in Bonaire: provides a learning experience in marine ecology and conservation and is designed to prepare students for graduate programs in marine science, conservation or environmental science. CIEE offers semester and summer courses for American University students and also hosts visiting scientists and faculty-led student groups. - Caribbean Marine Biological Institute (CARMABI) in Curacao: aims to manage the protected areas and to provide facilities and logistical support to researchers and students.

Overseas entities	Research sector
Research Stations	<ul style="list-style-type: none"> - Caribbean Netherlands Science Institute (CNSI) in St. Eustatius: CNSI is a permanent accommodation, research and education base for scientists and students, and for fundamental, strategic, applied and societal and policy relevant research. Its objective is to strengthen the cooperation between Caribbean and European Netherlands, involving local, regional and international partners and knowledge networks focussed on the region. CNSI is part of the NIOZ Royal Netherlands Institute of Sea research.
French ORs and OT	
National research institutions / Organisations / Public bodies / Universities	<ul style="list-style-type: none"> - National Center for Scientific Research (CNRS): governmental research organisation under the responsibility of the French Ministry of Education and Research. - Institut de recherche pour le développement (IRD): focused its research on the relationship between man and its environment, in Africa, Mediterranean, Latin America, Asia and the French tropical overseas territories. - French Research Institute for Exploitation of the Sea (IFREMER): the national oceanographic institution of France. - Institut National de la Recherche Agronomique (INRA): the National Institute of Agricultural Research. - Centre de coopération internationale en recherche agronomique pour le développement (CIRAD): French agricultural research and international cooperation organization working for the sustainable development of tropical and Mediterranean regions. - Museum National d'Histoire Naturelle (MNHN): the National French museum for natural history. - Université des Antilles: based in Guadeloupe and Martinique - Institut Pasteur: biological analyses - Observatory of the Marine Environment in Martinique (OMMM)
UK OTs	
National research institutions / Public bodies / Universities	<ul style="list-style-type: none"> - University College of the Cayman Islands - University College of the Caribbean (Turks and Caicos)
Research Stations	<ul style="list-style-type: none"> - Cayman Islands: Central Caribbean Marine Institute (CCMI) based in Little Cayman - Not-for-profit organization founded in 1998 to protect coral reefs through research, conservation and education programmes. CCMI provides a variety of school, undergraduate, graduate and professional marine ecology and conservation field-oriented education. - Turks and Caicos Islands: School of Field Studies - A study abroad organisation committed to study and preserve the ecological health and sustainability of terrestrial and marine ecosystems. The SFS is involved in field-based learning and research through educational programs adressed to students.

7.5. Private sector

Several private companies occur in the EU overseas entities with activities focusing on nature management and conservation at the local and regional level. A list of these private organisations is provided Table 37 (the list is not exhaustive).

Table 37. Some of the private companies occurring in the 15 EU overseas entities.

EU overseas entities	Private sector organisations and companies
UK OTs	
Anguilla	
Environment Systems	This company, based in the UK, provides geographic and environmental information consultancy and services. In Anguilla, for instance, this company is in charge of terrestrial habitats mapping.
theNRgroup	Association of independent consultants providing a wide range of services promoting sustainable development, consultancy, research, training and advisory services in environment. It is leading a project of benthic resources mapping in Anguilla.
BVI	
Environmental Systems Ltd.	Environmental consulting agency based in the BVI.
Econcerns Ltd.	Company based in the BVI that is involved in environmental research, education, consulting and marine tourism.
TCI	
SWA Ltd.	Company based in the TCI involved in environmental consulting.
Cayman Islands	
Green Tech	This company is involved in Sustainability consulting and education, environmental and carbon assessment, green building product sales.
Montserrat	
Aqua Montserrat	Company involved in marine conservation, public awareness on marine biodiversity outcomes.
Montserrat Island Dive Centre & Scuba Montserrat	Two dive shops involved in marine conservation.
Scribers Adventure Tours	Guided tours that raise awareness on local biodiversity outcomes and conservation (hiking tours, terrestrial ecosystems in general, bat and birds populations).
Montserrat Hydroponics Ltd.	Founded in 2012, this company aims to use sustainable hydroponic growing techniques to supply fresh salads, herbs and other greens to the people of Montserrat. The company is involved in the creation of an educational farm in partnership with the Ministry of Education.
Dutch OCTs	
EcoVision	Environmental consultancy and management firm based in Curaçao. Conduct environmental studies in the Dutch Caribbean.

Wolfs Company	Environmental consultancy specializing in TEEB research (The Economics of Ecosystems and Biodiversity) conducting nature valuation studies in the Dutch Caribbean Islands.
French ORs & OT	
Environmental private companies	<ul style="list-style-type: none"> - Based in EU overseas entities: CREOcean (former PARETO Ecoconsult), Lurel Environment, Caraibe Environnement, Rhea Environnement Antilles, BIOS, Impact Mer, Nova Blue Environnement, Biotope Antilles, SAFEGE, Asconit, OC2 Consultants - Based in France: Biotope, CAREX Environment, TBM

Some resort and private companies in St.Maarten (Divi Little Bay Beach Resort, Isle de Sol Yatch Club), Guadeloupe (Marina Bas-du-Fort) and Martinique (Port de plaisance du Marin) have participated in environmental programmes such as **Blue Flag** for water quality, safety, environmental education and information for beaches and marinas. This programme, administered by the Foundation for Environmental Education (FEE), is an environmental awareness initiative that aims to promote sustainable business practices and to protect valuable natural resources (<http://www.blueflag.global/>).

8. THREATS AND PRESSURES ON BIODIVERSITY

This Chapter provides some information on **the main threats and pressures** affecting islands' biodiversity. The focus is made on the main threats identified for the 15 EU overseas entities of the Caribbean region.

8.1. Evaluation of the threats

Following the **IUCN threats classification Scheme**, Table 38 provides an assessment of the level of threats, as well as potential threats or pressures, affecting biodiversity and ecosystems in the EU overseas entities. Threats are coded as having high, medium or minor impacts (Table 38).

Table 38. Evaluation of the main threats to biodiversity and ecosystems in the 15 EU overseas entities, according to IUCN classification.

Threats	Segrass beds	Coral reefs	Beaches & Coastal areas	Wetlands	Terrestrial habitats (rainforests, dry forests, shrublands,...)	Rivers & Streams	Caves	Islets
1 Urbanization	3	3	3	3	3	3	2	2/3
2 Agriculture & breeding	2	2	1/2	2	3	2	1	2/3
2.1 Agriculture			2	2	3	2	1	2
2.2 Breeding			2	2	3	2		3
3 Extractive industries and energy	2	2	2	2	2	2	1	2
4 Transport infrastructures	2	2		2	2		2	2
5 Biological resources exploitation	3	3	2/3	3	3	2	2/3	3
5.1 Hunting				3	3	2	2	3
5.2 Species gathering		3	3	3	3	2	3	3
5.3 Forestry and wood gathering			2	3	3			2
5.4 Fishing	3	3				2		
6 Human disturbance	3	3	3	3	3	2	2	2
7 Perturbation of natural systems	2	2	3	3	3	3	2	3
7.1 Fires			3	3	3		2	3
8 Invasive species	3	3	3	3	3	3	3	3
9 Pollution	3	3	3	3	3	3	1	2
10 Geological events	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3
11 Climatic and Natural events - Climate change	3	3	3	3	3	3	3	3

Threat levels: 3 major threat - 2 medium threat - 1 minor threat

Information on the main threats are provided in the following section.

8.2. Alien Invasive Species and Exotic Species

Exotic and Alien Invasive Species constitute one of the main threat to biodiversity worldwide and are reported as one of the main cause of species loss in island ecosystems (Petit and Prudent 2008). Some of the non-native species are particularly aggressive and can cause severe ecological damage on native populations, with sometimes serious economic, social and public health repercussions (Petit and Prudent 2008, IUCN - ISSG). These exotic species are therefore recognized as Alien Invasive Species (AIS).

The IUCN - **Invasive Species Specialist Group** (ISSG) is a global network of scientific and policy experts on invasive species, organized under the auspices of the Species Survival Commission (SSC). ISSG has been created in 1994 to promote and facilitate the exchange of invasive species information and knowledge across the globe and ensure the linkage between knowledge, best practices and policy.

In the overall Caribbean region, there is at least 552 exotic species reported, including 390 species regarded by at least one authority as naturalized and/or invasive (Kairo et al. 2003). Recent inventories conducted in the EU overseas entities have documents no less than 211 exotic alien species in the Dutch BES islands (Smith et al. 2014, van Buurt and Debrot 2012), 49 exotic species in the French side of St-Martin, 139 and 163 exotic species in Guadeloupe and Martinique respectively (Asconit Consultants et al. 2013, Soubeyran 2008) and between 30 (Montserrat) and 79 (Cayman Islands) exotic species among the 5 UK OTs (JNCC, Global Invasive Species Database).

The following section provides some information and species lists among the alien taxa recognized as causing significant impacts or being potential threats to native species and natural ecosystems.

- **Examples of invasive plant species:** Several exotic plant species are known to invade natural habitats, suffocating all other vegetation, and prevent the growth of other native and endemic plants, for instance (to cite but a few): Corallita or Mexican creeper (*Antigonon leptopus*), White lead tree (*Leucaena leucocephala*), Rubbervine (*Cryptostegia grandiflora*), Purple nutsedge (*Cyperus esculentus*), Neem tree (*Azadirachta indica*), Sicklebush (*Dichrostachys cinerea*), *Triphasia trifolia*, Water hyacinth (*Eichhornia crassipes*), *Spathodea campanulata*, Common bamboo (*Bambusa vulgaris*). Other AIS include the Arabic tree (*Acacia nilotica*), the Australian Pine (*Casuarina equisetifolia*) in the TCI and Cayman Islands, the Purple Allamanda (*Cryptostegia madagascariensis*) in Montserrat or the Sea lettuce (*Scaevola sericea*) and Brazilian Pepper (*Schinus terebinthifolius*) in the Cayman islands.

Recently, the exotic marine seagrass *Halophila stipulacea* became established in the Caribbean in 2002. It has been reported in 19 of the Eastern Caribbean islands, including the Dutch Leeward Islands of Aruba, Curaçao, the Lesser Antilles and the Virgin Islands (Willette et al. 2014).

- **Invasive fungus and invertebrates:** In Montserrat, the exotic Chytrid fungus (*Batrachochytrium dendrobatidis*) is severely impacting the endemic and threatened Mountain chicken (*Leptodactylus fallax*) by causing skin diseases. In the TCI, the Caicos Pine national tree populations (*Pinus caribaea* var. *bahamensis*) are affected by the invasive pine tortoise scale insect.

In Anguilla, the Pink hibiscus mealybug (*Maconellicoccus hirsutus*) is known as a pest for a wide range of ornamental and crop species.

In the Lesser Antilles and Virgin Islands, the invasive and exotic moth (*Cactoblastis cactorum*) is causing severe damages in *Opuntia* cactus populations.

In Martinique, the exotic Red-rim Melania (*Melanoides tuberculata*) invaded the whole hydrographic system (Delannoye et al. 2015).

Among the numerous exotic invertebrates that are causing considerable damage on native habitats, we can also cite for instance: Giant African snails (*Achatina* sp.), Fire ants (*Solenopsis invicta*), *Acromyrmex octospinosus* Ants, Silverleaf Whitefly (*Bemisia tabaci*), Green peach aphids (*Myzus persicae*).

- **Invasive fishes:** Freshwater native fauna is threatened by exotic fishes such as the tilapias *Oreochromis mossambicus*, *Tilapia* sp. and the guppies *Poecilia* sp.

The invasion of lionfish (*Pterois miles* and *P. volitans*) in the Caribbean sea has recently been recognised as one of the world's top marine conservation issues and may well prove to be one of the greatest threats of this century to Atlantic reefs and associated habitats.

- **Invasive Herptofauna:**

- **examples of invasive amphibians:** the Cuban tree frog (*Osteopilus septentrionalis*) in the Lesser Antilles, Dutch Leeward islands and in Anguilla and the BVI, the Marine toad (*Rhinella marina*), Red Snouted Treefrog (*Scinax ruber*), *Scinax x-signatus* (Edgar 2010).

- **examples of invasive reptiles:** Boa (*Boa constrictor*), Corn snake (*Elahe guttata*), House Gecko (*Hemidactylus mabouia*), Green iguana (*Iguana iguana*), Cuban brown anole (*Anolis sagrei*), Red-eared slider (*Trachemys scripta*)- now established in numerous ponds, the Florida Red-bellied turtle (*Pseudemys nelsoni*), Underwood's Spectacled Tegu (*Gymnophthalmus underwoodi*), Green anole (*Anolis carolinensis*), the Brown Anole (*Anolis sagrei* - introduced in the Cayman Islands), Jamaican Giant Anole (*Anolis garmani*- introduced in the Cayman Islands), Eastern Glass Lizard (*Ophisaurus ventralis*- introduced in the Cayman Islands) (Edgar 2010, Soubeyran 2008). Within the Cayman Islands, the Little Cayman Green Anole (*Anolis maynardi*), which is endemic to Little Cayman, has been introduced to both Grand Cayman and Cayman Brac (Edgar 2010).

Iguana delicatissima vs. the AIS *Iguana iguana*

The **endangered Lesser Antillean Iguana** (*Iguana delicatissima*) has a very small distribution range limited to only few islands of the Lesser Antilles : Anguilla, St-Barthélemy, St-Eustatius, Guadeloupe, Dominica and Martinique (Legouez 2010, Knapp et al. 2014).

I. delicatissima is highly affected by habitat destruction and fragmentation, hunting, and the introduction of exotic predators and competitors, such as cats, dogs and the Green iguanas (*I. iguana*). Common Green iguanas have been moved worldwide for the pet trade. The intentional or unintentional release of these iguanas, that are highly competitive with native iguanas for food and space, has led to the establishment of uncontrolled invasive

populations with subtropical and tropical islands being highly vulnerable. In the EU overseas entities of the Caribbean region, populations of *I. iguana* occur in the Cayman Isl., BVI, Anguilla, St-Martin/St-Maarten, St-Barthélemy, Guadeloupe and Martinique. In 2016, one specimen of the exotic *I. iguana* was discovered on St. Eustatius.

Populations of the Lesser Antilles Iguana has experienced dramatic declines causing the extirpation of some populations such as on the island of St.Martin/St-Maarten. Invasive iguanas can exhibit explosive population growth, such as in Grand Caymans, where Green iguanas have increased from few specimens to thousands of individuals within a decade (IUCN SSC Iguana Specialist group, 2016).

Moreover, the hybridization between Green and Lesser Antilles iguanas constitutes a major threat to the survival of genetically pure *I. delicatissima* populations.

A conservation plan for the Lesser Antilles iguana has been published in 2014 in order to ensure long-term survival of this species that is recognized as a flagship species for the unique biodiversity of the Lesser Antilles (Knapp et al. 2014).

A recent position statement of the IUCN Species Survival Commission (SSC) Iguana Specialist group on non-native invasive iguanas highlighted the pest status of the exotic invasive Green iguana by emphasizing the devastating environmental and economic impacts they can cause on native habitats and species. This invasive species is causing multi million dollar impact on biodiversity, agriculture, infrastructure and tourism. To date, no country has been able to eradicate this invasive once a breeding population has become established (IUCN SSC Iguana Specialist group, 2016). Therefore, in 2016 the IUCN SSC Iguana Specialist group makes some recommendations, especially for islands:

- **territories where invasive Green iguanas are not present:** develop and enforce country-specific regulations to ban importation and prevent accidental introduction of non-native iguanas;
 - **territories where invasive Green iguanas are present in captivity only:** implement education programs focusing on responsible pet ownership, encourage pet sterilization, ban the release of non-native iguanas, provide sanctioned repository for unwanted captive iguanas;
 - **territories where invasive Green iguanas have been recently detected in the wild:** implement well-coordinated and resources action plans to remove non-native iguanas before eradication becomes unfeasible;
 - **territories with established breeding populations of invasive Green iguanas:** eradicate existing populations where possible; if eradication is unsuccessful, implement continual management actions to control population growth and prevent further expansion.
-
- **Examples of invasive birds:** the House crow (*Corvus splendens*) in Curaçao; the Shiny cowbird (*Molothrus bonariensis*) in the Dutch Leeward islands and Lesser Antilles (in Martinique this bird is a threat to the endemic and threatened *Icterus bonana*); sparrow (*Passer domesticus*); Shiny cowbird (*Molothrus bonariensis*); Eurasian collared dove (*Streptopelia decaocto*)
-
- **Invasive mammals** such as Brown and black rats (*Rattus rattus*, *R. norvegicus*, *R. exulans*), house mice (*Mus musculus*), cats (*Felis sp.*) and dogs (*Canis familiaris*) are predators of the native and endemic fauna. For instance, cats and dogs are a serious problem for the endangered Lesser Antillean iguana (*Iguana delicatissima*) and native birds

populations (Hilton and Cuthbert 2010, Soubeyran 2008). In the ABC islands, the endemic Vesper mouse (*Calomys hummelincki*) has been displaced by the rats and mice (van Buurt and Debrot 2012).

Roaming domestic species such as goats (*Capra hircus*), sheep (*Ovis* sp.), cattle, pigs (*Sus scrofa*), donkeys (*Equus asinus*) or deer cause severe damages to native vegetation due to intense grazing and accelerate soil erosion.

The **Small Indian Mongoose** (*Herpestes auropunctatus*) has been deliberately imported in the Caribbean as a biological control agent against snakes and rats in sugar cane fields. It became established in many Caribbean islands having a major negative impact on native fauna including threatened and endemic species such as native snakes, birds or iguanas. In St-Martin/St-Maarten, the introduction of the mongoose has been subsequently linked to the local extinction of the Anguilla Racer (*Alsophis rijgersmaei*), which is now only observed on the islands of Anguilla and St. Barthélemy.

Recently, the **Vervet Monkey** (*Chlorocebus pygerythrus*) has been observed in the islands St-Martin/St-Maarten and Anguilla and is regarded as responsible for declines of bullfinch, dove and trasher bird populations (van Buurt and Debrot 2012).

Other exotic mammals such as the agouti (*Dasyprocta* sp.- observed in Montserrat, Guadeloupe, Martinique or Cayman Islands) or the racoon (*Procyon lotor*- in St.Martin/St.Maarten or Guadeloupe) also occur in overseas entities.

In 2015, an EU regulation came into force in order to address the problem of AIS to protect biodiversity and ecosystem services, as well as to minimize and mitigate the human health or economic impacts that these species can have⁴. This Regulation foresees 3 types of intervention: prevention, early detection and rapid eradication and management.

8.3. Urbanization, Habitat destruction and fragmentation

Urbanization, habitat destruction and fragmentation is among the most significant threats affecting biodiversity, ecosystem functioning and ecosystem services. Habitat fragmentation, through environments' discontinuities, increases the risks to biodiversity by reducing the space available to species and the separation endemic and/or threatened populations.

The destruction of natural ecosystems in overseas entities began with the first human settlers who cleared lands to make space for crops and human installations. Habitat destruction and fragmentation has significantly increased due to the rapid population growth and the increasing pace of development of the tourism industry coupled with a lack of physical planning legislation (Petit and Prudent 2008, EC 2015b).

Wetlands are under severe threat due to habitat draining, filling or clearing and the global area covered by mangroves has declined by 35% during the past two decades (Valiela 2001). For instance, only few pockets of mangroves remain on Aruba, St-Barthélemy, Montserrat or Grand Cayman (EC 2015b).

The development of agricultural activities, such as the cultivation of sugar cane, bananas, coffee and cocoa which are the primary crops in the Caribbean islands, and grazing

⁴ EU Regulation 1143/2014 on AIS:
http://ec.europa.eu/environment/nature/invasivealien/index_en.htm

pressure have led to significant land clearing and constitute a major threat to natural habitats and biodiversity (Petit and Prudent 2008).

Habitat degradation, inadequate coastal development and poor surface water management exacerbate sedimentation runoff into wetlands and marine ecosystems resulting in the degradation or massive die-off of coral reefs, seagrass beds and mangroves.

8.4. Pollution

Natural ecosystems in overseas entities are highly affected by chemical and organic pollution of the air, land, freshwater and sea leading to a growing concern on drinking water and biodiversity. Freshwaters, soils and marine ecosystems have been particularly affected from run-off and pollution arising from the poor management of wastes, sewage and agriculture activities (Petit and Prudent 2008). In the Caribbean, more than 70% of waste water is not treated and discharged to the sea. This increase of nutrients and organic matter in the water results, amongst other negative impacts, in algal growth harmful for coral species (Jackson et al. 2014).

In the French ORs of Guadeloupe and Martinique, chlordecone (an insecticide widely used in banana plantations) led to serious pollution in soils, waters and organisms (Belpomme 2007). A recent assessment of the contamination of marine fauna by this organochlorine pesticide highlighted that crustaceans and fishes living near mangroves with detritivore-omnivore diets are more sensitive to contamination (Dromard et al. 2015).

Marine litter contamination with submerged debris is a wide-spread problem and considered to be one of the most serious threats to sustainable use of the region's marine and coastal resources.

Marine traffic and oil refineries also constitute a significant potential threat to surrounding waters, coastal and marine ecosystems. *Environmental Sensitivity Index maps* are an integral component of hazardous events and help in the assessment of an oil spill and its possible impact on the coastal environment. Additionally the maps can help identify the critical areas for shoreline clean-up activities.

8.5. Biological resources exploitation

The unsustainable and over-exploitation of species and natural resources through fishing, hunting and wood extraction constitutes a major threat to islands biodiversity (Petit and Prudent 2008). According to the FAO, over 35% of marine species stocks in the Caribbean region are considered as overexploited (fully fished, over-fished, depleted or recovering). The over-exploitation of marine species, such as herbivorous fishes and sea urchins, constitute a main threat to the functioning of coral reefs due to the increase in the abundance of macroalgae (Jackson et al. 2014).

Intensive poaching of natural resources as well as poaching in protected areas remain an important issue, particularly for sea turtles, reef fishes, sharks and invertebrates. The lack of

enforcement capacity to adequately patrol and enforce protected areas is a major concern in most overseas entities (EC 2015b).

8.6. Hunting and trade of species

Species hunted for food or sport include many threatened and/or endemic species, such as: the Mountain chicken in Montserrat; sea turtles (especially nesting females and eggs); iguanas and mammals, such as the Guinea pigs (*Hutia* sp.) that occurs in the TCI. Many species of birds are hunted for food or sports, particularly waterbirds and game birds, including the vulnerable and endemic Forest Thrush (*Turdus Iherminieri*) that is listed in the game birds species list in Guadeloupe, the vulnerable West Indian whistling-duck (*Dendrocygna arborea*), pigeons and doves.

Species collection for the pet, aquarium or horticultural trade is a major threat for native species with many of them reported as threatened and/or endemic. These species are therefore more attractive and commercially valuable. Many plant species, such as cacti, orchids, bromeliads or ferns, are negatively impacted by poaching for species collection. Concerning invertebrates, poachers target diverse taxa including butterflies, beetles, arachnids, marine and terrestrial snails or reef invertebrates. Concerning bird populations for instance, the Yellow-shouldered Amazon parrot in Bonaire (*Amazona barbadensis*) and the Cuban Parrot (*Amazona leucocephala*) in the Cayman Islands are highly threatened due to illegal collection for trade. Poachers destruct the nests and sell chicks and adult parrots into the illegal local and international pet parrot trade. In the Cayman Islands, the local policy and strategy for the Grand Cayman Blue iguana (*Cyclura nubila*) ensures no further collection of specimens for the private pet trade (Species recovery plan 2009-2011).

8.7. Extractive industries

Extracting and mining activities for gravels, sand, stones and other construction materials are responsible of the loss of natural habitats and habitat fragmentation.

For instance, sand extraction from beaches and dunes exacerbates coastal erosion, thus increasing the impact of natural disasters, and contributes to significant loss of the sea turtles nesting areas. Illegal sand mining also occurs on several islands, such as on Zeelandia beach in St. Eustatius, in Anguilla or the BVI (EC 2015b).

8.8. Geological and Natural events

All the EU overseas entities in the Caribbean region are highly vulnerable to the negative impact of natural events, such as storms, storm surges, hurricanes, earthquakes, tsunamis, and volcanic activities.

Volcanic eruptions have caused severe damages to many islands, such as in 1902 in Martinique, in 1976 in Guadeloupe and in Montserrat with The Soufrière Hills eruption in 1995 and following years. In Montserrat, the two-third of the island is presently an exclusion zone and has been evacuated.

8.9. Climate Change

Climate change is a major threat to global biodiversity and more particularly to small islands as the biological populations of insular species are generally small, localized, with limited means of migration and often highly specialized (Petit and Prudent 2008). Island ecosystems, such as coral reefs or tropical rain forests, are very sensitive to any change in their environment (i.e. temperatures, sea levels, floods and intense droughts...) and the resilience of these ecosystems can be severely exacerbated by climate change.

Major impacts have already been recorded in most of these low lying islands, such as rising temperature (in the air and the sea), ocean acidification, coral bleaching events, coastlines erosion, change in precipitation and wind patterns, floods, landslides, sea level rise, intensification of El Niño phenomenon as well as tropical storms and hurricanes. The IPCC (Intergovernmental Panel on Climate Change) already indicates that there has been an increase in the incidence of Category 4 and 5 hurricanes in the Caribbean region over the past 30 years (IPCC 2014).

One of the most visible impact of climate change in the Caribbean region's biodiversity is **coral bleaching**. This phenomenon, that is due to the expulsion of the coral symbiotic algae called zooxanthellae leading to the starvation of the coral, has already affected most the Caribbean coral reefs. In 2005, water temperature in the Caribbean region exceeded 29°C for 6 months and was particularly warm in the Eastern islands. This heat wave caused the bleaching of more than 90% of reefs around some islands. The consequence of this massive bleaching event leads to a high rate of mortality of coral species that were already weakened due to human negative impacts (Wilkinson and Souter 2008). Even if coral reef mortality rate was particularly high around some islands of the Lesser Antilles (40% in Guadeloupe), it was minimal in the Greater Antilles (such as around the Cayman islands). This variation of recorded death rates on coral reefs was related to a variable resilience of reefs, with a greater level of mortality in areas where reefs are weakened by human impacts (i.e. pollution, sedimentation, over-exploitation of fishes...) (Wilkinson 2008).

9. ASSESSMENT OF CURRENT INVESTMENTS

This chapter provides an assessment of the **main investments dedicated to biodiversity conservation and the sustainable use of ecosystems in the 15 EU overseas entities**. The objective is to identify funding sources that can be mobilized for the implementation of the BEST Regional Investment Strategy (RIS).

A desk review was first conducted from institutions and organisations reports and Web sites, grant makers' Web sites and interview with local actors and stakeholders. Information has been validated locally during meetings and bilateral consultation of local actors and stakeholders.

The source of funding listed in this chapter are those **having direct benefits to biodiversity conservation and management**. Projects active in 2016 or those planned in the coming years are also indicated. It is important to notice that the list is not exhaustive. It is also important to note that access to these funding is very different from one source to the other. As detailed funding information was sometimes quite hard to obtain, precise amounts of funding are provided when available.

This chapter provides information on different source of funding: **European funding**, **Regional funding** at the scale of the Caribbean region, **National funding** (dedicated either to UK OTs, Dutch OCTs or French overseas entities) or **Local funding** (from local Governments or institutions) (Table 39).

Particular information on these funding is provided in the following sections.

Table 39. Some funding at the European, National or Local levels for the 15 EU overseas entities in the Caribbean region*.

	5 UK OTs	6 Dutch OCTs	3 French ORs & 1 OT
European Level	<ul style="list-style-type: none"> • BEST Initiative • BEST 2.0 (5 OCTs) • EDF (5 OCTs) • EAFRD • LIFE Programme • EU NetBiome, EU FP Horizon 2020 • INTERREG Caribbean 	<ul style="list-style-type: none"> • BEST Initiative • BEST 2.0 (6 OCTs) • EDF (6 OCTs) • EAFRD • LIFE Programme • EU NetBiome, EU FP Horizon 2020 • INTERREG Caribbean 	<ul style="list-style-type: none"> • BEST Initiative • BEST 2.0 (1 OT) • EDF (1 OT) • ERDF (3 ORs) • EAFRD • LIFE Programme • EU NetBiome, EU FP Horizon 2020 • INTERREG Caribbean
National & Local Level	<ul style="list-style-type: none"> • UK Defra - Darwin Initiative • Dfid, DECC, FCO, Fera • UK OTs Governments, Governor's Office • AFD - FFEM • JNCC • UKOTCF • RSPB • Royal Botanic Gardens Kew 	<ul style="list-style-type: none"> • Ministry of Economic Affairs • Ministry of the Interior and Kingdom Relations • NL OCTs Governments • AFD - FFEM • DCNA - Trust Fund • Prince Bernhard Nature Fund • WWF Netherlands • Vogelbescherming 	<ul style="list-style-type: none"> • Ministry of the Environment, Energy and the Sea - DEAL (3 ORs) • Ministry of Overseas - IFRECOR • Ministry of Education and Research - ANR • AFD - FFEM • Regional and General Councils (1 OR) • Overseas collectivities (2OR & 1OT)

	5 UK OTs	6 Dutch OCTs	3 French ORs & 1 OT
	<ul style="list-style-type: none"> • Mohamed bin Zayed Species Conservation Fund • Fauna & Flora International - Flagship Species Fund • WWF UK • Ruffors Foundation • Durrell Wildlife Conservation Trust • OTEP <i>-not available anymore</i> 	Nederland <ul style="list-style-type: none"> • Green Funds Scheme • Future for Nature Foundation • UNEP - CEP-SPAW RAC 	<ul style="list-style-type: none"> • National Parks & National Nature Reserves • UNEP - CEP-SPAW RAC • AAMP, CELRL, ONF, ONCFS, ONEMA • WWF France • TEMEUM • Fondations, i.e. TOTAL, Nicolas Hulot, Nature et Découvertes, Fondation de France • Fonds Bleus

* This table provides some examples of funding schemes, complementary information is provided in the sections below.

9.1. European funding

EU institutions are one of the main donor for the EU overseas entities in the Caribbean region.

The **European Development Fund (EDF)** is the main instrument for providing development aid to African, Caribbean and Pacific (ACP) countries and to overseas countries and territories (OCTs). In the Caribbean region, this fund concerns the 6 Dutch OCTs, the 5 UK OTs and the French OT of St-Barthélemy. The EDF is financed by direct contributions from EU Member States.

However, due to their high GDP per capita some EU OCTs (Cayman Islands, BVI and St-Barthélemy) are not eligible for bi-lateral allocation under the EDF but can access the EDF-OCT Caribbean regional envelope of €40 million for cooperation in the area of sustainable energy and marine biodiversity (European Commission 2015, <https://ec.europa.eu/europeaid>).

The total financial resources of the 11th EDF for all European member states amount to €30.5 billion for the period 2014-2020. A part of these financial resources (364.5 million€) will be allocated to the EU OCTs with about 93.7 million€ dedicated to the OCTs in the Caribbean region (European Commission 2015, <https://ec.europa.eu/europeaid>). It is importante to note that this a general amount of the EDF that is not fully dedicated to biodiversity and conservation.

The **Global Climate Change Alliance Project (GCCA)**, that started in 2014, is funded by the 10th EDF and several EU Member States (Ireland, Sweden, Estonia, Cyprus and the Czech Republic). About €234 million have been committed to support the mainstreaming of climate change into national or regional development planning, to adapt programmes in climate-sensitive sectors such as agriculture, coastal zone protection, land and water management and to strengthen vulnerable territories to tackle climate change.

In the Caribbean, the GCCA is supporting the 17 member countries of the Caribbean Forum (CARIFORUM) through the Caribbean Community Climate Change Centre (CCCCC). As part of this project, the EU is financing, in partnership with the OECS, a GCCA Project on

"Climate Change Adaptation and Sustainable Land Management in the Eastern Caribbean" for € 10.6 million. The project concerns OECS Member States (thus including **Anguilla, British Virgin Islands, Montserrat**) and intends to address the issue of sustainable land management on the basis of a comprehensive and integrated regional approach.

The **European Regional Development Fund (ERDF)** aims to strengthen economic and social cohesion in the EU by reducing disparities between its regions and focuses its investments on several key priority areas, with some of them related to biodiversity conservation: Environment and risk prevention; Research and technological development; Culture; Tourism; Energy or Education.

The ERDF 2014-2020 has a global budget of €183.3 billion. In the Caribbean region, it concerns the 3 French ORs of St. Martin, Guadeloupe and Martinique (EC, <http://ec.europa.eu/>).

It is important to notice that the ERDF Programme for the Overseas Collectivity of **St.Martin (ERDF 2014-2020)** has **no line in budget dedicated to biodiversity and ecosystem services**.

The **INTERREG Caribbean** cooperation programme (INTERREG IV 2007-2013 and INTERREG V 2014-2020) focuses on cooperation between the ORs of Guadeloupe, French Guiana, Martinique and Saint Martin, and around 40 third countries and EU OCTs in the Caribbean basin. The programme is supported by the ERDF, with research under way into coordination with the EDF and focuses on several priority areas, including: Protecting the cultural and natural environment by improving the management of vulnerable or protected spaces and by jointly developing sustainable tourism in the Caribbean; Increasing natural hazard response capacity by improving knowledge of natural hazards and putting in place shared risk management systems. Several projects have been funded through the INTERREG IV (2007-2013) (Table 40) and a budget of 64 million Euros is available for the INTERREG V Caribbean (2014-2020), with 19 million Euros dedicated to Sustainable management and the prevention of natural hazards. ERDF funds 75% of this budget, the remaining is funded by Région Guadeloupe, Région Martinique (since 2016), the Overseas collectivities of St-Martin and St-Barthélemy and private funding.

Table 40. INTERREG IV projects funded in the EU overseas entities in the Caribbean region through the Operational Programme 2007-2013.

Lead organisation or institution	Project	Funding
11 Caribbean islands States, ORs and OCTs, including the French ORs of Guadeloupe and Martinique	Caribbean Hydrological Cycle Observing System (Caraïbes Hycos).	€ 1.7 million (with €802,855 from ERDF)
Guadeloupe: University of the Antilles - Laboratoire GRIMAAG	Vegetation coverage classification using texture analysis on high resolution satellite images (CESAR).	€ 27,477 (with €20,607 from ERDF)
Martinique: Union des groupements de producteurs de banane de Guadeloupe et Martinique (UGPBAN)	Banane durable: the project aims to ensure innovative and sustainable farming practices and to develop alternative methods to fight against pests.	€ 5.5 million (with €4.1 million from ERDF)

Lead organisation or institution	Project	Funding
Guadeloupe: Office National des Forêts (ONF)	Protection and valorization of coastal wetland ecosystems.	€ 1.1 million (with 872,275 from ERDF)
Conseil Général de la Martinique	Caribbean Cluster on Natural Hazards and Sea (CaribRiskCluster).	€ 858,191 (641,801 of ERDF)
IRD Martinique	CARIBbean Environmental Information SATellite System (Caraibes Sat).	€ 2.8 million (with €1.9 million from ERDF)
IFREMER Martinique	Fish Aggregation Devices (FADs) in the Lesser-Antilles (MAGDELESA).	€ 1.4 million (with €1.0 million from ERDF)
University of the Antilles in Guadeloupe	Modélisation numérique des risques naturels marins des les Antilles.	€ 580,000 (with €435,000 from ERDF)
Observatoire Volcanologique et Sismologique de Martinique	Implementation of the tsunami warning in the Antilles.	€ 2 million (with €1.4 million from ERDF)
CIRAD Guadeloupe	Caribbean network for the prevention and sustainable control of emerging diseases of bananas (Cabaré).	€ 1.5 million (with €990,263 from ERDF)

The EU's rural development policy is funded through the **European Agricultural Fund for Rural Development** (EAFRD) with a global budget of €100 billion (€11.3 billion for France, €5.2 billion for the UK, €765 million for the Kingdom of the Netherlands) that is dedicated over the period 2014-2020 (EC, <http://ec.europa.eu/>). The EU framework for rural development programmes includes priority areas such as: Restoring, preserving and enhancing ecosystems related to agriculture and forestry; Promoting resource efficiency and supporting the shift toward a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors.

EU LIFE Programme

LIFE ("L'instrument financier pour l'environnement") is the EU's financial instrument supporting environmental, nature conservation and climate action projects. The LIFE Programme includes priority areas focusing on: Nature & Biodiversity; Environment; Climate Action. The LIFE Nature & Biodiversity provides targeted funding for projects that aimed at conserving threatened habitats listed in the annexes of the EU Habitats Directives as well as supporting specific actions within Natura 2000 sites (The Natura 2000 Directive does not apply in the European overseas entities of the Caribbean region).

In 2016, LIFE Programme launched a call for action grants with a total budget of €337 million. Of this amount, €273 million will be allocated to the sub-programme for environment and €63 million for climate action. At least 55% of the environment allocation will be dedicated to projects supporting the conservation of nature and biodiversity (EC; <http://ec.europa.eu/environment/life/about/>).

Recent EU LIFE projects dedicated to biodiversity conservation have been previously funded in the Eu overseas entities (Table 41).

Table 41. Recent LIFE projects dedicated to biodiversity conservation and climate change in EU overseas entities.

Overseas entities	Project	Amount
Guadeloupe (French OR)	LIFE SIRENIA (2014) - First demonstration of reintroduction of West Indian Manatee in the Grand Cul-de-Sac Marin Bay, Guadeloupe <i>Duration of the project:</i> 2015/2021 <i>Lead applicant:</i> Parc National de Guadeloupe	€ 5.9 million (with €3.5 million of EU contribution)
Martinique (French OR)	CAP DOM (2009) - Conserving French overseas threatened bird species and their habitats using demonstrative conservation tools. <i>Duration of the project:</i> 2010/2015 <i>Lead applicant:</i> Ligue pour la Protection des Oiseaux (LPO) <i>Partners within the French OR of Martinique:</i> France Association Ornithologique de Martinique (AOMA) (local NGO)	€ 2.2 million (with €1.1 million of EU contribution)

Reference: EC Environment Life Programme: <http://ec.europa.eu/environment/life/project/Projects/index.cfm>

EU Framework Programmes - Research funding

The EU Framework Programmes for Research and Technological Development (FP1 to FP7 and FP Horizon 2020) support and foster research in EU. The Horizon 2020 Programme has a budget of €70 billion available over 7 years (2014 to 2020).

- **BiodivERsA** is a network of 31 research-funding agencies across 18 European countries. It is an ERA-NEt Co-fund, funded under the EU's Horizon 2020 Framework Programme for Research and Innovation. BiodivERsA works to coordinate national research programmes on biodiversity across Europe and to organize international funding for research projects in this field, on a competitive basis.

EU NetBiome Programme

The **NetBiome CSA Programme** (2013-2016) is a project funded by the EU Framework Programme 7 CSA Scheme and coordinated by the Fundo Regional para a Ciência (FRC) of Azores (Portugal). This programme aims to strengthen research partnerships and cooperation for smart and sustainable management of tropical and subtropical biodiversity in ORs and OCTs (<http://www.netbiomecsa.netbiome.eu/>). The total budget was €1.1 million, with €999,615 from the EU. In the 15 EU entities of the Caribbean region, 4 organisations have participated to the programme: Région Guadeloupe, Parc Naturel Régional de Martinique, Ministry of Economic Affairs (Netherlands), Naturalis Biodiversity Center (Netherlands).

NetBiome CSA Programme provided policy recommendations and priorities for research cooperation in biodiversity management in the EU overseas.

The **Net-Biome ERA-Net consortium** (2007-2012) funded projects that strengthened partnerships between scientists in order to enhance research in EU overseas by bringing

together complementary skills and expertise. A total of 7 projects (with a global budget of €3.1 million) have been funded in 2010, including projects occurring in the EU overseas entities of the Caribbean region:

- **Project Frag & Binv - Consequences of forest fragmentation and conditions for biological invasions: The case of Caribbean Birds.** Three out of the 4 territories involved in the project are located in the Caribbean region: Guadeloupe and Martinique (ONCFS), Montserrat (Department of Environment). Total grant awarded for the project: 368,800 €.
- **Moveclim - Montane vegetation as listening posts for climate change:** the project involved 11 partners of 6 territories, including the Conservatoire Botanique de Guadeloupe and the National Park of Guadeloupe. Total grant awarded for the project: 419,000 €.
- **SafePGR - Towards safer plant genetic resources through improved viral diagnostic:** 7 partners are involved in the project, included the CIRAD-AGAP Research Unit (Centre de Coopération Internationale en Recherche Agronomique pour le Développement) Guadeloupe. Total grant awarded for the project: 553,227 €.
- **Seaprolif - Diversity and functioning of coastal marine biomes under siege: implications of seaweed proliferations across three oceans.** 8 partners are involved in the project, including the University of the Antilles in Guadeloupe. Total grant awarded for the project: 496,518 €.
- **Vabiome - Characterization, protection, sustainable use and valorization of vanilla biodiversity in tropical EU.** Five partners from French ORs and OCTs in the Caribbean, Pacific and Indian Ocean, including the National Park of Guadeloupe. Total grant awarded for the project: 259,020 €.

EU BEST Initiative

The **BEST initiative** – which stands for Voluntary scheme for Biodiversity and Ecosystem Services in EU Outermost Regions and Overseas Countries and Territories – has been launched in 2010 by the European Parliament to promote conservation and sustainable use of biodiversity and ecosystem services in EU Outermost Regions (ORs) and Overseas Countries and Territories (OCTs).

The first two years of the **BEST Preparatory Action (2011 and 2012)** have been implemented through two open calls with a budget of 2 million Euros per year. In the Caribbean region, € 1.3 million were allocated to support 4 projects through this Preparatory Action (Table 42).

The third and last year of the **BEST Preparatory Action** is dedicated to the development of regional Ecosystem profiles for all the 34 EU OCTs and ORs that will enable to identify conservation targets in European Overseas and to define and articulate a five-year Regional Investment Strategy (RIS) for BEST. This project is coordinated by the **BEST III Consortium**, an international consortium of 10 partners led by IUCN, and aims to achieve the transition to sustain BEST activities in the 7 regions of the EU overseas.

Recognizing the urgency to keep support for projects on the ground while a long-term BEST financing mechanism is being elaborated, the European Commission's Directorate General for International Cooperation and Development (DG DEVCO) has decided to allocate new resources for concrete projects in the 25 Overseas Countries and Territories (OCTs) through a five-year programme called BEST 2.0. This funding programme is supported by DG DEVCO as part of the EU Biodiversity for Life flagship (B4Life). In the Caribbean region, 12 OCTs are eligible to the BEST 2.0 grant programme: Aruba, Bonaire, Curaçao, Saba, St-

Eustatius, St-Maarten, Anguilla, Montserrat, Turks & Caicos, British Virgin islands, Cayman islands and St-Barthélemy.

Recognizing the urgency to keep support for projects on the ground while a long-term BEST financing mechanism is being elaborated, the European Commission's Directorate General for International Cooperation and Development (DG DEVCO) has decided to allocate new resources for concrete projects in the 25 Overseas Countries and Territories (OCTs) through a five-year programme called BEST 2.0. This funding programme is supported by DG DEVCO as part of the EU Biodiversity for Life flagship (B4Life). Capitalizing on the BEST III initiative, the Best 2.0 programme will - amongst others - support implementing actions in the Key Biodiversity Areas identified through the participative Ecosystem profiles process led by the BEST knowledge hubs.

The **BEST 2.0 grant programme** has been launched in 2015 with 2 open calls for medium and small grants. **In the Caribbean region**, the call for medium grants (< €400,000) has been launched in 2015 and 4 projects have been awarded in 2016 (Table 42).

The call for proposals for small grants has been launched in April 2016 and will enable to fund projects up to €100,00. For the Caribbean and Pacific region, around €1.8 million will be allocated to the EU OCTs through the small grant programme.

Table 42. EU BEST projects funded in the Caribbean region

Target territories	Project - Lead applicants and co-applicants	Amount
BEST Preparatory Action: 4 projects funded in the Caribbean region (2011-2012)		
Martinique (French OR), St. Eustatius (Dutch OT), Grenade	<p>Project CARIPES: Quantification of ecosystem services provided by marine protected areas (MPAs) in the Caribbean with a view to their payment. Valuing the ecosystem services provided by select MPAs to engage fishers' support and to instigate discussion of payments from the users to the fishers.</p> <p>Lead organisation: Université des Antilles et le Centre de recherche sur les pouvoirs locaux dans la Caraïbe (CRPLC)</p> <p>Project Factsheet: http://ec.europa.eu/environment/nature/biodiversity/best/pdf/fs_caripes.final.pdf</p>	Total: 348,700 €
Martinique (French OR)	<p>Project EcoServPlantain: Quantification of Ecosystem Services in Agroecosystems, case of Plantain banana in Martinique. Measuring the ecosystem services of plantain field systems especially in terms of conservation of arthropods and plant diversity, of regulation of pests, and of production, with a view of guiding the development of sustainable agricultural practices in tropical agrosystems.</p> <p>Lead organisation: CIRAD</p> <p>Project Factsheet: http://ec.europa.eu/environment/nature/biodiversity/best/pdf/fs_ecoservplantain_final.pdf</p>	Total: 69,041 €
All 34 EU ORs and OCTs	Project MANG: Giving impetus to a collective movement in favour of the preservation of coastal wetlands in EU OTs. Establishing	Total: 601,284 €

Target territories	Project - Lead applicants and co-applicants	Amount
	<p>and promoting a method to assess the value of coastal wetlands, and promoting management measures engaging and supported by public and private stakeholders.</p> <p>Lead organisation: Atelier Technique des Espaces Naturels (Aten) and the Conservatoire du Littoral (CELRL)</p> <p>Project Factsheet: http://ec.europa.eu/environment/nature/biodiversity/best/pdf/fs_mang.final.pdf</p>	
5 UK OTs: Anguilla, BVI, TCI, Cayman Isl., Montserrat	<p>Conserving Species and Sites of International Importance by the Eradication of Invasive Alien Species (IAS) in the Caribbean UK OTs. Addressing the threat and demonstrating best practices for the prevention, control or eradication of IAS to protect threatened seabirds, iguanas and land-bird species and their habitat.</p> <p>aims to protect threatened species and safeguard internationally important sites by eradicating IAS in the Caribbean OTs, sharing best practice and building local capacity, with a focus on invasive vertebrates.</p> <p>Lead organisation: RSPB</p> <p>Co-applicants and affiliated entities: Anguilla National Trust; Trust for Cayman Islands; National Parks Trust for the Virgin Islands; Jost Van Dyke Preservation Society; Turks and Caicos National Trust and the Department of Environment of Montserrat.</p> <p>Project Factsheet: http://ec.europa.eu/environment/nature/biodiversity/best/pdf/fs_rspb_final.pdf</p>	Total: 284,511 €
BEST 2.0 Grant Programme: Open calls for medium and small grants dedicated to the EU OCTs		
BEST 2.0 Medium Grants - Caribbean region (2016): 4 projects awarded		
5 UK OTs: Anguilla, BVI, TCI, Cayman Isl., Montserrat	<p>Title: Securing pockets of paradise in the Caribbean; embedding capacity for invasive alien species management in UKOT based organisations</p> <p>Duration of the project: 36 months</p> <p>Lead organisation: RSPB in partnership</p> <p>Co-applicants and affiliated entities: The National Parks Trust for the Virgin Islands (NPTVI); National Trust of the Cayman Islands; Dpt of Environment of Montserrat /Ministry of Agriculture, Trade, Lands, Housing and Environment; Montserrat National Trust; TCI National Trust; Anguilla National Trust (ANT)</p>	Total: 442,243 € with 398,541 € from BEST 2.0 (90.1%) and 19,673 € from RSPB, NPTVI, TCI Nat.Trust
Aruba (Dutch OC)	<p>Title: Marine Park Aruba</p> <p>Duration of the project: 36 months</p> <p>Lead organisation: Directorate on Nature and Environment (DNM)-Government of Aruba</p>	Total: 297,984 € with 297,984 € from BEST 2.0 (83.8%)

Target territories	Project - Lead applicants and co-applicants	Amount
	Co-applicants and affiliated entities: The Netherlands Organization for Applied Scientific Research TNO	and 57,369€ from DNM
Anguilla (UK OT)	Title: Saving the sea turtles of Anguilla: combining community action with scientific evidence to drive legislative change Duration of the project: 36 months Lead organisation: Department of Fisheries and Marine Resources DFMR Co-applicants and affiliated entities: Anguilla National Trust, University of Roehampton / WIDECAST	Total: 438,262€ with 394,976 € from BEST 2.0 (90.1%) and 43,262€ from ANT
Dutch OCTs: Saba, St.Eustatius, St.Maarten UK OT: Turks and Caicos Isl.	Title: Restoration of Ecosystem Services and Coral reef Quality (RESCQ) Duration of the project: 36 months Lead organisation: IMARES Co-applicants and affiliated entities: Saba Conservation Foundation, St Eustatius National Parks, Nature Foundation St. Maarten, Turks & Caicos Reef Fund	Total: 395,000€ with 335,000 € from BEST 2.0 (84.8%) and 60,000€ from the Dutch Ministry of EZ

9.2. National and Local Governments Funding

EU overseas entities receive funds from conservation programs originating from the countries they are politically attached to: France, the Kingdom of the Netherlands and the United Kingdom.

UK OTs

National fundings

Three UK government departments are primarily responsible for providing support to the UKOTs on environmental issues: the Department for Environment, Food and Rural Affairs (Defra), the Department for International Development (Dfid) and the Department for Energy and Climate Change (DECC).

- The **Department for Environment Food and Rural Affairs** (Defra) is responsible for policy and regulations on environmental, food and rural issues. Defra leads on developing and implementing a biodiversity strategy with the UKOTs. The Strategy sets out clear objectives on biodiversity and ensures co-ordinated working between Defra, FCO and Dfid on biodiversity. Defra chairs an Overseas Territories' Biodiversity Group (OTBG) which meets quarterly to discuss progress on the UKOT Biodiversity Strategy.

Defra provides funding for a number of different projects related to biodiversity and conservation in the UKOTs through the **Darwin Initiative**, the **Defra's Flagship Species Fund**, **Directed research and development fund**, **co-financing on specific projects**.

For instance, in 2011/2012, Defra provided a grant of £50,000 for the RSPB-led project through the EU BEST Preparatory Action in order to support actions against alien invasive species in OTs. In 2011, Defra provided £100,000 towards a Foresight Project on the International Dimensions of Climate Change.

- The **Department for International Development** (Dfid) provides financial and development support to OTs. Since the volcanic eruptions, which began in 1995, the UKOT of Montserrat has been unable to return to self-sufficiency and the economy remains weak. Thus, DFID provides annual financial support to the island (about £19.2 million in 2015-2016) in order to ensure its recovery from severe natural disasters.

Defra is providing technical advice to a DFID-led project that aims to address climate change impacts in the UKOTs (Defra 2012).

- The **Department for Energy and Climate Change** (DECC) works to make sure the UK has secure, clean, affordable energy supplies and promote international action to mitigate climate change.

- The **Darwin Initiative** is a cross-Government environmental funding scheme (joint-funded by Defra and Dfid) that has been providing funds for biodiversity conservation and sustainable-use projects in UK OTs (through the Darwin Initiative Overseas territories Challenge Fund). Since 1998, Darwin has provided £3.8 million for scoping projects and main projects in the UK OTs.

The **Darwin Plus** (or Overseas Territories Environment and Climate Fund) provides funding, with the contribution of Defra, Dfid and FCO, for scoping potential projects in the UKOTs. The fund dedicates around £2 million per year to support environment and climate projects in the UK OTs (<https://www.gov.uk/guidance/darwin-plus-applying-for-projects-in-uk-overseas-territories>).

Between 2009 and 2016, the Darwin Initiative awarded about 30 projects in the 5 UKOTs in the Caribbean region totalling £3.9 million (Table 43).

Table 43. Recent Darwin Initiative (2009-2016) projects funded within the 5 UK OTs in the Caribbean region.

UK OTs	Project	Funding
TCI	Project: Developing biodiversity management capacity around the Ramsar site in Turks and Caicos Islands Years: 1999-2002 - Project leader: CABI International - Egham	£124,800
Montserrat	Project: Reducing the impact of feral livestock in and around the Centre Hills Years: 2009-2011 - Project leader: RSPB	£144,236
5 UK OTs of the Caribbean region	Project: Building civil society capacity for conservation in the Caribbean UKOTs Years: 2009-2012 - Project leader: Commonwealth Foundation	£262,755
TCI	Project: Management plans implementation and Ramsar designation expansion in the TCI	£24,464

UK OTs	Project	Funding
	Years: 2010-2012 - Project leader: Gov. of the TCI	
Cayman Islands	Project: Darwin Initiative to enhance an established protected area system, Cayman Islands Years: 2010-2013 - Project leader: Bangor University	£273,914
Montserrat	Project: Enabling Montserrat to save the Critically Endangered mountain chicken Years: 2010-2013 - Project leader: Durrell Wildlife Conservation Trust (DWCT)	£232,484
Cayman Islands	Project: The threatened Cayman Brac parrot: a flagship for conservation Years: 2012 - Project leader: National Trust for the Cayman Islands	£21,350
Anguilla, Montserrat	Project: Advancing marine ecosystem management in UKOTs Years: 2012 - Project leader: Fauna & Flora International	£24,950
5 UK OTs of the Caribbean region	Project: Upgrade and revision of reef survey resource Years: 2013	£8,000
TCI	Project: Biodiversity and food security: developing collaborative policy for seagrass conservation Years: 2012-2013 - Project leader: Cardiff University	£24,458
TCI	Project: Developing multi-sector strategies for marine resource use, management and conservation Years: 2012-2013 - Project leader: Marine Conservation Society	£24,762
Anguilla	Project: Anguilla national ecosystem assessment - a foundation for green economy Years: 2012-2014 - Project leader: Gov. of Anguilla	£22,200
Cayman Islands	Project: Assuring Engagement in Caymans Enhanced Marine Protected Area System Years: 2013-2014 - Project leader: Bangor University	£190,000
5 UK OTs of the Caribbean region	Project: Seed conservation in the Caribbean UKOTs Years: 2013 - 2015 - Project leader: RBG Kew	£95,755
Anguilla, BVI	Project: Using seabirds to inform Caribbean marine planning Years: 2013 - 2015 - Project leader: Univ. of Liverpool	£226,367
Anguilla, Cayman Isl.	Project: Promoting the creation and appropriate management of protected areas in Anguilla and the Cayman Islands Years: 2013 - 2015 - Project leader: Anguilla National Trust (ANT)	£193,568
BVI	Project: Conserving plant diversity and establishing ecosystem based approaches to the management of forest ecosystems in the British Virgin Islands Years: 2013 - 2015 - Project leader: National Parks Trust of the Virgin Islands (NPTVI)	£83,915
Montserrat	Project: Enhancing economic development through improved natural resource management on Montserrat Years: 2013-2015 - Project leader: Coral Cay Conservation	£90,200
Cayman Islands	Project: Coral nursery project in Little Cayman: enhancing resilience and natural capacity of coral reefs in the UKOTs Years: 2013 - 2015 - Project leader: Central Caribbean Marine Institute	£41,631
Anguilla	Project: Anguilla National Ecosystem Assessment (NEA) - towards a green economy Years: 2014 - 2016 - Project leader: Gov. of Anguilla	£190,500

UK OTs	Project	Funding
BVI	Project: British Virgin Islands MPA and hydrographic survey capacity building Years: 2014 - 2016 Project leader: Cefas - Centre for Environment, Fisheries and Aquaculture Research	£253,443
Cayman Islands	Project: Socioeconomic aspects of turtle conservation in the Cayman Islands Years: 2014-2016 - Project leader: Gov. of Cayman Islands	£149,904
TCI	Project: Caicos pine forests: mitigation for climate change and invasive species Years: 2014-2016 - Project leader: RBG Kew	£199,693
BVI	Project: Building systems and capacity to monitor and conserve BVI's flora Years: 2015 - 2017 - Project leader: RBG Kew	£99,896
BVI	Project: BVI seabird recovery planning programme Years: 2015 - 2017 - Project leader: Univ. of Roehampton	£47,907
Cayman Islands	Project: Sustainable management of threatened keystone predators to enhance reef resilience Years: 2015-2017 - Project leader: Marine Conservation International	£173,439
Anguilla	Project: Mapping Anguilla's Blue Belt Ecosystem Services Years: 2016 -2018 - Project leader: Cefas	£271,238
BVI	Project: Consolidating local capacity for sustainable restoration in BVI Protected Areas Years: 2016 -2018 - Project leader: NPTVI	£85,413
Cayman Islands	Project: Assessment, protection and actions for important seabird populations in the Cayman Islands Years: 2016-2018 - Project leader: Gov. of Cayman Islands	£201,985
Montserrat	Project: Maximising long-term survival prospects of Montserrat's endemic species and ecosystem-services Years: 2016-2018 - Project leader: UK Overseas Territory Conservation Forum	£165,400

- Joint Nature Conservation Committee (JNCC)** is Defra's statutory adviser on environment issues and has an Overseas Territories and Crown Dependencies Programme which aims to provide advice and support to UKOTs and CDs on nature conservation. JNCC provides funding for OTs and CDs participation in regional or international meetings or training sessions and technical workshops. Those workshops are focussing on progressing areas that are high priority for OTs, more recently these workshops focussed on: lionfish (2013), OT data access (2015), GIS (2015) and MPAs (2014). JNCC is also currently piloting and co-funding, on behalf of the Foreign and Commonwealth Office (FCO), environmental mainstreaming projects.

JNCC pilotes the **Blue Turtle Award**, an annual award (£1,500) for nature conservation work undertaken by an OT and CD conservation award individual or group of individuals,

from OTs and CDs , who have made a valuable contribution to nature conservation in their Territory or Dependency.

Moreover, JNCC is periodically able to offer financial contributions to biodiversity research in the UK OTs. Up to two invitations will be issued each year to members of the 'UK Overseas Territories and Crown Dependencies Steering Group', inviting them to submit requests for contributions to biodiversity research projects.

- The **Foreign and Commonwealth Office** (FCO) leads on overall UK Government's policies in the UKOTs (with the exception of the Sovereign Base Areas of Cyprus). In terms of biodiversity conservation, FCO provided funding to several projects, such as: a RSPB-led project for a 'stock take' of species in UK OTs conducted in partnership with local Governments and NGOs; a project in TCI focusing on sustainable fisheries; a JNCC-led project that aimed to develop environmental value mapping tools for OTs; workshops on lionfish organized by JNCC in the Caribbean region with the objective to enable UKOTs to develop long term response strategy against this invasive species.
- The **Food and Environment Research Agency** (Fera) aims to encourage the UKOTs to accede to the International Plant Protection Convention (IPPC) as part of the UK's acceptance, in order to give them the basis on which to protect their Territory from plant pests and diseases.
- The **Overseas Territories Environment Programme** (OTEP), that was jointly funded by the Foreign & Commonwealth Office (FCO) and the Department for International Development (Dfid), started with an initial funding of £3 million over 3 years. It aimed to support OTs with the implementation of the Environment Charters and environment management more generally. OTEP has been operational between 2003 and 2011.

Local Governments fundings

Within the local Governments of the UK OTs, the Departments in charge of the environment provide funding for local actions dedicated to biodiversity conservation: Department for the Environment and Maritime Affairs (DEMA) of the TCI, the Department of Environment (DoE) of the Cayman Islands, the DoE of Anguilla, the DoE of Montserrat, the Department of Conservation and Fisheries of the BVI.

Moreover, the **Governor's Office** provides annual fundings to UK OTs through the **Overseas Territories strategic Programme Fund** (OTSPF) of the United Kingdom's Foreign and Commonwealth Office. The overall strategic aim is to safeguard the sovereignty of UK OTs, promote their economic well-being and natural environments and manage the contingent liabilities of the UK Government in respect of its international obligations in the Territories. The funded projects focus on a variety of topics, including environmental and biodiversity issues. For instance, the Governor's Office provided funds for DEMA in the TCI for a training on lionfish control (\$10,000 in 2014), to the DoE of the Cayman Islands to conduct research on green turtle populations (2013-2014), to Queen Elizabeth II Botanic Park in the Cayman Islands to construct a Woodland trail (2013-2014), to training education programme in Anguilla (2014).

Moreover, in the Cayman Islands, the Government Environmental Protection Fund (EPF) was established in 1997 through a levy of US\$ tax per person departing the territory (between US\$ 2 to 4). It was originally intended that the Fund should assist with the acquisition of land in environmentally sensitive areas (European Commission 2015b).

In the TCI, a Conservation Fund gathering 1% tax from hotels and restaurants was established by the local Government to provide funding to actions of the Protected Areas Division, to the National Environment Centre and the Community Conservation projects. This fund has been dissolved in 2012.

Dutch OCTs

At the National level, the main funding provided to Dutch OCTs for projects dedicated to biodiversity and conservation are provided by the Dutch Parliament, the Ministry of Economic Affairs and the Dutch Ministry of the Interior and Kingdom Relations.

- The **Ministry of Economic Affairs** (EZ) promotes specific policy for innovation and enterprise to support businesses in areas where it is really necessary. This makes the ministry of Economic Affairs the central access point for government information and services in the area of innovation, export and financing. The Ministry also provides support for Dutch business abroad through economic diplomacy, for example, and assistance from embassies and consulates.

The Ministry is also responsible for the decision making process, funding, supervision and promotion of the projects in the BES islands (i.e. the Dutch OTs of Bonaire, Saba and St. Eustatius). In 2013, the Ministry approved a **Nature policy plan** (2013-2017) for the BES islands. This plan is based on the BES Principles of Nature Protection and Management Act and provides a framework for solid management and sustainable use of nature in the Dutch OTs. Its objective is the sustainable use of nature and biodiversity in order to preserve the ecological systems and ecosystem services.

The Ministry of Economic Affairs has an annual budget of about €1.1 million for nature conservation and management in the BES islands, of which €500,000 is earmarked for research, monitoring and reporting and for the implementation of the National Government's tasks concerning agriculture and fisheries (Nature Policy Plan for the Dutch OTs 2013-2017). In 2012, the Ministry of Economic Affairs allocated US\$ 50,000 for DCNA to work on the content management aspects of the Dutch Caribbean Biodiversity Database.

- The **Dutch Ministry of the Interior and Kingdom Relations** (BZK): this Ministry of the Dutch central government is responsible for Home Affairs, Civil service, Intelligence and the relations with the other countries in the Kingdom of the Netherlands, namely the Dutch OCs of Curaçao, St Maarten and Aruba. The Ministry aims to formulate policy, prepare legislation and regulations, and is also responsible for coordination, supervision and policy implementation.

From 2006 to 2016, the Ministry of the Interior contributes to the DCNA Trust Fund with an annual contribution of €750,000. In 2012, the Ministry provided an additional €235,000, which was used to cover the operational costs of running the Secretariat and the Board as well as funding the regional conservation work of the DCNA.

Islands' Governments fundings

The Dutch Islands' Governments provide subsidies to projects dedicated to biodiversity and environment. These incomes are provided to local NGOs in charge of the management of PAs (DCNA Annual report 2012, European Commission 2015b).

Protected areas-related fees

Most of the funding available for nature management in the Caribbean Netherlands is generated by users fees. The budget generated through these protected-areas fees constitute a significant part of the total budget earmarked for nature management (i.e. 14% in St. Eustatius, 53% on Saba and 85% in Bonaire) (European Commission 2015b).

FR ORs and OT

In France, fundings for biodiversity conservation are allocated by the Ministries, State Services, Public administrations, Regional and general councils and overseas collectivities.

French Government

- **Ministère de l'Environnement, de l'Energie et de la Mer** (French Ministry of the Environment, Energy and the Sea).

The Ministry is responsible for the State Environmental Policy and has direct responsibility for most types of protected areas in overseas entities. The Ministry is represented by the **Prefet** and the **Direction de l'Environnement, de l'Aménagement et du Logement** (DEAL - Direction of Environment, Land Use Planning and Housing) in the OR of Guadeloupe as well as in the overseas collectivities of Martinique and St.Martin. The DEAL implements national environmental policies in these Overseas region and collectivities and pilotes the declination of the National Biodiversity Strategy, a specific action plan addressing the specific ecological context of overseas entities.

Fundings to implement the objectives of this strategy are allocated to the DEAL by the Ministry of the Environment, Energy and the Sea including:

- Annual subventions and functioning subsidies for National Natural Reserves and National Parks. In Martinique, the DEAL allocates 260,000€ per year for the National Reserves and 120,000€ per year for the Regional Park of Martinique. In Guadeloupe, the DEAL allocates 258,924€ per year for the National Reserve of St-Martin, 209,000€ and 75,150€ per year for the National Reserve of Petite-Terre and Désirade, respectively.
- Subventions dedicated to studies, projects and actions related to biodiversity conservation.
- Call for tenders (e.g. for inventories, monitoring).

- **Ministère de l'Outre-Mer** (French Ministry of Overseas)

The Ministry of Overseas is responsible for overseeing the Overseas departments and territories of France. It coordinates, with the Ministry of the Environment, Energy and the Sea, the **French Initiative for Coral Reefs** (IFRECOR).

Funding dedicated to biodiversity that are allocated by the Ministry of Overseas include:

- fundings dedicated to IFRECOR;
- research projects in overseas entities;
- subventions to local organisations.

- **Ministère de l'enseignement supérieur et de la recherche** (Ministry of Education and Research) - *Funding dedicated to research*

The **French National Research Agency** (ANR - Agence Nationale de la Recherche) is a public body under the authority of the Ministry of Research and Education. The ANR provides funding for project-based research in all science fields (both basic and applied research) through an internationally compliant competitive peer review process; grant recipients include public research organisations, universities, and companies big and small. The investments for the future programmes represent 47 billion Euros of which 26.6 billion Euros are allocated to higher education and research.

Public administrations

Several public entities provide technical supports and fundings in terms of biodiversity conservation or the sustainable use of ecosystems in overseas entities. These public administrations can constitute fundings to award projects dedicated to the biodiversity and conservation. Some of these fundings are detailed hereafter:

- **French Development Agency** (Agence Française du Développement-AFD): AFD is a public financial institution and the main implementing agency for France's official development assistance to developing countries and French Overseas Departments and Collectivities. Its action is in line with the policy set out in France's Framework Document for Development Cooperation. AFD supports States, local Governments or NGOs through loans, grants, guarantees or technical assistance. In 2014, AFD earmarked a total of 8.1 billion of Euros including 1.5 billion Euros committed to French Overseas entities (AFD 2014).

The AFD funded the BEST project MANG that aims to improve coastal wetlands conservation and management.

- The **French Facility for Global Environment** (FFEM - Fonds français pour l'environnement mondial) is a public financial fund managed by AFD that has been established by the French Government in 1994 and aims to promote protection of the global environment and biodiversity in developing countries. The FFEM is mandated to cofinance development projects with high environmental component in the areas of biodiversity, the greenhouse effect, international waters, land degradation and desertification, persistent organic pollutants and the stratospheric ozone layer and strengthen regional cooperation. Eligible countries are all developing countries. French overseas territories may also request FFEM grants through regional projects, with a contribution that cannot exceed 25% of the overall project amount.

In the Caribbean region FFEM did not fund or co-fund any project yet.

- **Conservatoire du Littoral et des Rivages Lacustres** (Coastline and Lakeshore Protection Agency-CELRL): this public administrative institution is in charge of the protection of coastal areas entrusted to it or assigned by public or private owners. Lands may be acquired on the basis of private agreements, by pre-emption in coastal areas, by expropriation or by donation. Budget of the CELRL is mainly provided by the National Government and contributions can be provided by the EU, local authorities and private organisations.

- **National Forestry Office (ONF)**: The ONF can fund projects through its Fund for the Environment and Sustainable Development (FEDD - Fond pour l'Environnement et le Développement Durable).

- **French Marine Protected Areas Agency** (Agency of Marine Protected Areas - AAMP): the AAMP 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 and the Sea. The main assignments of the Agency are supporting public policies for the creation and management of MPAs in the French maritime waters, running the MPA network, providing technical and financial support of natural marine parks, reinforcing French potential in international negotiations concerning the sea.

- **National Office of Hunting and Wildlife (ONCFS)** is a public administrative institution under the joint supervision of the Ministries in charge of ecology and agriculture. Among its assignments, the ONCFS aims to enhance biodiversity knowledge and conservation in overseas entities by providing technical assistance for wildlife monitoring, policy development, the elaboration of management plans and policies for wildlife and its habitats and through the development of regional and international cooperation.

In 2003-2004, the ONCFS initiated the **Orientations régionales de gestions et de conservations de la faune sauvage et de ses habitats** (ORGFH - Regional guidelines for the management and conservation of wildlife and its habitats), with the objective to provide a background document focusing on wildlife and its habitats and to highlight major outcomes in terms of management and conservation priorities.

Until 2015, the **Lesser Antilles iguana National Action Plan** was coordinated and funded by the DEAL and entrusted to the ONCFS for its implementation. Until 2016, ONCFS coordinates the **National Action Plan for the conservation of sea turtles**.

- **National agency for water and aquatic environments (ONEMA)** is a national public agency overseen by the Ministry of Environment. The ONEMA works closely with governmental bodies on the European, national and local levels, as well as with other public entities, notably the Water agencies and offices, and with the National agency for hunting and wildlife (ONCFS) for police work. Among its assignments, ONEMA contributes to funding political priorities, notably the policy of solidarity between river basins. For a majority of the projects, Onema will set up shared-cost partnerships with the major national scientific organisations (BRGM, CNRS, Ifremer, Ineris, INRA, Irstea, MNHN, etc.), plus a number of specific activities with universities and other partners having the necessary scientific knowledge in the water field. For certain emerging topics, the agency may issue calls for ideas to facilitate projects involving a number of partners.

ONEMA is participating in funding water supply and sanitation infrastructure in order to upgrade urban water-treatment plants to current standards thus enabling to restore good water status in Overseas entities. The total allocated fundings (i.e. not all the amount is dedicated to biodiversity and conservation) will represent € 180 million for both French overseas entities and Corsica (2013-2018).

- **National Parks of Guadeloupe**: The public bodies of the National Parks of France can fund projects of local NGOs with a project thematic corresponding to its general objectives and missions.

For instance, the National Park of Guadeloupe supports an open call for projects called "Pwojé pou laliwondaj" that aims to support the protection of natural habitats, promote natural heritage or cultural projects related to the environment.

- **National Natural Reserves:** The National Natural Reserve of St-Martin, St-Barthélemy and Petite-Terre receive some fundings through admission fees from commercial companies operating within the National Reserves. These fundings contribute to the structural funds of the National Reserves and are used for MPA management and the maintenance of users' facilities (i.e., signs, trails, buoys, environmental awareness...).

Regional and local funds

The **Regional Cooperation Fund** (Fonds de coopération régionale -FCR) is supported by the State and can be co-financed by Overseas Departments or Collectivities. It concerns the French overseas entities of Guadeloupe and Martinique and aims to strengthen regional cooperation with countries in the Caribbean region. Several thematics are concerned including the Environment.

The **Contrat de plan Etat-Région** (CPER 2014-2020) (State-Region Planning Contract) is a document in which the French Government and a Region are committed in programming multi-year fundings dedicated to regional development contracts. Funds are provided by the State, the Region and the ERDF. Among the 6 thematic components, one key objective supports *Ecological and energy transition*.

Regional and General Councils of Guadeloupe

- **Regional Council of Guadeloupe** (Conseil Régional): Region Guadeloupe contributes financially to various programmes for the protection of endangered species and outreach programmes. The action of the Regional council is also part of the National Biodiversity Strategy (SNB) 2011-2020. The regional council intends to meet 4 key issues set out in the **Scheme of Regional Planning** (SAR-Schéma d'Aménagement Régional):

- a regional development supporting the environment;
- environmental compensation measures when biodiversity is under threat;
- biodiversity knowledge;
- Local Planning Scheme (Plan Local d'Urbanisme (PLU) the main document for urban planning) that take into account the network of protected areas, natural heritage and biodiversity outcomes.

The Regional Council is also providing some funds to local NGOs through open calls "Mon archipel, mon environnement" ("My archipelago, my environment").

- The **General Council of Guadeloupe** (Conseil Départemental) is the deliberative assembly of the Department with an office in charge of the environment (Bureau de l'Environnement de la Direction des Politiques Agricoles, Foncières et Environnementales - DPAFE).

Overseas collectivities

The Ministry of Environment, with the DEAL, is the competent authority in terms of environment in Guadeloupe and in the overseas collectivities of **St-Martin** and **Martinique**.

The overseas collectivity of **St-Barthélemy** is the competent authority for the environment within its territory. The Agence Territoriale de l'Environnement de St-Barthélemy (Territorial Environment Agency) is the public body in charge of the management of environment in the territory and is funded by the overseas collectivity of St-Barthélemy.

9.3. International and National Organizations and Foundations, Funds & Trusts

This section provides information on the **main funding organizations, Foundations, Trusts and Funds** that awarded projects dedicated to biodiversity conservation within the 15 EU overseas entities in the Caribbean region. Funding schemes that are dedicated to a taxa are also highlighted.

- **Funding schemes based in the UK, France and Netherlands**

Dutch-based funding schemes

- **Dutch Caribbean Nature Alliance (DCNA)**: a non-profit and non-governmental organization created to assist and support the local Dutch NGOs that have been mandated to manage the protected areas.

In 2006, the **DCNA** established an endowment **Trust Fund** in order to provide a sustainable and regular funding to cover operating costs of the local NGOs managing the protected areas (Parks). The capital of the Trust fund is locked for a defined period and once it is fully capitalized, the annual revenues from the Trust Fund are designed to cover the bare management costs for one land and one marine park on each island. A Trust Fund committee has been created by the DCNA and provides coordination, leadership and decision making power throughout this process.

Funders of the DCNA Trust Funds are: the Dutch Ministry of the Interior, Dutch postcode Lottery, Vogelbescherming Nederland, WWF Netherlands (Wereld Natuur Fonds - WNF) and the Prince Bernhard Nature Fund. In 2013, the amount on the Trust Fund is evaluated to \$14 million USD.

Other donations and in-kind support for the DCNA are provided by: Ernst and Young, Applied Ecological Solutions Inc., the Environmental Systems Research Institute (ESRI), Google Earth Outreach, SHAPE Photography, SmugMug, NetTech NV, Bonaire Computer Wizard, and numerous DCNA Photobank (DCNA Annual report 2013).

The Netherlands Committee for IUCN (NC-IUCN) and successful lobbying of the Dutch Parliament and ministries have established a group to support the DCNA, consisting of **De Landschappen** (the Dutch provincial landscape associations), **Natuurmonumenten** (Society for the Preservation of Nature in the Netherlands), **Staatsbosbeheer** (National Forest Service), **WWF** and the representative of **Conservation International** in the Netherlands.

Since 2006, the DCNA receives annually about € 1 million from the **Dutch Ministry of the Interior**, €750,000 of which is deposited directly in the Trust Fund (until 2016). The remainder (i.e. €250,000) is used for direct support of nature conservation within the 6 Dutch OCTs of the Caribbean region.

DCNA became beneficiary of the **Dutch Postcode Lottery** in February 2009. From each annual donation of €500,000 from the Lottery, €200,000 is deposited straight into the Trust Fund.

- **Prince Bernhard Nature Fund**: The Prince Bernhard Nature Fund was established in 1994 by the late Prince Bernhard of the Netherlands. The Fund's mission is to support small, preferably local initiatives towards the conservation and wise use of nature and natural resource base. In particular, the Fund aims to help save critically endangered flora and fauna.

In 2006, the Fund donated \$34,500 USD to DCNA supporting the development of a series of guidebooks for the protected areas of the Dutch Caribbean.

Among the Dutch OCTs, the Nature Fund awarded fundings to STENAPA in St. Eustatius for projects on native plants and the botanical garden development and to the local NGOs of St. Eustatius and St. Maarten on environmental education programmes.

- **WWF Netherlands** (Wereld Natuur Fonds - WNF): WWF Netherlands is one of the largest conservation organisations in the Netherlands and has been successfully supporting nature conservation all over the world since 1962. WNF is a partner of the DCNA and was instrumental in setting up the Marine Parks on Bonaire, Saba and St Eustatius. In 2009, WNF donated €10,000 to the DCNA in order to build support and to lobby with policy makers in the Netherlands, the objective was to take directed measures in the area of nature conservation during the process of constitutional reform.

In 2015, WNF provided funding support to Saba Conservation Foundation for the Initiative "Save our sharks" in order to produce a video "Sharks Demystified"

- **Vogelbescherming Nederland**: This independent bird conservation organisation is the Dutch Partner of BirdLife International, a worldwide Partnership of non-governmental conservation organisations that together seeks to conserve all wild bird species and the priority sites (Important Bird Areas) and habitats on which they depend. Through specific conservation programs, intensive cooperation, political lobby, legal action, clear education and effective campaigns, Vogelbescherming is working on the conservation of birds in the Netherlands and worldwide. Vogelbescherming Nederland is a partner of the DCNA and has allowed the development of a comprehensive bird conservation programme in the Dutch Caribbean.

- The **Dutch Postcode Lottery**: The Dutch Postcode Lottery (Nationale Postcode Loterij) has been raising funds since 1989 to support organisations working towards biodiversity and the environment and social issues. About 50% of the lottery's annual turnover goes to charity. The lottery has steadily grown to become the biggest charity lottery in the Netherlands and supports 95 non-governmental organisations. In 2016, the lottery raised a total of € 328 million that will be distributed to NGOs.

Since 2005, the lottery supports the DCNA that becomes a full beneficiary in 2009 and grants the DCNA with €500,000 per year, of which €200,000 goes towards the DCNA's endowment Trust Fund. The remaining (€300,000) is used for conservation activities within the 6 Dutch OCTs.

In 2010-2012, the lottery funded a Conch Restoration Project in Lac Bay (Bonaire) (Project "What if We change").

In 2015 DCNA was the proud recipient of **Special Project funding from the Lottery** to run a three year long initiative in the 6 Dutch OCTs of the Caribbean region to “**Save our Sharks**”! The project aims to work with all sectors of the community from fishermen to decision makers to ensure that by 2017 sharks will be able to flourish in our waters.

For this project, the Dutch Postcode Lottery awarded 1.8 million to the DCNA.

- **DOEN Foundation:** The DOEN Foundation has been established in 1991 by the Dutch Postcode Lottery and was given the assignment of pursuing the same objectives as the lottery (people and nature) and to complement the lottery's work. DOEN receives its revenues from the Dutch Postcode Lottery, the BankGiro Lottery and the Friends Lottery. DOEN supports people and organisations that take the lead in the field of sustainable, cultural and social innovation. Annually, DOEN supports more than 200 initiatives by means of subsidies, participations, loans and guarantees. From the 2015 net proceeds of the Dutch Postcode Lottery DOEN Foundation received a sum of € 22.5 million. With this contribution, the Foundation supports sustainable, social and cultural entrepreneurs who contribute to a better world for people and the planet. In addition, a contribution goes to DOEN Participaties BV, the investment company of the DOEN Foundation.

- The **Green Funds Scheme** has been launched in 1995 by the Dutch government as a tax incentive scheme enabling individual investors to put money into green projects that benefit nature and the environment. Individuals who invest in a green fund or save money with financial institutions practicing ‘green banking’ receive a lower rate than the market interest rate, however this is compensated by a tax incentive. In return, the banks charge green projects a lower interest rate.

- **IVN Natuur en Milieueducatie:** IVN is a organisation, getting people involved in nature, environment and landscape. IVN is a partner of the DCNA and these organisations are working together on the development of a regional nature education programme for the Dutch Caribbean.

- **Staatsbosbeheer:** Staatsbosbeheer is commissioned by the Dutch government and has worked with the DCNA on the development of Management Plans for the parks and supported GIS project initiatives.

Two **Dutch bilateral funding channels** have been established for Dutch-Antillean development cooperation: the **AMFO** (Antillean Co-Financing Organisation) and the **SONA** (Stichting Ontwikkelingsfonds Nederlandse Antillen).

- Parallel to the channel for Dutch bilateral government co-operation, an independent foundation was established in 2003 to operate as funding channel for NGOs, the **Antillean Co-Financing Organisation** (AMFO) (Antilliaanse Mede-Financierings Organisatie). Each island has established its own NGO platform and these platforms have developed multi-annual programs. Project proposals submitted to the AMFO have to fit in these programs. The annual AMFO programme budget for the coming years is 8 million Euros. So far, the overall emphasis of the programs is on social issues and capacity building, and so far no island program or activity field refers to nature management.

- In 2004, management of the co-operation program from government-to-government has been transferred to a newly formed development fund, the **SONA**. The co-operation budget varies from year to year, and now stands at around 40 million Euros (EcoVision 2005). Ten percent of the Dutch contribution has been allocated to the national Antillean government, to be calculated over a four-year period. Almost one quarter of this amount is for nature and the environment, including funding for activities on the Dutch islands; in other sectors, these funds are restricted to the national Antillean level. The other ninety percent of the SONA development fund goes to island governments, and none of this is allocated to the environmental sector.

UK-based funding schemes

- **Royal Society for the Protection of Birds (RSPB)**: The RSPB is the BirLife partner in the UK and is providing strategic support to NGOs, Governments and local communities in order to increase their capacity on nature conservation.

The RSPB has lead and partnered on a number of projects in the UK OTs to address such issues as invasive species and island restoration.

A former BEST - RSPB project on OT invasive alien prioritisation (£21.5k in 2011-2012) provided a list of priority to assist the OTs and donor organisations to prioritise their actions.

- **Royal Botanic Gardens (RBG) Kew**: RBG Kew provides policy advice, technical and practical botanical support for UKOTs, with the overall aim of helping UKOTs to implement the Global Strategy for Plant Conservation (GSPC) under the Convention on Biological Diversity. In terms of directly financing projects/activities in UKOTs, RBG Kew has limited access to funds that can be dedicated to initiating projects in UKOTs. RBG Kew has undertaken fundraising activities to support specific activities through scholarships for UKOTs technical staff to attend courses, internships or bespoke training at RBG Kew.

The **RBG Kew's Millennium Seed Bank Partnership (MSBP)** is a dedicated seed conservation programme in UKOTs which comprises training in seed collection and storage techniques. provided £14,000 to the TCI and £5,000 to the Cayman Islands.

Through the **Bentham-Moxon Trust**, RBG Kew provides annual small grants to botanists and horticulturalists for plant collection and field research; international visits or work at Kew; travel and conferences.

- **Mohamed bin Zayed Species Conservation Fund (MBZ)**: This Species Fund is a significant philanthropic endowment established to provide targeted grants to individual species conservation initiatives, recognize leaders in the field of species conservation and elevate the importance of species in the broader conservation debate.

Grants are awarded to a maximum of \$25,000 for each project.

Some of the projects funded in the 15 EU overseas entities (MBZ website):

- **Anguilla** : Translocation of the Lesser Antilles iguana (*I. delicatissima*) to Prickly Pear (2015, \$6,750)

- **BVI**: 2 projects on plant species distribution: Pokemeboy (*Vachellia anegadensis*) (2014, \$10,000) and the Wire wist (*Metastelma anegadense*) (2014, \$5,000). One project on the Anegada iguana (*Cyclura pinguis*) (2010, \$15,000).

- **Cayman Isl.**: population dynamics of the Sister Islands Rock Iguana (2014, \$8,500); a project on the plant species *Dendropemon caymanensis* (2013, \$3,500)

- Montserrat: project on the Mountain Chicken (2011)
 - **TCI**: 2 projects on the Turks and Caicos Iguana (\$4,900 in 2010 and \$5,000 in 2012); a project on the Turks Island Boa (\$5,000 in 2010)
 - **Montserrat**: one project on the Mountain chicken (2011, \$10,000)
 - **St.Eustatius**: project focusing on the Lesser Antillean iguana (2015, \$4,950)
- **Fauna & Flora International** (FFI) is an international conservation charity and NGO registered in the UK that aim to conserve threatened species and ecosystems worldwide, choosing solutions that are sustainable, are based on sound science and take account of human needs.

FFI has established a **Species Fund** that aims to restore key populations of highly threatened species to viable levels over the next two decades. The **Emergency Response Fund** has been set to enable swift interventions when sudden emergencies threaten the future of species that are already highly threatened, or when there is a time-limited opportunity to improve the outlook for these species.

The **Flagship Species Fund** (FSF), a joint initiative between Fauna & Flora International and UK-Defra, provides practical support for small-scale projects to conserve threatened species and their habitats (Table 44).

Table 44. Flagship Species projects funded through FFI in the 15 EU overseas entities in the Caribbean region.

EU overseas entities - Lead applicants	Project	Amount
Turks and Caicos Islands: REEF (local NGO)	2014 - Spawning aggregations of Nassau Grouper	€19,060 (£14,760)
Anguilla: Anguilla National Trust	2014 - Supporting sea turtle conservation through applied research	€18,545 (£14,361)
Anguilla: Anguilla National Trust	2012 - Dog Island restoration project in Anguilla	n.s.
Anguilla: Anguilla National Trust	2011 - Strengthening sea turtle conservation measures through research and capacity building in Anguilla	n.s.
Anguilla: Anguilla National Trust	2010- Building community capacity to monitor and conserve sea turtle nesting populations in Anguilla	n.s.

n.s., not specified

- The **Ruffors Foundation** is a UK registered charity which funds nature conservation projects across the developing world through 5 grants for Nature Conservation: the Rufford Small Grant for Nature (up to £5,000), the 2nd Rufford Small Grant (up to £5,000), a Booster grant (up to £10,000), 2nd Booster grant (up to £10,000) and the Completion grant (up to £15,000).

- In 2012/13, the **Anguilla National Trust** received a grant of £5,916 from the Ruffors Foundation to monitor wildlife recovery on Dog Island, after the eradication of alien invasive species.

- In the **Cayman Islands**, a grant has been awarded in 2015 for the evaluation of Sister Isles Rock Iguana populations (in partnership with the Department of Environment and the National Trust).

- In 2009, a grant was awarded (£5,879) to conduct field work for the publication of the Seabird Breeding Atlas of the Lesser Antilles (project in partnership with **EPIC, local NGO in St-Maarten**).

France-based funding schemes

- **TEMEUM** (Terres et Mers UltraMarines): the overall objective of Te Me Um is to strengthen the local capacities of French overseas protected area managers, within each local authority, and regionally via the creation of a network and promoting and facilitating exchanges among managers and stakeholders. The TeMeUm programme mainly targets natural and protected areas managers and associated stakeholders and local NGOs. TeMeUm awards **micro-project grants** for specific projects dedicated to biodiversity and conservation in French Overseas entities (Table 45). In the French overseas entities in the Caribbean region, about 22,504 Euros and 11,104 Euros have been awarded through micro-project grants in 2014 and 2015, respectively (Laure Vincent pers. com. 2016).

Table 45. TeMeUm micro-project grants awarded in the French ORs and OT of the Caribbean region.

Overseas entities	Project	Lead applicant
Guadeloupe	Conservation of a threatened orchid species in Guadeloupe (<i>Epidendrum revertianum</i> - EN) (2010)	Association Guadeloupéenne d'Orchidophilie (AGO)
	Abundance and distribution of lemon sharks (<i>Negaprion brevirostris</i>) in the Réserve Naturelle of Petite-Terre (2013)	Kap Natirel
	A better knowledge of the natural heritage of Guadeloupe for best practices in terms of biodiversity conservation. (2013)	Association Tité
	Rehabilitation of St Vaast area (2014)	National Park of Guadeloupe
	Conception of games dedicated to marine mammals and the protection of their habitats (2014)	Association Mon Ecole, Ma Baleine
	Educational programs and outreach activities dedicated to marine mammals in schools and for the general public (2014).	Association Mon Ecole, Ma Baleine
	Conception of the second comic book "Ocean Dreams" (2015).	Association Mon Ecole, Ma Baleine
	Experimental project for the control of <i>Sansevieria hyacinthoides</i> in the future Biological Reserve in north of Grande Terre (2014).	Office National des Forêts
Guadeloupe / St-Martin / St-Barthélemy	Monitoring of lemon shark populations in the French Lesser Antilles (2014).	Kap Natirel

Guadeloupe / St-Martin / St-Barthélemy	Assessment and study of the fishing and local consumption of elasmobranchs (2015)	Kap Natirel
St-Martin	Pilot project for the implantation of artificial habitats to enhance marine larval recruitment and biomass production (2014).	Réserve Naturelle Nationale de St Martin

- **Fondation Nicolas Hulot (FNH)**: Since 1990, the foundation aims to propose and accelerate changes in individual and collective behavior, and support environmental initiatives in France and abroad to engage the ecological transition of the societies. The FNH is recognized of public utility and is part of the Collectif Français de l'Education à l'Environnement (CFEEDD).

- The **Fondation TOTAL**, founded in 1992, by the company TOTAL SA is one of the largest French business foundations. The Foundation has a 5-year grant awarded by the company to conduct its sponsorship activities and general interest. Initially dedicated to research on marine biodiversity to the protection of oceans, the Foundation expanded in 2008 the scope of its sponsorship activities in the areas of health, solidarity and culture and heritage. To support these developments, the initial five-year budget of € 8 million was raised to € 50 million, thus a minimum annual budget of 10 million euros dedicated to projects worldwide. The Foundation was extended for the fourth time in 2012 and for the period 2013-2017.

- **Fondation EDF** (Electricity of France): The EDF Foundation aims to support project which bring innovative solutions to major social issues, where the needs are the greatest and where public or private funds are lacking. One of the key priority of the Foundation focuses on scientific knowledge, environmental awareness and education. In 2012-2015, EDF Foundation has a budget of €40 million to support projects worldwide.

- **Fondation du Patrimoine**: an independent private non-profit organisation created in 1996 whose mission is to defend and promote unprotected endangered natural heritage sites and unprotected heritage as historical monuments. The foundation regularly conducts safeguard actions, by organizing regional contests, to preserve natural heritage sites. In the Caribbean region, a regional delegation of the Fondation du Patrimoine provides its advices on projects for the overseas entities of Guadeloupe, Martinique, St-Martin and St-Barthélemy.

In the Natural Reserve of Petite-Terre in Guadeloupe, the Foundation supports an educative outreach programme through the establishment of a nature and educational trail around the islet.

- **Fondation Ensemble**: a private Foundation set up in 2004 whose objectives are to conduct actions focusing on 4 main areas: sustainable agriculture, sustainable fishing, biodiversity conservation and sustainable technologies. The Foundation focuses its actions in several countries and the grant awarded is up to €50,000 per year to support worldwide projects. The Foundation has a Special Fund dedicated to threatened animal species.

- **Fonds Bleus** (endowment Blue Fund): This Fund is a non-profit organization created in 2011 and based in the French OR of Guadeloupe. It aims to support and conduct any mission of general interest contributing to the defense of the natural environment. The Fund aims to participate in the knowledge and protection of the marine and terrestrial biodiversity in the French Lesser Antilles and French Guyana in initiating or supporting initiatives to the study and conservation of flora and fauna.

In the French Lesser Antilles, Fonds bleus supports Reef Check Foundation which aims to train volunteer scuba divers to coral reef monitoring programme.

- **Fondation de France**: Fondation de France is an independent administrative foundation established in 1969 by the French Government to carry out philanthropic activities in any field of general interest. In particular, Fondation de France enables donors to create their own foundation under its umbrella, offering different services from management to advices on philanthropic priorities. The foundation is active in the environment by encouraging people to live in greater harmony with their surroundings and favouring a citizen-based approach. For instance, the foundation focuses on environmental awareness, projects dedicated to coastal habitats and the connectivity between natural and urban areas. The foundation supports group endeavours, scientific research and educational projects in France and abroad. In 2014, Fondation de France hosted 775 donor advised funds and dedicated about 150 million euros to social activities.

Several foundations, within the umbrella of Fondation de France, focus on the environment and biodiversity:

◆ **Fondation Nature et Découvertes**: The Foundation supports projects of varying scale dedicating to the protection of nature and environmental awareness. Since 1994, each year, the company donates 10% of its net profits to the Foundation, in accordance with the environmental commitment of its founding Charter. Call for projects worldwide has an annual global budget of €250,000. Since 2005, the Foundation is a member of the IUCN and of the IUCN - French National Committee.

- **Other funding institutions, organisations, Trusts & Funds**

- The **International Union for Conservation of Nature** (IUCN) is a global environmental organisation and is the global authority on conserving nature and natural resources for people's livelihoods, settling international standards and fostering innovation in addressing global challenges for biodiversity and sustainable development. IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice.

Within the umbrella of this international organization, there are **National Committees of the IUCN** that aim to facilitate cooperation among the network of IUCN Members, and with other parts of the Union, and to support the participation of Members in the Programme and governance of IUCN. There is an IUCN National Committee in the Netherlands (IUCN-NL), in France (Comité français de l'IUCN) and in the UK (IUCN National Committee UK- NCUK).

The **IUCN Caribbean Initiative** has been established in 2008 with the support of the Governments of France and Italy and focuses on the Insular Caribbean. This regional Initiative has 20 Caribbean members, including the National Parks Foundation STINAPA in Bonaire. This initiative works through its regional network of members and partners to provide a platform for collaboration among governments, non-governmental organisations, scientific institutions and individuals. The IUCN Caribbean Work Plan 2013-2016 provides an umbrella framework with 3 main programme areas focusing on: (1) Valuing and Conserving Nature; (2) Effective and Equitable Governance of Nature's Use; (3) Deploying Nature-based Solutions to Global Challenges in Climate, Food and Development.

In addition to IUCN's Caribbean Initiative, **WCPA Caribbean** (World Commission on Protected Areas) will support the SPAW Programme and the protected areas initiatives of IUCN member and partner institutions as practicable, in-so-far as these programmes address Caribbean priorities for protected areas management.

- The **United Nations Environment Programme** (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment. UNEP is an intergovernmental organization owned by the 193 UN Member States.

The **Caribbean Environment Programme** (CEP) has been established under the UNEP Regional Seas Programme and focuses on the Wider Caribbean Region's marine landscape. The objective of UNEP-CEP is implemented through the Cartagena Convention and its three Protocols, including the SPAW Protocol concerning **Specially Protected Areas and Wildlife**. The main objectives of the SPAW-Regional Activity Centre are to protect, preserve and manage in a sustainable way: 1) areas and ecosystems that require protection to safeguard their special value, 2) threatened or endangered species of flora and fauna and their habitats, and 3) species with the objective of preventing them from becoming endangered or threatened.

The **Caribbean Trust Fund** was established in 1983 to provide financial support for the common costs and activities associated with the implementation of the Action Plan for the Caribbean Environment Programme (CEP). The Caribbean Trust Fund now serves to provide support to the common costs and activities of the Cartagena Convention.

A bi-annual programme of activities is adopted by the Conference of Parties of the SPAW Protocol every two years. The Secretariat of the Cartagena Convention is responsible for the implementation of the programme of activities with technical support of the SPAW Regional Activity Centre. The SPAW-RAC annual budget is funded by the french government (around 140,000€ per year) and relies on various others funders, including the Caribbean Trust Fund, to implement activities.

Within the framework of the SPAW protocol objectives for the development and reinforcement of marine protected areas and their management, UNEP-CEP has developed a **dedicated cooperation programme** in order to support the **protected areas listed under the SPAW Protocol**. The purpose of this list is to identify those areas that are of particular importance to the Wider Caribbean region, that are to be accorded in priority for scientific and technical research and mutual assistance, as well as to protect the listed areas from activities that would undermine the purposes for which they were listed. Appropriate

guidelines and criteria on the requirements for listing Protected Areas under the SPAW Protocol have been developed and adopted by the SPAW Conference of Parties.

Depending of availability of funds, the cooperation programme may include **Small Grants Funds for Sustainable Fisheries and MPAs, and Alternative Livelihoods**.

The cooperation programme is run in collaboration with the **Caribbean Marine Protected Areas Managers Network and Forum (CaMPAM)**.

- **World Wildlife Fund (WWF)** missions are to work towards conserving the world's biodiversity; ensuring that the use of natural resources is sustainable; and promoting the reduction of pollution and wasteful consumption, in partnership with foundations, governments, businesses, communities and individuals. About 85% of the WWF's spending is directed to worldwide conservation activities. The offices of WWF-France, WWF-United Kingdom and WWF-Netherlands are part of the WWF global network.

- The **Wildlife Conservation Society (WCS)** aims to save wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature. WCS provides several grants, such as: Graduate Scholarship Programs, WCS Research Fellowship Program, John Thorbjarnarson Fellowship for Reptile Research, Conservation Leadership Programme and Wildlife Action Opportunities Fund (that focuses on climate adaptation). WCS works in the Latin America & Caribbean region.

- The **Conservation Leadership Programme (CLP)** is an international capacity building programme supporting young conservationists in less developed countries. It supports high-priority biodiversity conservation projects by building the leadership skills of early career conservationists who are striving to overcome major threats to nature in places where capacity and access to resources is limited. CLP is a partnership bringing together 3 international conservation organisations: BirdLife International, Fauna & Flora International and Wildlife Conservation Society.

CLP awards three grant levels: **Future Conservationist Award** (grants up to \$12,500 for 3 to 12 months), teams are supported to undertake small-scale research and awareness-raising projects. Through **Conservation Follow-up** (up to \$20,000) and **Leadership awards** (up to \$40,000) teams can implement larger projects over a longer period of time and deliver practical solutions to conservation issues whilst learning to command more complex decision-making, communication and leadership skills.

- The **Conservation Trust Grant of the National Geographic Society** (global non-profit organization) aims to support conservation activities worldwide. The Trust funds project (on average between \$15,000 to \$20,000 per project) that contributes significantly to the preservation and sustainable use of the Earth's biological, cultural, and historical resources. Four projects have been granted by the Conservation Trust in the EU overseas entities of the Caribbean region:

- **Cayman Islands**: "Distribution, taxonomy and abundance of nitrogen fixing cyanobacteria in corals" (2008/2009)
- **Bonaire**: "Perfect Worlds: a new vision of tropical reefs" (2006)

- **Montserrat**: "Individual Niche Specialization in a Top Marine Predator: Using the Bottlenose Dolphin to Study the Niche Variation Hypothesis" (2010); " Interactions Between Active Volcanic Systems and Aquifers" (2013)

- The **Nature Conservancy** (TNC) an international conservation organization that works around the world with in-country organisations in many activities with biodiversity benefits and conservation outcomes, such as the protection and conservation of lands and waters, protected areas management or the control of invasive species. TNC pursues its conservation activities within the Caribbean region. TNC was instrumental in organizing the **Caribbean Challenge Initiative** (CCI) gathering 10 countries and territories, including the BVI, in order to take collaborative actions to protect and sustainably manage their marine and coastal environment. In the Caribbean, TNC contributes to the **Caribbean Biodiversity Fund**.

- The **Global Environmental Facility** (GEF) (World Bank's) is the institutional structure that operates the financial mechanism for implementation of the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). The GEF has become an international partnership of 183 countries, international institutions, civil society organizations, and private sector to address global environmental issues. The GEF administers different Trust Funds: **Global Environment Facility Trust Fund** (GEF); Least Developed Countries Trust Fund (LDCF); **Special Climate Change Trust Fund** (SCCF); Nagoya Protocol Implementation Fund (NPIF). The GEF also provides secretariat services, on an interim basis, for the **Adaptation Fund** that was established to finance concrete adaptation projects and programmes in developing countries that are parties to the Kyoto Protocol and are particularly vulnerable to the adverse effects of climate change.

European overseas entities are not eligible to the GEF Fund but GEF also contributes to the **Caribbean Biodiversity Fund**.

- The **Caribbean Biodiversity Fund** (CBF) is a regional endowment of multiple national level conservation Trust Funds whose objective is to support long-term conservation of marine and coastal resources and to support activities that contribute substantially to the conservation, protection and maintenance of biodiversity within the national protected areas systems or any other areas of environmental significance of its participating countries. Ten countries and overseas entities are participating or observer entities to the CBF, including the British Virgin Islands (UK OT) that is an Observer entity (CBF, <http://www.caribbeanbiodiversityfund.org/en/about-cbf>).

The CBF, legally established in 2012, has reached its initial endowment capitalization target of US\$ 40million through contributions from several Donors: the Global Environment Facility (GEF) – through the World Bank and the United Nations Development Programme (UNDP), The Nature Conservancy (TNC) and the Government of Germany through the German Development Bank (KfW).

- The **U.S. Fish & Wildlife Service** works with partners worldwide for the conservation, protection, and enhancement of fish, wildlife and plants, and their habitats, and maintain the integrity of ecological processes beyond our borders. The U.S. Fish and Wildlife Service's **Wildlife Without Borders** provides critical support to conserve priority species and ecosystems across high-biodiversity value landscapes through **Species** (i.e. Critically

endangered animals Conservation Fund and Marine Turtle Conservation Fund) and **Regional programmes** (i.e. the Central America program).

In the 15 EU overseas entities, the Marine Turtle Conservation Fund provided supports to the Fifth Conference of the Parties (COP5) of the Inter-American Convention for the Protection and Conservation of Sea Turtles that was held in Bonaire (Dutch OT) in 2011.

- The **National Fish and Wildlife Foundation** (NFWF), has been established to support the mission of the US Department of the Interior's US Fish and Wildlife Service. NFWF is an international independent nonprofit organization, provides funding on a competitive basis to projects that sustain, restore and enhance fish, plants, wildlife and their habitats. The Foundation's IDEA (Impact-Directed Environmental Account) program manages a nationwide portfolio of accounts arising from legal and regulatory actions involving natural resources and the environment; in the aggregate, these accounts exceed \$170 million designated in each case for specific purposes benefitting natural resources and the environment.

- The **PEW Charitable Trust** is an independent non-profit, NGO founded in 1948 that aims to strengthen environmental policies and practices in ways that produce significant and measurable protection for terrestrial and marine systems worldwide. Presently, the Trusts' public policy areas focus on the environment, state policy, economic policy and health and human services. In the Caribbean, PEW (through the Global shark conservation initiative) is a partner of the DCNA project "Save our sharks" which concerns the 6 Dutch OCTs.

- **Disney Worldwide Conservation Fund** (DWCF) provides grants for wildlife conservation, habitat protection and community awareness and education in critical ecosystems worldwide. Nonprofit organizations that are not based in the US can apply to grants in collaboration with US nonprofit partners. The DWCF makes annual conservation grants, and it manages a rapid response fund. It also makes awards to grassroots conservationists for outstanding work to protect wildlife and habitats, and to educate communities : Annual Conservation Grant (up to US\$25,000), Rapid Response Fund (up to US\$5,000), Conservation Heroes (up to US\$1,500).

For instance, DCF awarded some funds to the NGO Echo in Bonaire for a project on reforestation and outreach activities on the Yellow-shouldered Amazon parrot.

Fundings dedicated to Bird populations and bird habitats conservation

- **Bird Life International** is the world's largest nature conservation Partnership, with 120 BirdLife Partners worldwide – one per country – and growing. It is recognized as the world leader in bird conservation. The BirdLife partnership has 6 Regional BirdLife Coordination Offices throughout the world and a Global Office in Cambridge, UK – together known as "The BirdLife International Secretariat". The Secretariat co-ordinate and facilitate the BirdLife International Global and Regional Conservation strategies, programmes and policies.

In the European entities in the Caribbean region, BirdLife is represented by the **Royal Society for the Protection of Birds** (RSPB) for the UK OTs, by **Vogelbescherming Nederland** for Dutch OTs, by the **Ligue pour la Protection des Oiseaux** (LPO) for French ORs and OT.

- The **Neotropical Bird Club** (NBC) is an international organisation for birders and ornithologists interested in the birds of the Neotropics (i.e. Middle & South America and the Caribbean). The **NBC Conservation Fund** awards grants up to \$5,000 for conservation work or research that has an intended conservation benefit. Awards are for projects carried out by nationals and/or residents of countries in the Caribbean, Central America, and South America.

- **Birds Caribbean**, formerly the Society for the Conservation and Study of Caribbean Birds (SCSCB), is a nonprofit membership organization working to conserve the birds of the Caribbean and their habitats through research, education, conservation action and capacity building. Birds Caribbean is involved in the Caribbean Waterbird Census Programme, the West Indian Whistling-Duck and Wetlands Conservation Project, the International Migratory Bird Day and the Caribbean Endemic Bird Festival.

Funds dedicated to iguanas

- The **International Iguana Foundation** (IIF) is a non-profit organization formed in response to the need for consistent funding for critical iguana conservation initiatives. The IIF seeks to ensure the survival of all iguana species in the Caribbean and elsewhere, through the promotion of a broad conservation agenda involving habitat protection, education, scientific research, and captive management.

The IIF Board is able to generate a minimum of \$50,000 USD per year to help fund ongoing field conservation and research projects in areas of critical need.

Among the previous IIF grants, funds have been awarded for studies focusing on: the recovery of the Anegada Iguana (*Cyclura pinguis*) in the BVI (2010, 2012, 2013, 2015); the reintroduction of the Lesser Antilles iguana (*Iguana delicatissima*) in Prickly Pear East (Anguilla National Trust, 2014-2015); nesting ecology of *Cyclura nubila caymanensis* on the Sister Islands (Little Cayman and Cayman Brac, 2014); a rescue and relocation program for the TCI Iguana (*Cyclura carinata*) (2012).

10. PRIORITY AREAS FOR ACTION

This chapter aims to highlight priorities of action for future investments in terms of biodiversity conservation in the 15 EU overseas entities in the Caribbean region for the implementation of the BEST Initiative and other programmes dedicated to conservation and the sustainable use of ecosystems.

The first step was to identify terrestrial, coastal and marine Key Biodiversity Areas (KBAs) with the list of associated trigger species and habitats. All these KBAs are important for global biodiversity conservation and thematic areas and actions have been identified for their biological priority. The level of threats affecting biodiversity assessed during the consultation process enabled to identify and prioritize the strategic directions and actions.

In a first step, this chapter details the **strategic directions and investment priorities** identified through the consultation process with local actors and stakeholders. In a second step, the **priorization is discussed within the identified KBAs**. The KBAs highlighted in this profile were refined into a focused set of priority outcomes by using a set of criteria defined by the CEPF and usually used in Ecosystem profiles. These priority outcomes can concern one or several KBAs and the corresponding areas identified in Chapter 3 are indicated in this second section.

10.1. Thematic priorities

A set of strategic directions guide the investment priorities for the 15 EU overseas entities in the Caribbean region.

These strategic directions concern various topics and objectives indicated in the following diagram: Biodiversity outcomes; Ecosystem services; Management and legislation within KBAs; Threats and pressures affecting KBAs and the Support the network of local actors and stakeholders (Table 46).

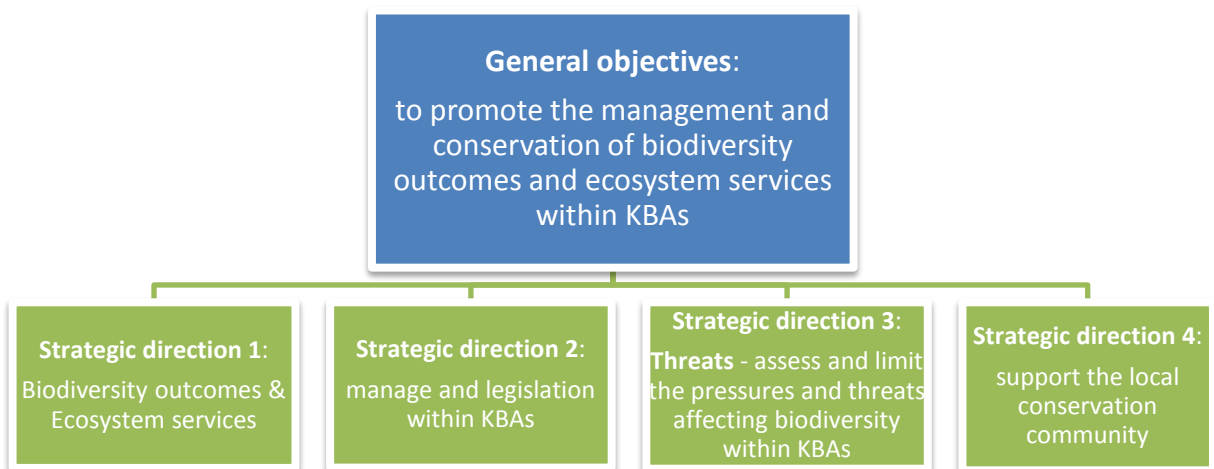


Table 46. Main strategic directions and priorities identified for the 15 EU overseas entities in the Caribbean region.

Strategic directions	Priorities
Biodiversity outcomes	
	- Developing ecosystem-based initiatives for the conservation and sustainable use of terrestrial and marine ecosystems.
	- Integrate biodiversity conservation and outcomes into development policies, spatial planning, local land-use and projects.
	- Increase and improve access to information concerning species and ecosystems that are useful for political and private decision-makers as well as the scientific community.
	- Obtaining data on the status and distribution of threatened and/or endemic species to inform the preparation of local, regional and national policies, territorial planning and management plans (including baseline survey and subsequent species monitoring).
	- Obtaining data information on Data Deficient species and populations in order to improve the general knowledge and thus the conservation of these species.
	- Obtaining data information on data deficient areas and habitats to fill this gap of knowledge.
	- Update and revise data information of the threatened status of species on the global RedList, particularly for species strictly endemic to an area or territory.
	- Obtaining data and improve the knowledge on the species life cycle and therefore their vulnerability at key stage of their life cycle (foraging or reproducing events).
	- Support actions of restoration of island ecosystems and conservation of degraded and/or threatened ecosystems, particularly regarding the habitats of trigger species (i.e. endemic and/ or threatened species).
	- Improve the knowledge on the distribution patterns of migrating species to strengthen transboundary management and cooperation. Improve the knowledge on connectivity within the territories of the Caribbean region.
Ecosystem services	
	- Develop tools to value ecosystem services in order to inform sustainable development policies and practices.
	- Assess and map the main ecosystem services.
	- Promote and support ecotourism as well as sustainable activities (agriculture, fisheries...) to develop long-term economic activities and best practices that will benefit ecosystem resilience.
Management and legislation within KBAs	
	- Ensuring proper management of protected areas by supporting management planning that reach local objectives and outcomes.
	- Promote and assist capacity building, training, partnership building and technical resource sharing amongst local conservation institutions and organisations.
	- Support and assist nature conservation institutions and organisations, as well as the civil society, to safeguard biodiversity and promote the sustainable use of nature resources in KBAs.
	- For KBAs that are also designated as protected areas: strengthen local and national legislation and enforcement; improve human resources, and dedicated fundings.

Strategic directions	Priorities
	- Create protected areas (PAs) network based on KBAs and conservation corridors and/or strengthen the management of existing PAs.
	- Protection and/or manage wetlands and marine ecosystems.
Threats	
	- Eradicate or control alien invasive species (AIS) that become established, and prevent the establishment of new AIS.
	- Strengthen environmental biosecurity in order to reduce the risk of introducing or spreading AIS.
	- Assess and mitigate the negative impact of anthropogenic activities on biodiversity to inform the preparation of policies and management plans.
	- Strengthen environmental impact assessment to assess ongoing and potential threats to biodiversity outcomes and KBAs.
	- Assessing and reducing the impacts of climate change on biodiversity and ecosystem services. Foster the development of cross-sectoral approaches to climate change adaptation that are consistent with the principles of sustainable development.
	- Support local actors and stakeholders to design and implement conservation and sustainable management actions that respond to major threats.
Support the network of local actors and stakeholders and promote alliances	
	- Strengthen civil society capacity at local and regional levels through training, exchanges and regional cooperation.
	- Promote regional and international cooperation and agreements for common management policies and actions.
	- Establish multi-stakeholder discussion platforms, promote alliances between local Governments, civil society, private sector and research institutes.
	- Empower local actors to mainstream biodiversity and conservation into political and economic decision-making.
	- Support local actors and stakeholders in fundraising skills, project management, implementing conservation actions and in building their technical, administrative and financial capacity.
	- Support local actors in disseminating biodiversity information to the local community with: educational programs and resources, communication tools, environmental education. Strengthen environmental programs dedicated to schools.
	- Foster the management of sites with recreational and/or cultural outcomes: develop communication tools and public utilities (posters, flyers, informative centers, trails, guided tours...) in order to inform the local community on species and ecosystems outcomes, ecosystem services, threats, protected areas.

In 2010, the CEPF performed the ***Ecosystem profile for the Caribbean Islands Biodiversity Hotspot*** and provided conservation outcomes and priorities for investments defined in a five-year investment strategy with a budget of \$6.5 million (2010-2015).

In the Caribbean region, the ***CEPF investment strategy*** focuses on 5 key directions:

- Improve protection and management of the 45 priority key biodiversity areas.

- Integrate biodiversity conservation into landscape and development planning and implementation in six conservation corridors.
- Support Caribbean civil society to achieve biodiversity conservation by building local and regional institutional capacity and by fostering stakeholder collaboration.
- Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team.
- Provide emergency support to Haitian civil society to mitigate the impacts of the 2010 earthquake.

10.2. Priority KBAs

The methodology used in this profile considered a list of criteria to refine the focus within the **92 KBAs** that have been identified for the 15 EU overseas entities. The methodology provided by Langhammer et al. (2007) is based on irreplaceability and vulnerability criteria and is used by the CEPF for their Ecosystem profiles. These criteria have been validated by local actors and stakeholders during the consultation process.

These criteria concern:

- **high biodiversity priority:** this criteria underlines the biological importance of the area by considering the number of endemic and/or threatened species;
- **ecosystem level:** this criteria considers the ecosystem functioning and habitat connectivity as well as ecosystem services;
- **management of sites:** this criteria stresses the level of protection of some KBAs, from unprotected areas or protected areas without adequate management to adequately managed areas;
- **threat assessment:** the level of pressure and threats affecting biodiversity and KBAs;

Following these criteria, a score was given to KBAs and the prioritization results were shared and discussed with local actors. Those results were set between very high priority / high priority / medium priority for investment (Table 47).

Table 47. Priority for investment between KBAs identified for the 15 EU overseas entities.

EU oversea entity	KBAs	Area (km ²)
very high priority - Number of priority KBAs: 51		
UK OTs	Number of priority KBAs: 20	
Anguilla	AIA-1:Offshore cays and Marine Park system	80.6
	AIA-2:Windward point- Junks Hole - Scrub and Little Scrub islets	11.1
Montserrat	MSR-1: Centre Hills - forest reserve boundary	13.2
	MSR-2: Northern Forested Ghauts	1.7
	MSR-3: Silver Hills reserve - dry forests	10.7
	MSR-4: South Soufrière Hills	5.4
	MSR-5: Marine ecosystems - Sea turtle nesting sites	50.8
BVI	VGB-1: Anegada	41.9

EU oversea entity	KBAs	Area (km ²)
	VGB-3: Jost Van Dyke and Green Cay	13.4
	VGB-7: Marine space	25.3
Cayman Islands	CYM-1: Terrestrial areas of Grand Cayman	55.2
	CYM-3: Terrestrial areas of Little Cayman	9.4
	CYM-5: Terrestrial areas of Cayman Brac	12.7
	CYM-2: Marine ecosystems of Grand Cayman	136
	CYM-7: Sea turtle nesting sites	14.7
TCI	TCA-2: Marine ecosystems	927
	TCA-3: Providenciales	38.8
	TCA-4: North Caicos	45.6
	TCA-5: Middle Caicos	22.8
	TCA-10: Turks Bank & Salt Cay	28.6
Dutch OCTs	Number of priority KBAs: 17	
Aruba	ABW-2: Marine areas and coastal bays	34.5
	ABW-3: Spaans Lagoen and mangroves	1.4
	ABW-5: Bubali and Tanki Sabana & Lake Noord Ponds	0.5
	ABW-7: Tierra del Sol Saliña	0.05 ha
Curaçao	CUW-1: Christoffel-Shete Boka Terrestrial Parks & North-east coast	143.8
	CUW-2: Malpais-St Michiel & Rif-Marie	25
	CUW-3: Curaçao Underwater Park to Eastpoint	40.8
Bonaire	BON-1: Bonaire Marine Park	27
	BON-2: Washington-Slagbaai & Dos Pos	79.4
	BON-5: Pekelmeer Saltworks	62.5
Saba	SAB-1: Saba Terrestrial Park and Mount Scenery Reserve	1.5
	SAB-4: Saba Bank National Park	2680
St.Eustatius	STA-1: Quill-Boven & Signal - Gilboa Hills	12.2
	STA-3: St. Eustatius National Marine Park	27.5
St.Maarten	SXM-1: Man of War Shoal Marine Park & Eastern islets	36.2
	SXM-3: Mangroves of Simpson Bay Lagoon	0.3
	SXM-5: Terrestrial areas	3.0
French ORs & OT	Number of priority KBAs: 14	
St. Barthélemy	BLM-1: Marine areas and ilets	22.6
	BLM-2: Terrestrial areas and ponds	8.1
St.Martin	MAF-1: Marine, coastal areas and ponds	34.9
	MAF-3: Terrestrial areas (Hill tops and mangroves)	4.7
Martinique	MTQ-1: Bay of Fort de France	60.6
	MTQ-2: Area of Prêcheur - Ilet La Perle	7.9
	MTQ-3: Montagne Pelée - Prêcheur Grande Rivière et Pitons du Carbet - Case Pilote - Bellefontaine Lorrain	232.7
	MTQ-5: Pointe Borgnèse - Macabou	53.7
	MTQ-7: Presqu'île de la Caravelle - Pointe Pain Sucre	116.1
Guadeloupe	GLP-1: Massif forestier de Basse-Terre	425.9
	GLP-2: Falaises nord et secteur de Port-Louis à Pointe de la Vigie - Nord Grande-Terre	41.0
	GLP-6: Côte sud de la Grande-Terre	21.2
	GLP-8: Ilets de Petite-Terre et La Désirade	87.9
	GLP-9: Marie-Galante	79.3

EU oversea entity	KBAs	Area (km ²)
high priority - Number of priority KBAs: 34		
UK OTs	Number of priority KBAs: 12	
Anguilla	AIA-4: Forest areas and bat caves	0.9
	AIA-5: Marine areas (outside the MPA network)	1.9
	AIA-3: Ponds & IBAs	2.7
BVI	VGB-2: Virgin Gorda and nearby islands	12.4
	VGB-4: Tortola & nearby islands	18.2
	VGB-6: Sisters Islands	12.7
Cayman Islands	CYM-4: Marine ecosystems of Little Cayman	20.7
	CYM-6: Marine ecosystems of Cayman Brac	15.8
TCI	TCA-1: Wetlands & Ramsar site	575.8
	TCA-6: East Caicos	305
	TCA-7: South Caicos	11
	TCA-8: Southern Cays	59.7
Dutch OCTs	Number of priority KBAs: 12	
Aruba	ABW-1: Parke Nacional Arikok	34
Curaçao	CUW-2: Malpais-St Michiel & Rif-Marie	25
	CUW-4: Klein Curaçao	12.2
	CUW-5: St Jorisbaai and Kueba di Noordkant	19.3
	CUW-6: San Juan - Santa Cruz & Pos Spaño	30.7
Bonaire	BON-4: Klein Bonaire	19.7
	BON-6: Washikemba-Onima & Bolivia area	78
Saba	SAB-2: Saba Marine Park & coastal IBA	22.2
	SAB-3: Caves and inland bird areas	0.5
St.Eustatius	STA-2: Zeelandia beach	3.7
St.Maarten	SXM-2: Coastal areas (outside MPA and Eastern islets)	10.4
	SXM-4: Ponds and IBAs	1.4
French ORs & OT	Number of priority KBAs: 10	
St. Barthélemy	BLM-3: Cave	0.1 ha
St.Martin	MAF-2: Marine and coastal areas (outside the Réserve Naturelle and Conservatoire du Littoral)	1.8
Martinique	MTQ-4: Dufour - Diamant - Pointe Borgnèse	140.9
	MTQ-6: Baie du Robert - Ilets Boiseau et Petit Piton - Ilet Chancel	90.8
	MTQ-8: Dry forests	6.3
Guadeloupe	GLP-3: Lagon du Grand Cul-de-Sac Marin	295
	GLP-4: Côte au-vent de la Basse-Terre	88.5
	GLP-5: Côte sous-le-vent et sud de la Basse-Terre	179.7
	GLP-7: Côte est de la Grande-Terre	14.1
	GLP-10: Les Saintes	42.5
medium priority - Number of priority KBAs: 7		
UK OTs	Number of priority KBAs: 4	
Montserrat	MSR-6: Wetlands	0.3
BVI	VGB-5: Great and Little Tobago	15.7
Cayman Islands	CYM-8: Offshore Banks	5.8
TCI	TCA-11: French, Bush and Seal Cays	0.4

EU oversea entity	KBAs	Area (km ²)
Dutch OCTs	Number of priority KBAs: 3	
Aruba	ABW-4: Sea turtle nesting sites	0.5
	ABW-6: Lago Colony Cave	0.06 ha
Bonaire	BON-3: Terrace Landscape	22

To foster regional cooperation and transboundary actions, the KBAs are gathered following the type of habitats and ecosystems (Table 47). Thus, 39 KBAs concern the marine ecosystems (including coral reefs, seagrass beds, wetlands), 5 KBAs are tropical rainforests, about 50 KBAs are composed by dry forests, shrublands and savannahs, 6 KBAs gather cave systems, 20 KBAs are offshore islets, and 22 KBAs encompass ponds or saltworks (Table 48).

Some KBAs can be listed in several habitat categories as they encompass a high diversity of habitats and ecosystems.

Table 48. Habitat types of the identified KBAs for the 15 EU overseas entities in the Caribbean region.

Habitats & Ecosystems	Eu overseas entities	KBAs
Marine ecosystems (coral reefs, seagrass beds, wetlands) & Coastal areas (seaturtles nesting areas)	Aruba	ABW2-Marine areas and coastal bays
	Aruba	ABW3-Spaans Lagoen and mangroves
		ABW4-Sea turtle nesting areas
	Bonaire	BON1- Bonaire Marine Park
	Curaçao	CUW3-Curaçao Underwater Park to Eastpoint
	Saba	SAB2-Saba Marine Park & coastal IBA
		SAB4-Saba Bank National Park
	St.Eustatius	STA2-Zeelandia beach
	St. Eustatius	STA3-St. Eustatius National Marine Park
	St. Maarten	SXM1-Man of War Shoal Marine Park & Eastern islets
		SXM2-Coastal areas
		SXM3-Mangroves of Simpson Bay Lagoon
	St. Martin	MAF1-Marine, coastal areas and ponds
	St. Martin	MAF2-Marine and coastal areas
	St. Barthélemy	BLM1-Marine areas and ilets
	Martinique	MTQ1-Bay of Fort de France
		MTQ2-Area of Prêcheur - Ilet La Perle
		MTQ4-Dufour - Diamant - Pointe Borgnèse
		MTQ5-Pointe Borgnèse - Macabou
		MTQ6-Baie du Robert - Ilets Boiseau et Petit Piton - Ilet Chancel
Anguilla	AIA1-Offshore cays and Marine Park system	
	AIA5-Marine areas	
Montserrat	MSR5-Marine ecosystems - Sea turtle nesting sites	
	MSR6-Wetlands	
Cl	CYM2-4-6-Marine ecosystems of Grand Cayman,	

Habitats & Ecosystems	Eu overseas entities	KBAs
		Little Cayman and Cayman Brac
		CYM7-Sea turtle nesting sites
		CYM8-Offshore Banks
	BVI	VGB7-Marine space
	TCI	TCA1-Wetlands & Ramsar site
		TCA2- Marine ecosystems
	Guadeloupe	GLP2-Northern Cliffs and sector from Port-Louis to Pointe de la Vigie
		GLP3-Lagoon of the Grand Cul-de-Sac Marin
		GLP4-Windward side of Basse-Terre
		GLP5-Leeward side of Basse-Terre
		GLP6-Southern part of Grande-Terre
		GLP7-Eastern part of Grande-Terre
		GLP8-Ilets de Petite-Terre et La Désirade
		GLP9-Marie-Galante
GLP10-Les Saintes		
Offshore islands	Bonaire	BON4-Klein Bonaire
	Curaçao	CUW4-Klein Curaçao
	St. Maarten	SXM1- Eastern islets
	St. Martin	MAF1-ilets
	St. Barthélemy	BLM1- ilets
	Martinique	MTQ2- Ilet La Perle
		MTQ4- Diamant
		MTQ6- Ilets Boiseau et Petit Piton - Ilet Chancel
	Anguilla	AIA1-Offshore cays and Marine Park system
		AIA2- Scrub and Little Scrub islets
	CI	CYM8-Offshore Banks
	BVI	VGB1-Anegada
		VGB5-Great and Little Tobago
	TCI	TCA8-Southern Cays
		TCA10-Turks Bank & Salt Cay
		TCA11-French, Bush and Seal Cays
	Guadeloupe	GLP3-Lagoon of the Grand Cul-de-Sac Marin
GLP8-Ilets de Petite-Terre et La Désirade		
GLP9-Marie-Galante		
GLP10-Les Saintes		
Ponds & Saltworks	Aruba	ABW5- Bubali and Tanki Sabana & Lake Noord Ponds
		ABW7- Tierra del Sol Saliña
	Bonaire	BON5-Pekelmeer Saltworks
	St. Maarten	SXM4-Ponds and IBAs
	St. Martin	MAF1-Marine, coastal areas and ponds
	St.Barthélemy	BLM2-Terrestrial areas and ponds
	Martinique	MTQ5-Pointe Borgnèse - Macabou
	Anguilla	AIA3-Ponds & IBAs
	CI	CYM1-3-5-Terrestrial areas of Grand Cayman, Little Cayman and Cayman Brac
	BVI	VGB1-Anegada

Habitats & Ecosystems	Eu overseas entities	KBAs
	TCI	VGB4-Tortola & nearby islands
		TCA3- Providenciales
		TCA4-North Caicos
		TCA5-Middle Caicos
		TCA6-East Caicos
		TCA7-South Caicos
		TCA9-Grand Turk
	Guadeloupe	GLP2-Northern Cliffs and sector from Port-Louis to Pointe de la Vigie
		GLP6-Southern part of Grande-Terre
		GLP7-Eastern part of Grande-Terre
GLP8-Ilets de Petite-Terre et La Désirade		
	GLP9-Marie-Galante	
Cave	Aruba	ABW6- Lago Colony Cave
	Curaçao	CUW5- Kueba di Noordkant
	Saba	SAB3-Caves and inland bird areas
	St. Maarten	SXM5-Terrestrial areas
	St.Barthélemy	BLM3-Cave
	Anguilla	AIA4-Forest areas and bat caves
Dry forests, shrublands and/or savannahs	Aruba	ABW1 - Parke Nacional Arikok
	Bonaire	BON2-Washington-Slagbaai & Dos Pos
		BON3-Terrace Landscape Middle Bonaire
		BON6-Washikemba-Onima & Bolivia area
	Curaçao	CUW1-Christoffel-Shete Boka Terrestrial Parks & North-east coast
		CUW2-Malpais-St Michiel & Rif-Marie
		CUW5-St Jorisbaai
		CUW6-San Juan - Santa Cruz & Pos Spaño
	Saba	SAB1-Saba Terrestrial Park and Mount Scenery Reserve
		SAB2-Saba Marine Park & coastal IBA
		SAB3-Caves and inland bird areas
	St. Eustatius	STA1-Quill-Boven & Signal - Gilboa Hills
	St. Maarten	SXM5-Terrestrial areas
	St. Martin	MAF1-Marine, coastal areas and ponds
		MAF2-Marine and coastal areas
	St. Martin	MAF3-Terrestrial areas
	St. Barthélemy	BLM2-Terrestrial areas and ponds
	Martinique	MTQ3-Montagne Pelée - Prêcheur Grande Rivière et Pitons du Carbet - Case Pilote - Bellefontaine Lorrain
		MTQ4-Dufour - Diamant - Pointe Borgnèse
		MTQ5-Pointe Borgnèse - Macabou
		MTQ6-Baie du Robert - Ilets Boiseau et Petit Piton - Ilet Chancel
		MTQ7-Presqu'île de la Caravelle - Pointe Pain de Sucre
		MTQ8-Dry forests
Anguilla	AIA2-Windward point- Junks Hole - Scrub and	

Habitats & Ecosystems	Eu overseas entities	KBAs
		Little Scrub islets
		AIA4-Forest areas and bat caves
	Montserrat	MSR1-Centre Hills
		MSR2-Northern Forested Ghauts
		MSR3-Silver Hills reserve
		MSR4-South Soufrière Hills
		CI
	BVI	VGB1-Anegada
		VGB2-Virgin Gorda and nearby islands
		VGB3-Jost Van Dyke and Green Cay
		VGB4-Tortola & nearby islands
		VGB5-Great and Little Tobago
		VGB6-Sisters Islands
	TCI	TCA3- Providenciales
		TCA4-North Caicos
		TCA5-Middle Caicos
		TCA6-East Caicos
		TCA7-South Caicos
		TCA9-Grand Turk
	Guadeloupe	GLP1-Forests of Basse-Terre
		GLP2-Northern Cliffs and sector from Port-Louis to Pointe de la Vigie
		GLP4-Windward side of Basse-Terre
		GLP5-Leeward side of Basse-Terre
		GLP6-Southern part of Grande-Terre
		GLP7-Eastern part of Grande-Terre
		GLP8-Ilets de Petite-Terre et La Désirade
		GLP9-Marie-Galante
GLP10-Les Saintes		
Tropical rain forests & Hydrographic systems	Saba	SAB1-Saba Terrestrial Park and Mount Scenery Reserve
	Martinique	MTQ3-Montagne Pelée - Prêcheur Grande Rivière et Pitons du Carbet - Case Pilote - Bellefontaine Lorrain
	Montserrat	MSR1-Centre Hills
	Guadeloupe	GLP1-Forests of Basse-Terre
		GLP5-Leeward side of Basse-Terre

11. CONCLUSIONS

In the Caribbean Region, the *SPAW-RAC* in partnership with the *Natural National Reserve of St Martin* is in charge of the coordination of the **Caribbean regional Hub** for the BEST III initiative and of the development of the Caribbean ecosystem profile for the 15 European Overseas entities, politically attached to France, the United Kingdom and the Kingdom of the Netherlands. These 15 EU overseas entities in the Caribbean region are part of the Caribbean Islands Biodiversity Hotspot and feature numerous endemic and globally threatened species.

The Ecosystem profile for the 15 EU overseas entities was developed through the consultation of **250 individual stakeholders and experts** from about 145 local governments, local and regional institutions and organizations. Between 2014 and 2016, **24 BEST III meetings** and **9 regional and international meetings and workshops** were conducted by the Caribbean Hub team to collect data information and validate the profile with the local actors and stakeholders.

The Ecosystem profile uses a bottom-up process to define biodiversity and conservation outcomes. Following the BEST III Consortium methodology, the site outcomes encompass **194 globally threatened species, 1094 endemic and restricted-range species** and about 45 **species**, mainly represented by birds and marine mammals, that **congregate in important numbers** to feed or reproduce.

The EP identifies and maps **92 Key Biodiversity Areas (KBAs)**, including 42 terrestrial KBAs and 50 marine and coastal KBAs and **43 ecological corridors**. Moreover, 18 candidates KBAs have been highlighted.

The purpose of this ecosystem profile was to identify priority areas for action that support conservation of biodiversity and sustainable use of ecosystem services including ecosystem-based approaches to climate change adaptation and mitigation. These priorities should guide future investments and ensure that funding will be used accordingly. The Key Biodiversity Areas and priority investment themes identified for the Caribbean EU Overseas entities are hoped to be taken into consideration by applicants to potential future BEST and other funds as well as by other donors and organisations wishing to invest in the biodiversity conservation of the Caribbean region in order to better target their funding and efforts, complementing and broadening the scope of BEST investments. More details on investment gaps and opportunities in line with the identified priority areas for action in the Caribbean entities of the EU Overseas are outlined in the accompanying document entitled “Regional Investment Strategy (RIS)”.

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See references in Appendice 5 for the 15 Ecosystem profile Factsheets of the EU overseas entities.

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APPENDIX 1. CARIBBEAN HUB MEETING REPORT: LOCAL, REGIONAL AND INTERNATIONAL MEETINGS

Content / Objectives	Date	Place	Participants (institutions and organizations)	Outcomes / Results
3 French ORs and 1 French OT in the Caribbean region				
Presentation of BEST III initiative to the local actors of Guadeloupe	19/06/2014	Guadeloupe	André Bon - Conseil Régional de Guadeloupe Pierre Boesch - DEAL Guadeloupe Maurice Anselme, Maïtena Jean - Parc National de Guadeloupe Amandine Eynaudi - AAMP / Sanctuaire AGOA <u>Caribbean Hub team:</u> Romain Renoux, Hélène Souan, Amandine Vaslet	Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
BEST meeting with local actors of Guadeloupe	23/04/2015	Guadeloupe	Céline Jules-Soret, Marguerite Joyau - Conseil Régional de Guadeloupe Marc Gayot-ONF Guadeloupe Régis Gomès- Association ASFA Océane Beaufort- Association Kap'Natirel - ReGuaR Sophie Bédél-AAMP Sanctuaire AGOA Julie Belmont-CAR-SPAW Maïtena Jean- Parc National de Guadeloupe Thomas Celsaire- Conservatoire Botanique des Iles de Guadeloupe Alain Pibot- CELRL Pierre Boesch, Luc Legendre - DEAL Guadeloupe Sophie Brugneaux- AAMP <u>Caribbean Hub team:</u> Romain Renoux, Anne Fontaine, Amandine Vaslet	- Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile

Presentation of BEST III initiative to the local actors of Martinique	02/10/2014 03/10/2014 07/10/2014	Martinique	<p>François Colas, Morjane Safi, Alexandre Arqué - AAMP, Equipe Parc Naturel Marin de Martinique Françoise Negouai - Conseil Régional Martinique Jean-Louis Vernier, Cyrille Barnérias - DEAL Martinique Maurice Veilleur, Nadine Vénumière - Parc Naturel Régional Martinique Rodrigue Deré - ONF Martinique</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
BEST meeting with local actors of Martinique	06/07/2015	Martinique	<p>Nadine Vénumière - Parc Naturel Régional Martinique, RNN des Ilets de Ste Anne et de la Presqu ile de la Caravelle Morjane Safi- AAMP, Equipe Parc Naturel Marin de Martinique Stéphanie Saint-Aimé-Conservatoire Botanique de Martinique Mathieu Coulis- Association Martinique Entomologie- Institut Caribéen pour la Nature et la Culture Romain Ferry- Association OCEANvironnement / Membre du groupe de recherches BIOSPHERE (Université des Antilles) Céline Coisy- DEAL Martinique Ericka Jacaria- Affaires Européennes, Conseil Régional de Martinique</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	<ul style="list-style-type: none"> - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile

BEST meeting with the local Government of St-Martin	02/07/2014	Saint-Martin	Alex Richards, Omar Morales - Coopération Régionale et Fonds Européens, Collectivité de Saint-Martin <u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet	Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
BEST meeting with the local Government and actors of St-Martin	26/09/2014	Saint-Martin	Omar Morales, Salombo Guibert, Anne-Marie Bouillé, Charlotte Terrac - Collectivité de Saint-Martin Nicolas Maslach - Réserve Naturelle de St Martin <u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet	- Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
BEST meeting with the local Government and actors of St-Martin	28/09/2015	Saint-Martin	Guillaume Arnell, Premier Vice-Président, Louis Fleming, Conseiller Territorial - Collectivité de St-Martin Alex Richards, Omar Morales, Romain Perreau, Charlotte Terrac -Collectivité de St-Martin Régis Armengaud- Service des Territoires de la Mer et du Développement Durable, Préfecture de St-Martin/St-Barthélemy Nicolas Maslach -Réserve Naturelle de St Martin Olivier Raynaud -CELRL Amandine Vaslet-Association Mon Ecole ma Baleine Mark Yokoyama- Association Les Fruits de Mer <u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet	- Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile

BEST meeting with the local Government and actors of St- Barthélemy	22/01/2015	Saint- Barthélemy	Franciane Lequellec, Sébastien Gréaux, Karl Questel - Agence Territoriale de l'Environnement Michel Chevaly - Association St Barth Essentiel <u>Caribbean Hub team:</u> Romain Renoux, Anne Fontaine, Amandine Vaslet	<ul style="list-style-type: none"> - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of local actors and funding resources - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative
6 Dutch OCTs in the Caribbean region				
Presentation of BEST III initiative - local NGO St Maarten	04/08/2014 29/01/2015	Sint-Maarten	Tadzio Bervoets - Sint Maarten Nature Foundation <u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet	<ul style="list-style-type: none"> - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
BEST meeting with the local Government and actors of Sint-Maarten	21/11/2014	Sint-Maarten	Rueben Thompson - Emilio Wilson Estate Foundation (EWE) Natalia Collier, Laura Bijnsdorp - EPIC Fleur Hermanides - EWE member/ Department of Public Health - Environment and Hygiene Melanie Choisy - Be The Change Foundation <u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet	<ul style="list-style-type: none"> - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame - Exchange on biodiversity outcomes and local priorities
BEST meeting with the local Government and actors of Sint-Maarten	13/05/2015	Sint-Maarten	Rueben Thompson - Emilio Wilson Estate Foundation (EWE) Fleur Hermanides - Government of St Maarten - Ministry of Public Health Department of Public Health / EWE member Claire Hooft Graafland, Geert van der Leest	<ul style="list-style-type: none"> - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding

			<p>Government of St Maarten VROMI Hasani Ellis, Loekie Morales- Government of Sint Maarten - Department of Interior & Kingdom Relations (AZ/BAK)</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	<p>resources</p> <ul style="list-style-type: none"> - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative
DCNA Board meeting - BEST meeting with the local actors of the 6 Dutch OCTs	22-24/10/2014	Aruba	<p>Kalli de Meyer, Glenn Thodé, Nathaniel Miller, Emeray Martha, Elise Benedictus - DCNA Paul Stokkermans, CARMABI Curaçao Kerenza Rannou-Frans, Johan Afman - STINAPA Bonaire Hannah Madden - STENAPA St Eustatius Rueben Thompson - NGO representative - Dutch Windward islands Frensel Mercelina - NGO representative - Dutch Leeward islands Bert Denneman - Vogelbescherming Nederland - BirdLife International Henri Roggeri - IUCN NL</p> <p><u>Caribbean Hub team:</u> Amandine Vaslet</p>	<ul style="list-style-type: none"> - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame - Presentation of the biodiversity outcomes for the 6 Dutch Overseas entities in the Caribbean - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile
DCNA Board meeting - BEST meeting with the local Governments and actors of the 6 Dutch OCTs	24-26/03/2015	Saba	<p>his Excellency Governor Johnson of Saba his Excellency Governor Holiday of St.Maarten Kalli de Meyer, Glenn Thodé - DCNA Paul Hoetjes - Ministry of Economic Affairs (EZ) Hannah Madden, Jessica Berkel - STENAPA St Eustatius Kai Wulf - Saba Conservation Foundation Tadzio Bervoets - Sint Maarten Nature Foundation Paul Stokkermans, CARMABI Curaçao Kerenza Rannou-Frans, Johan Afman -</p>	<ul style="list-style-type: none"> - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory. - Local actors and stakeholders' feedbacks on biodiversity outcomes, priorities, threats for the 6 Dutch OCTS in the Caribbean region. - Presentation of BEST 2.0 initiative

			<p>STINAPA Bonaire Rueben Thompson - NGO representative - Dutch Windward islands Frensel Mercelina - NGO representative - Dutch Leeward islands</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	
DCNA Board meeting - BEST meeting with the local Governments and actors of the 6 Dutch OCTs	27-29/10/2015	Curaçao	<p>His Excellency Eugene Holiday Governor of St Maarten Jaap Leeuwenburg Advisor to the Royal House Jaime Saleh Former Governor-General of the Netherlands Antilles and Minister of State Glenn Thode DCNA Chairperson Tadzio Bervoets St. Maarten Nature Foundation Paul Stokkermans CARMABI, Curaçao Kai Wulf Saba Conservation Foundation Greg Peterson Arikok National Park Foundation Kerenza Rannou – Frans STINAPA Bonaire Hannah Madden STENAPA, St. Eustatius Frensel Mercelina - NGO representative (Leeward islands) Jeannette Nolen STINAPA Bonaire Michael Chammaa Saba Conservation Foundation Binkie van Es St. Maarten Nature Foundation Adrian del Nevo Applied Ecological Solutions Elise Traub Pew Trust: Global Shark programme Gisette Seferina Waitt Foundation Irene Kingma Dutch Elasmobranch Society Kalli De Meyer DCNA Executive Director and DCNA staff</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Julie Belmont</p>	<p>-Updates on the BEST 2.0 and 3 initiatives. - Ecosystem profile validation for the 6 Dutch OCTs in the Caribbean region.</p>

5 UK OTs in the Caribbean region				
BEST meeting with the local Government and actors of Anguilla	17/03/2015	Anguilla	<p>Farah Mukhida, Louise Soanes, Janeczka Richardson - Anguilla National Trust Karim Hodge, Rhon Connor, Andre Samuel, Lake Clint, Connor Dallen, Fleming Sharmer - Department of Environment Orlando Salisbury - Fisheries and Marine Resources Jasmin Ruan - Environmental Club at ALHCS Karle Connor - Anguilla Beautification Club</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	<ul style="list-style-type: none"> - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative
UKOCT Forum*	11-15/07/2015	Gibraltar	<p>- Workshop with Caribbean UK OTs ' local actors and stakeholders</p> <p><u>Caribbean Hub team:</u> Romain Renoux</p> <p>Participants of the UK Overseas Territories Conservation Forum Wider Caribbean Working Group (see list of participants below)*</p>	<ul style="list-style-type: none"> - Presentation of the BEST 3 and 2.0 initiative. - Presentation of the 5 Ecosystem profile drafts for the UK Overseas territories in the Caribbean region.
BEST meeting with the local Government and actors of the Virgin Islands	21/09/2015	Tortola, British Virgin Islands	<p>Nancy Pascoe, Finfun Peters- National Park Trust of the Virgin Islands (NPTVI) Orville Clarke - Department of Agriculture Clive Petrovic - Consultant Econcerns Ltd. Mervin Hastings - Conservation and Fisheries Department (CFD) Angela Burnett, Tessa Smith, Ronald Berkeley, Abbi Christopher, Joseph Smith-Abbott - Ministry of Natural Resources and Labour (MNREL)</p>	<ul style="list-style-type: none"> - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative

			<p>Susan Zulanski - Jost Van Dyke Preservation Society (consulted by email)</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	
Presentation of BEST III initiative - Governor of the Virgin Islands	22/09/2015	Tortola, British Virgin Islands	<p>his Excellency Governor Duncan, Virgin Islands Governor</p> <p>Sue Cotton, Governor Office</p> <p>Lynda Varlack, NPTVI</p>	<p>- Presentation of the initiatives BEST 2.0 and 3</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>
BEST meeting with the local Government and actors of the Turks and Caicos Islands	16/11/2015	Providenciales - Turks and Caicos Islands	<p>John Claydon, Eric F. Salamanca, Katharine Hart, Naqqi B. Manco, Alexander Roddy McLeod, Department of Environment and Maritime Affairs (DEMA)</p> <p>Marta Calosso, Research Associate DEMA</p> <p>Ethlyn Gibbs-Williams, Jonathan Sayao- Turks and Caicos National Trust</p> <p>Don Stark -Turks and Caicos Reef Fund</p> <p>Kathleen M. Wood -SWA Ltd.</p> <p>Tim Acott, Adriana Ford -University of Greenwich</p> <p>Amdeep Sanghera -Marine Conservation Society MCS-UK</p> <p>Esther Wolfs -Wolfs Company</p> <p><u>Caribbean Hub team:</u> Amandine Vaslet</p>	<p>- Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory</p> <p>- Mapping of KBAs</p> <p>- Identification of threats affecting biodiversity</p> <p>- Identification of local actors and funding resources</p> <p>- First validation of the Ecosystem profile</p> <p>- Presentation of BEST 2.0 initiative</p>
BEST meeting with the local Government and actors of Montserrat	25/11/2015	Montserrat	<p>Honourable Minister Claude Hogan, Ministry of Agriculture, Trade, Lands, Housing and Environment (MATLHE)</p> <p>Cynthia Farrell - Premiers Office</p> <p>Stephen Mendes, Laura Bambini, Llyod Martin, James Scriber Daley, James Boatswain - Department of Environment</p>	<p>- Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory</p> <p>- Mapping of KBAs</p> <p>- Identification of threats affecting biodiversity</p> <p>- Identification of local actors and funding resources</p>

			<p>Ryan Lavern, GIS Centre - Physical Planning Unit - MATHLE Claude Browne, Melissa O'Garro, Daphne Cassell - Department of Agriculture Danny Sweeney, President Fishermen Coop. Sarita Francis , Ravo Ratianimarina - Montserrat National Trust James Scriber Daley - Scribers Adventures Robin Ramdeen - Blue Halo Initiative - Waitt Institute Susan Robertson - Coral Cay Conservation Nicolas Tirard , Marc de Dinechin - Montserrat Hydroponics Ltd. Lyndon John, Elizabeth Radford - RSPB Veta Wade - Aqua Montserrat Charley Bartlett -Montserrat Island Dive Centre</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Amandine Vaslet</p>	<ul style="list-style-type: none"> - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative
BEST meeting with the local Government and actors of the Cayman Islands	25/03/2016	Grand Cayman - Cayman Islands	<p>Gina Ebanks-Petrie - Department of Environment (DoE), Government of the Cayman Islands Tim Austin - DoE Jessica Harvey - DoE Jane Håkonsson - DoE John Bothwell - DoE Janice Blumenthal - DoE Jeremy Olynik - DoE Stuart Mailer - National Trust of Cayman Islands Catherine Childs - National Trust of Cayman Isl. Patricia Bradley - National Trust of Cayman Isl.</p>	<ul style="list-style-type: none"> - Exchange on species list, habitats/ecosystems and potential KBAs identified for the territory - Mapping of KBAs - Identification of threats affecting biodiversity - Identification of local actors and funding resources - First validation of the Ecosystem profile - Presentation of BEST 2.0 initiative

			<p>Christine Rose-Smyth - National Trust of Cayman Isl. / Verdant Isle Orchids / National Conservation Council of the Cayman Islands</p> <p>Alli Candelmo - Central Caribbean Marine Institute</p> <p><u>Caribbean Hub team:</u> Amandine Vaslet</p>	
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***UK Overseas Territories Conservation Forum
Wider Caribbean Working Group WCWG**

Bruce	Dinwiddy	UKOTCF, Joint Chair WCWG
Boyd	McCleary	UKOTCF, Joint Chair WCWG
Ann	Pienkowski	UKOTCF, Secretary WCWG
Arlene	Brock	Bermuda
Colin	Clubbe	RBG Kew
Alison	Copeland	Bermuda Government Department of Conservation Services
Andrew	Dobson	Bermuda Audubon Society
Gina	Ebanks-Petrie	Department of Environment, Cayman
Alan	Evans	NOC, Southampton
Sharmer	Fleming	Department of Environment, Anguilla
Sarita	Francis	Montserrat National Trust
Tony	Gent	Amphibian and Reptile Conservation
Annie	Glasspool	Bermuda
Jennifer	Gray	Bermuda National Trust
Dace	Ground	UKOTCF, Bermuda National Trust
Jonathan	Hall	RSPB

Clare	Hamilton
Katharine	Hart
Mervin	Hastings
Claude	Hogan
Lyndon	John
B Naqqi	Manco
Christina	McTaggart
Katie	Medcalf
Steven	Mendes
Daniel	Mitchell
Farah	Mukhida
Iain	Orr
Nancy	Pascoe
Mike	Pienkowski
Elizabeth	Radford
Peter	Richardson
Don	Stark
Catharine	Wensink
Henry	Wilson
Kathleen	Wood
Susan	Zaluski

DEFRA
TCI Gov., Department of Environment and Maritime Affairs (DEMA)
Conservation and Fisheries Department, BVI
Minister for the Environment, Montserrat
BEST Invasives project, RSPB
DEMA; Turks and Caicos National Museum volunteer
National Trust for Cayman Islands
Environment Systems
Department of Environment, Montserrat
IUCN
Anguilla National Trust
UKOTCF Council
National Parks Trust of the Virgin Islands, BVI
UKOTCF
RSPB
Marine Conservation Society
TC Reef Fund
UKOTCF Coordinator
DEMA, TCI
SWA Ltd, Turks and Caicos Islands
Jost Van Dykes Preservation Society, BVI

Conferences and meetings for the promotion of BEST 3 and BEST2.0

Name of conference	Date	Location	Participants (institutions and organizations)	Relevant conclusions
Conference call	19/08/2014	Bonaire	Kalli de Meyer, Nathaniel Miller - Dutch Caribbean Nature Alliance (DCNA)	Presentation of BEST III initiative - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
ICRI workshop	16-18/09/2014	Bonaire	Kalli de Meyer, Nathaniel Miller - DCNA Paul Hoetjes - Ministry of Economic Affairs (EZ) National Office for the Caribbean Netherlands (RCN) Gina Ebanks Petrie- Cayman Islands Department of Environment Clifford De Lannoy - Carmabi Foundation Curaçao Kai Wulf - Saba Conservation Foundation Jessica Berkel - St. Eustatius National Parks Foundation Tadzio Bervoets - St. Maarten Nature Foundation Alexander Roddy Mcleod - Department of Environment and Maritime Affairs (DEMA) Turks and Caicos Islands Abbi Christopher - Ministry of Natural Resources and Labour Virgin Islands Peter Edwards - NOAA Coral Reef Conservation Program Kelsey Hope Schueler - Natural Resources and Disaster Risk Management Division, American Development Bank <u>Caribbean Hub team:</u> Romain Renoux	Presentation of BEST III initiative Participation to the workshop on ecosystem services
Guadeloupe Conference on Biodiversity and climate change in Europe overseas	21-25/10/2014	Guadeloupe	Face to face meetings with participants (BEST side events canceled) <u>Caribbean Hub team:</u> Romain Renoux, Anne Fontaine	Presentation of BEST III initiative - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame

Martinique - Table ronde des gestionnaires AMP Antilles Guyane	06-07/10/2014	Martinique	<p>Cyrille Barnerias, Denis Etienne, Fabien Védie - DEAL Martinique Franck Mazéas - DEAL Guadeloupe Jean-Claude Nicolas, Maurice Veilleur, Nadine Vénumière- Parc Naturel Régional Martinique Alain Pibot, Marie-Michèle Moreau- CELRL Eric Delcroix, Raoul Lebrave -RNN Petite-Terre / Titè NGO Nicolas Maslach - RNN St-Martin Kévin Pineau - RNN Grand Connétable Maurice Anselme, Olivier Oettly - Parc National de la Guadeloupe François Colas, Morjane Safi, Alexandre Arqué - AAMP, Equipe Parc Naturel Marin de Martinique Amandine Eynaudi, Sophie Bédel - AAMP / Sanctuaire Agoa Sophie Brugneaux, Jérôme Paillet- AAMP</p> <p><u>Caribbean Hub team:</u> Romain Renoux, Anne Fontaine, Amandine Vaslet</p>	Presentation of BEST III initiative - Presentation of the objectives and methodology, Caribbean Hub organization, Time frame
Gulf and Caribbean Fisheries Institute	03-07/11/2014	Barbados	<p>Eric Boman - Fisheries Center, St Eustatius Sherry Constantine, Anne Marie Hoffman - Nature Conservancy Jean-Philippe Maréchal - OMMM, Martinique Claude Bouchon, Yolande Bouchon, Aurélien Japaud - Université Antilles, Guadeloupe Johanna Pitt - Department Environmental Protection Bermudes Sophie Bédel - AAMP / Sanctuaire Agoa Jason Williams - BIOPAMA, Barbados</p> <p><u>Caribbean Hub team:</u> Amandine Vaslet</p>	- BEST 3 presentation during the poster session - Face to face meetings with participants
COP Cartagena Convention	08-13/12/2014	Cartagena, Colombia	National focal points for the Cartagena convention and PNUE secretariat	- Informal exchanges in parallel with the Cartagena convention meetings

			<u>Caribbean Hub team:</u> Anne Fontaine	- Presentation of the BEST initiative
Presenting the BEST ecosystem profiles of the EU Outermost Regions and Overseas Countries and Territories	19/10/2015	Committee of the Regions Brussels, Belgium	- 7 BEST Regional Hubs: presentation of the Ecosystem profiles for the BEST 3 initiative. <u>Caribbean Hub team:</u> Amandine Vaslet	- Preliminary results of the BEST III regional ecosystem profiles - Presentation of the 7 Ecosystem profiles
Internship for BEST III	19-31/10/2015	Brussels, Belgium	- Internship period for the interns of the 7 BEST Regional Hubs. <u>Caribbean Hub team:</u> Amandine Vaslet	- Training sessions on the EP methodology - Participation to events at the European Commission and European Parliament.
Caribbean CEPF final assessment workshop	9-15/11/2015	Haiti & Dominican Republic	<u>Caribbean Hub team:</u> Romain Renoux Olivier Langrand - CEPF Executive Director Pierre Carret - CEPF Grant Director Michele Zador - CEPF Grant Director Anna Hadeed - CANARI Caribbean Regional Implementation Team Grantees from Haïti and Dominican Republic French Embassy Representatives Agence Française de Développement Haïti and Dominican Republic European Union Representatives in Haïti and Dominican Republic GIZ Canadian cooperation	- BEST III information and presentation on our updated ecosystem profile - Best 2.0 calls for proposal presentation - Gathering information and data on conservation priorities in the Caribbean region - Brainstorm on the first draft for the BEST fundraising strategy - lessons learned from CEPF grants

Meetings with the BEST Consortium (Steering committees, Hub calls, training sessions)

Type of meeting / Content	Date	Place	Participants	Outcomes / Results
BEST III Kick off meeting	31/01/2014	Brussels	EU/ BEST Consortium / 7 regional Hubs	BEST presentation, objectives, methodology and Caribbean hub organization
BEST III 1st Steering Committee	08/04/2014	Video conference	EU / BEST Consortium / 7 regional Hubs	- Activities undertaken by the regional hubs / issues and concerns - Updates of the regional Hubs on BEST 3
Discussion on the EP methodology	04/06/2014	Video conference	Romain Renoux / Pierre Carret	- Ecosystem profile (EP) objectives and methodology
EP training session	24/06/2014	Video conference	Romain Renoux / Amandine Vaslet / Pierre Carret	- Ecosystem profile (EP) objectives and methodology
EP training session	27-28/10/2014	Saint-Martin	Pierre Carret - CEPF	- Technical assistance on the EP methodology - Field trip in Saint-Martin's KBAs
BEST central team and regional Hubs	14/01/2015	Video conference	BEST central team / 7 Hubs / CEPF	- EP methodology - FAQ document - CEPF expertise on the Ecosystem profile methodology and objectives.
BEST central team and regional Hubs	21/10/2014 26/11/2014 10/12/2014 23/01/2015 19/02/2015 23/03/2015 16/04/2015 07/05/2015	Video conference	BEST central team / 7 Hubs	- Activities undertaken by the regional hubs / issues and concerns - Updates on Best actions in the Caribbean Region
BEST III Steering committee	02/06/2015	Brussels, Belgium	BEST central team / 7 Hubs	- Updates on Best actions in the Caribbean Region, EP methodology, internship period. - Overview and time lime for the Ecosystem profile in the Caribbean region.

BEST central team and regional Hubs	27/07/2015	Video conference		Updates on Best actions, methodology, internship period.
Internship of BEST interns in Brussels	18-31/10/2015	Brussels, Belgium	EU / BEST Consortium / 7 regional Hubs	<ul style="list-style-type: none"> - Exchange between the 7 interns of the regional hubs for BEST. - Presentation of the Ecosystem profiles at the European Commission - EP training session with Pierre Carret (CEPF) - Participation to local events at the European Commission and European Parliament.
EP Methodology	9-15/11/2015	CEPF Final assessment in the Caribbean	Pierre Caret / Olivier Langrand	<ul style="list-style-type: none"> - BEST fundraising strategy - Ecosystem profile methodology
BEST central team and regional Hubs	17/12/2015	Video conference	BEST central team / 7 Hubs	<ul style="list-style-type: none"> - Updates on Best actions and Ecosystem profile for the Caribbean Region - Activities undertaken by the regional hubs / issues and concerns
BEST central team and Caribbean Hub	28/01/2016	Video conference	BEST central team / Caribbean Hub	<ul style="list-style-type: none"> - Updates on Best actions and Ecosystem profile for the Caribbean Region - Activities undertaken by the regional hubs / issues and concerns
BEST III Steering committee	10/02/2016	Brussels, Belgium	BEST central team / 7 Hubs	<ul style="list-style-type: none"> - Updates on Best actions and the Regional Ecosystem profiles - Activities undertaken by the regional hubs / issues and concerns

APPENDIX 2. LIST OF TRIGGER SPECIES: THREATENED AND ENDEMIC SPECIES

TAXONOMY	<i>Latin Name</i>	RedList category	Endemicity	SPA W	CITES
REPTILES	<i>Iguana delicatissima</i>	EN	LA	AIII	AII
REPTILES	<i>Cyclura pinguis</i>	CR	Island endemic	All	AI
REPTILES	<i>Cyclura lewisi</i>	EN	GA		AI
REPTILES	<i>Cyclura carinata</i>	CR	GA	All	AI
REPTILES	<i>Cyclura nubila</i>	VU	GA	All	AI
REPTILES	<i>Ameiva corax</i>	VU	Island endemic		
REPTILES	<i>Ameiva corvina</i>	VU	Island endemic		
REPTILES	<i>Typhlops epactius</i>		Island endemic		
REPTILES	<i>Anolis luteosignifer</i>		Island endemic		
REPTILES	<i>Tropidophis parkeri</i>		Island endemic		
REPTILES	<i>Tropidophis schwartzi</i>		Island endemic		
REPTILES	<i>Celestus maculates</i>		Island endemic		
REPTILES	<i>Alsophis caymanus</i>		Island endemic		
REPTILES	<i>Alsophis fuscicauda</i>		Island endemic		
REPTILES	<i>Alsophis ruttysi</i>		Island endemic		
REPTILES	<i>Anolis pogus</i>	VU	Island endemic		
REPTILES	<i>Spondylurus martiniae</i>		Island endemic		
REPTILES	<i>Ameiva plei</i>		LA		
REPTILES	<i>Anolis gingivinus</i>		LA		
REPTILES	<i>Anolis bimaculatus</i>		LA		
REPTILES	<i>Anolis bonairensis</i>		Island endemic		
REPTILES	<i>Anolis lineatus</i>		ABC islands		
REPTILES	<i>Cnemidophorus arubensis</i>		Island endemic		
REPTILES	<i>Cnemidophorus murinus</i>		ABC islands		
REPTILES	<i>Gonatodes antillensis</i>		South-eastern Caribbean		
REPTILES	<i>Phyllodactylus julienni</i>		Island endemic		
REPTILES	<i>Anolis roosevelti</i>	CR	GA	All	
REPTILES	<i>Dactyloa roquet</i>		Island endemic		
REPTILES	<i>Anolis conspersus</i>		Island endemic		
REPTILES	<i>Anolis maynardi</i>		Island endemic		
REPTILES	<i>Anolis scriptus</i>		GA		
REPTILES	<i>Sphaerodactylus mariguanae</i>		GA		
REPTILES	<i>Sphaerodactylus sabanus</i>		LA		
REPTILES	<i>Anolis sabanus</i>		Island endemic		
REPTILES	<i>Anolis terraealtae</i>		Island endemic		
REPTILES	<i>Anolis marmoratus</i>		Island endemic		
REPTILES	<i>Anolis marmoratus kahouannensis</i>		Island endemic		
REPTILES	<i>Anolis marmoratus pigeonnensis</i>		Island endemic		
REPTILES	<i>Anolis desiradei</i>		Island endemic		
REPTILES	<i>Anolis chrysops</i>		Island endemic		
REPTILES	<i>Anolis ferreus</i>		Island endemic		
REPTILES	<i>Ameiva erythrocephala</i>		LA		
REPTILES	<i>Ameiva pluvianotata</i>		Island endemic		
REPTILES	<i>Mabuya desiradae</i>		Island endemic		
REPTILES	<i>Mabuya cochonae</i>		Island endemic		
REPTILES	<i>Mabuya grandisterrae</i>		Island endemic		
REPTILES	<i>Mabuya guadeloupae</i>		Island endemic		
REPTILES	<i>Capitellum mariagalantae</i>		Island endemic		
REPTILES	<i>Mabuya montserratiae</i>		Island endemic		
REPTILES	<i>Gymnophthalmus pleii</i>	EN	LA		
REPTILES	<i>Capitellum metallicum</i>		Island endemic		
REPTILES	<i>Spondylurus semitaeniatus</i>	CR	GA		

REPTILES	<i>Spondylurus sloanii</i>	CR	Island endemic		
REPTILES	<i>Spondylurus caicosae</i>		Island endemic		
REPTILES	<i>Spondylurus turksae</i>		Island endemic		
REPTILES	<i>Aristelliger hechti</i>		Island endemic		
REPTILES	<i>Sphaerodactylus caicosensis</i>		Island endemic		
REPTILES	<i>Sphaerodactylus underwoodi</i>		Island endemic		
REPTILES	<i>Leiocephallus psamodrommus</i>		Island endemic		
REPTILES	<i>Anolis ernestwilliamsii</i>		Island endemic		
REPTILES	<i>Spondylurus macleani</i>		Island endemic		
REPTILES	<i>Typhlops catapontus</i>		Island endemic		
REPTILES	<i>Typhlops naugus</i>		Island endemic		
REPTILES	<i>Spondylurus anegadae</i>		Island endemic		
REPTILES	<i>Anolis pulchellus</i>		GA		
REPTILES	<i>Anolis stratulus</i>		GA		
REPTILES	<i>Ameiva exsul</i>		GA		
REPTILES	<i>Phyllodactylus martini</i>		ABC islands		
REPTILES	<i>Sphaerodactylus parthenopion</i>		Island endemic		
REPTILES	<i>Sphaerodactylus argivus</i>		Island endemic		
REPTILES	<i>Sphaerodactylus sputator</i>		LA		
REPTILES	<i>Spondylurus powelli</i>		LA		
REPTILES	<i>Sphaerodactylus parvus</i>		LA		
REPTILES	<i>Sphaerodactylus physacinus</i>		Island endemic		
REPTILES	<i>Sphaerodactylus sp. nov.</i>		Island endemic		
REPTILES	<i>Sphaerodactylus vincenti</i>		LA		
REPTILES	<i>Sphaerodactylus fantasticus</i>		LA		
REPTILES	<i>Sphaerodactylus festus</i>		LA		
REPTILES	<i>Thecadactylus oskrobapreinatorum</i>		Island endemic		
REPTILES	<i>Typhlops monastus</i>		Island endemic		
REPTILES	<i>Bothrops lanceolatus</i>		Island endemic		
REPTILES	<i>Typhlops guadeloupensis</i>		Island endemic	All	
REPTILES	<i>Antillotyphlops annae</i>		Island endemic		
REPTILES	<i>Antillotyphlops monastus</i>		Island endemic		
REPTILES	<i>Erythrolamprus cursor</i>	CR	Island endemic		
REPTILES	<i>Alsophis rijgersmaei</i>	EN	LA		
REPTILES	<i>Alsophis rufiventris</i>	EN	LA		
REPTILES	<i>Alsophis sanctonum</i>	EN	Island endemic		
REPTILES	<i>Alsophis antillensis</i>		Island endemic		
REPTILES	<i>Alsophis manselli</i>		Island endemic		
REPTILES	<i>Erythrolamprus juliae</i>		LA		
REPTILES	<i>Diploglossus montisserrati</i>	CR	Island endemic		
REPTILES	<i>Anolis lividus</i>		Island endemic		
REPTILES	<i>Tetracheilostoma bilineatum</i>		Island endemic		
REPTILES	<i>Borikenophis portoricensis</i>		GA		
REPTILES	<i>Typhlops richardi</i>		GA		
REPTILES	<i>Amphisbaena fenestrata</i>		GA		
REPTILES	<i>Chilabothrus granti</i>	EN	GA	All	
REPTILES	<i>Chilabothrus chrysogaster</i>		GA		
REPTILES	<i>Tropidophis caymanensis</i>		Island endemic		
REPTILES	<i>Typhlops caymanensis</i>		Island endemic		
REPTILES	<i>Crotalus unicolor</i>		Island endemic		
REPTILES	<i>Liophis triscalis</i>		Island endemic		
REPTILES	<i>Tropidophis greenwayi</i>		Island endemic		
REPTILES	<i>Chelonia mydas</i>	EN		All	
REPTILES	<i>Eretmochelys imbricata</i>	CR		All	
REPTILES	<i>Dermochelys coriacea</i>	VU		All	AI
REPTILES	<i>Caretta caretta</i>	VU		All	

REPTILES	<i>Lepidochelys kempii</i>	CR		All	
REPTILES	<i>Lepidochelys olivacea</i>	VU		All	
AMPHIBIANS	<i>Eleutherodactylus martinicensis</i>		LA	All	
AMPHIBIANS	<i>Eleutherodactylus johnstonei</i>		LA	All	
AMPHIBIANS	<i>Peltophryne lemur</i>	CR	GA	All	
AMPHIBIANS	<i>Eleutherodactylus barlagnei</i>	EN	Island endemic	All	
AMPHIBIANS	<i>Eleutherodactylus pinchoni</i>	EN	Island endemic	All	
AMPHIBIANS	<i>Leptodactylus fallax</i>	CR	LA		
AMPHIBIANS	<i>Allobates chalcopis</i>	VU	Island endemic		
AMPHIBIANS	<i>Eleutherodactylus lentus</i>	EN	Island endemic		
AMPHIBIANS	<i>Eleutherodactylus schwartzi</i>	EN	Island endemic		
AMPHIBIANS	<i>Eleutherodactylus antillensis</i>		GA		
AMPHIBIANS	<i>Eleutherodactylus cochranæ</i>		GA		
AMPHIBIANS	<i>Leptodactylus albilabris</i>		GA		
FISHES	<i>Kajikia albida</i>	VU		All suggested	
FISHES	<i>Makaira nigricans</i>	VU		All suggested	
FISHES	<i>Lachnolaimus maximus</i>	VU		All suggested	
FISHES	<i>Thunnus obesus</i>	VU		All suggested	
FISHES	<i>Thunnus thynnus</i>	CR		All suggested	
FISHES	<i>Epinephelus itajara</i>	CR		All suggested	
FISHES	<i>Epinephelus striatus</i>	EN		All suggested	
FISHES	<i>Hyporthodus flavolimbatus</i>	VU		All suggested	
FISHES	<i>Hyporthodus niveatus</i>	VU			
FISHES	<i>Hyporthodus nigritus</i>	CR		All suggested	
FISHES	<i>Hypoplectrus providencianus</i>	VU			
FISHES	<i>Mycteroperca interstitialis</i>	VU		All suggested	
FISHES	<i>Hippocampus erectus</i>	VU		All suggested	All
FISHES	<i>Balistes vetula</i>	VU			
FISHES	<i>Anablepsoides cryptocallus</i>		Island endemic		
FISHES	<i>Starksia williamsi</i>	EN	Island endemic		
FISHES	<i>Starksia springeri</i>		Island endemic		
FISHES	<i>Cyprinodon dearborni</i>		South-eastern Caribbean		
FISHES	<i>Poecilia vandepolli</i>		South-eastern Caribbean		
FISHES	<i>Eleotris perniger</i>		LA		
FISHES	<i>Gambusia xanthosoma</i>		Island endemic		
FISHES	<i>Limia caymanensis</i>		Island endemic		
FISHES	<i>Epinephelus guttatus</i>				
FISHES	<i>Pagrus pagrus</i>	EN			
FISHES	<i>Lutjanus analis</i>	VU			
FISHES	<i>Lutjanus cyanopterus</i>	VU			
FISHES	<i>Megalops atlanticus</i>	VU			
FISHES	<i>Batrachoides manglae</i>	VU			

<u>SHARKS AND RAYS</u>	<i>Centrophorus granulosus</i>	CR		All suggested	
<u>SHARKS AND RAYS</u>	<i>Carcharhinus longimanus</i>	VU			All
<u>SHARKS AND RAYS</u>	<i>Carcharodon carcharias</i>	VU			All
<u>SHARKS AND RAYS</u>	<i>Isurus oxyrinchus</i>	VU			
<u>SHARKS AND RAYS</u>	<i>Alopias vulpinus</i>	VU			
<u>SHARKS AND RAYS</u>	<i>Alopias superciliosus</i>	VU			
<u>SHARKS AND RAYS</u>	<i>Pristis pectinata</i>	CR			
<u>SHARKS AND RAYS</u>	<i>Rhincodon typus</i>	VU			All
<u>SHARKS AND RAYS</u>	<i>Sphyrna lewini</i>	EN			All
<u>SHARKS AND RAYS</u>	<i>Sphyrna mokarran</i>	EN			All
<u>SHARKS AND RAYS</u>	<i>Sphyrna zygaena</i>	VU			All
<u>SHARKS AND RAYS</u>	<i>Carcharhinus obscurus</i>	EN			
<u>SHARKS AND RAYS</u>	<i>Odontaspis ferox</i>	VU			
<u>SHARKS AND RAYS</u>	<i>Cetorhinus maximus</i>	VU			
<u>SHARKS AND RAYS</u>	<i>Manta birostris</i>	VU			All
<u>SHARKS AND RAYS</u>	<i>Manta sp. cf. birostris</i>				
<u>SHARKS AND RAYS</u>	<i>Carcharias taurus</i>	VU			
<u>BIRDS</u>	<i>Pterodroma caribbaea</i>	CR			
<u>BIRDS</u>	<i>Pterodroma hasitata</i>	EN	Caribbean region	All	
<u>BIRDS</u>	<i>Tyrannus cubensis</i>	EN	Caribbean region		
<u>BIRDS</u>	<i>Dendrocygna arborea</i>	VU		AIII	All
<u>BIRDS</u>	<i>Amazona barbadensis</i>	VU	South-eastern Caribbean	All	AI
<u>BIRDS</u>	<i>Cyanophaia bicolor</i>		LA		
<u>BIRDS</u>	<i>Icterus bonana</i>	VU	Island endemic		
<u>BIRDS</u>	<i>Icterus oberi</i>	CR	Island endemic		
<u>BIRDS</u>	<i>Ramphocinclus brachyurus</i>	EN	LA	All	
<u>BIRDS</u>	<i>Turdus lherminieri</i>	VU	LA		
<u>BIRDS</u>	<i>Melanerpes herminieri</i>		Island endemic		
<u>BIRDS</u>	<i>Myadestes genibarbis</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Myiarchus oberi</i>		LA		
<u>BIRDS</u>	<i>Myiarchus antillarum</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Elaenia martinica</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Chaetura martinica</i>		LA		
<u>BIRDS</u>	<i>Cinclocerthia ruficauda</i>		LA	All	
<u>BIRDS</u>	<i>Allenia fusca</i>		LA		

<u>BIRDS</u>	<i>Margarops fuscatus</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Euphonia musica</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Geotrygon mystacea</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Orthorynchus cristatus</i>		LA		
<u>BIRDS</u>	<i>Eulampis jugularis</i>		LA		
<u>BIRDS</u>	<i>Eulampis holosericeus</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Setophaga plumbea</i>		LA		
<u>BIRDS</u>	<i>Saltator albicollis</i>		LA		
<u>BIRDS</u>	<i>Loxigilla noctis</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Contopus latirostris</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Cinclocerthia guttularis</i>		LA		
<u>BIRDS</u>	<i>Vireo crassirostris</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Calliphlox evelynae</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Mimus gundlachii</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Corvus nasicus</i>		Eastern Caribbean islands		
<u>BIRDS</u>	<i>Amazona leucocephala</i>		Eastern Caribbean islands	All	
<u>BIRDS</u>	<i>Anthracothorax dominicus</i>		GA - LA		
<u>BIRDS</u>	<i>Vireo magister</i>		Caribbean region		
<u>BIRDS</u>	<i>Dendroica vitellina</i>		Island endemic		
<u>BIRDS</u>	<i>Melopyrrha nigra</i>		GA		
<u>MAMMALS</u>	<i>Chiroderma improvisum</i>	VU	LA	All	
<u>MAMMALS</u>	<i>Eptesicus guadeloupensis</i>	VU	Island endemic	All	
<u>MAMMALS</u>	<i>Leptonycteris curasoae</i>	VU	South-eastern Caribbean		
<u>MAMMALS</u>	<i>Myotis nesopolus</i>		South-eastern Caribbean		
<u>MAMMALS</u>	<i>Myotis martiniquensis</i>	VU	Island endemic		
<u>MAMMALS</u>	<i>Myotis dominicensis</i>	VU	LA		
<u>MAMMALS</u>	<i>Sturnira thomasi</i>	VU	LA		
<u>MAMMALS</u>	<i>Stenoderma rufum</i>	VU	Eastern Caribbean islands		
<u>MAMMALS</u>	<i>Ardops nichollsi</i>		LA	All	
<u>MAMMALS</u>	<i>Brachyphylla cavernarum</i>		Eastern Caribbean islands	All	
<u>MAMMALS</u>	<i>Monophyllus plethodon</i>		LA		
<u>MAMMALS</u>	<i>Natalus stramineus</i>		LA		
<u>MAMMALS</u>	<i>Calomys hummelincki</i>		South-eastern Caribbean		
<u>MAMMALS</u>	<i>Physeter macrocephalus</i>	VU		All	AI
<u>MAMMALS</u>	<i>Trichechus manatus</i>	VU		All	AI
<u>MAMMALS</u>	<i>Trichechus manatus ssp. manatus</i>	EN		All	AI
<u>ECHINODERMS</u>	<i>Nemaster grandis</i>		South-eastern Caribbean		
<u>CNIDARIANS</u>	<i>Millepora striata</i>	EN		AIII	All
<u>CNIDARIANS</u>	<i>Acropora cervicornis</i>	CR		All	All
<u>CNIDARIANS</u>	<i>Acropora palmata</i>	CR		All	All

CNIDARIANS	<i>Agaricia lamarcki</i>	VU		AIII	AII
CNIDARIANS	<i>Dendrogyra cylindrus</i>	VU		AIII	AII
CNIDARIANS	<i>Dichocoenia stokesii</i>	VU		AIII	AII
CNIDARIANS	<i>Orbicella annularis</i>	EN		AII	AII
CNIDARIANS	<i>Orbicella faveolata</i>	EN		AII	AII
CNIDARIANS	<i>Orbicella franksi</i>	VU		AIII	AII
CNIDARIANS	<i>Mycetophyllia ferox</i>	VU		AIII	AII
CNIDARIANS	<i>Oculina varicosa</i>	VU		AIII	AII
ANNELIDS	<i>Bothromesostoma pieti</i>		Island endemic		
ANNELIDS	<i>Diachaeta bonairensis</i>		Island endemic		
ANNELIDS	<i>Euschoengastia antillarum</i>		Island endemic		
ANNELIDS	<i>Microthalmus stocki</i>		Island endemic		
ANNELIDS	<i>Wagenaaria similis</i>		Island endemic		
MOLLUSCS	<i>Amphicyclotulus perplexus</i>	VU	Island endemic		
MOLLUSCS	<i>Amphicyclotulus schrammi</i>		Island endemic		
MOLLUSCS	<i>Amphicyclotulus beauianus</i>		Island endemic		
MOLLUSCS	<i>Alcadia schrammi</i>		Island endemic		
MOLLUSCS	<i>Bulimulus lherminieri</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte lychnuchus</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte pachygastra</i>		Island endemic		
MOLLUSCS	<i>Amphibulima depressa</i>		Island endemic		
MOLLUSCS	<i>Lucidella plicatula</i>		LA		
MOLLUSCS	<i>Pleurodonte badia</i>		LA		
MOLLUSCS	<i>Pleurodonte dentiens</i>		LA		
MOLLUSCS	<i>Amphibulimus rawsonis</i>		Island endemic		
MOLLUSCS	<i>Amphicyclotulus liratus</i>	VU	Island endemic		
MOLLUSCS	<i>Amphicyclotulus acutiliratus</i>		Island endemic		
MOLLUSCS	<i>Laevaricella semitarum</i>		Island endemic		
MOLLUSCS	<i>Naesiotus martinicensis</i>		Island endemic		
MOLLUSCS	<i>Naesiotus mazei</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte auridens</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte nucleola</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte nuxdenticulata</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte discolor</i>		Island endemic		
MOLLUSCS	<i>Helicina antillarum</i>		Island endemic		
MOLLUSCS	<i>Amphibulima rubescens</i>		Island endemic		
MOLLUSCS	<i>Drymaeus multifasciatus</i>		Island endemic		
MOLLUSCS	<i>Discolepsis desidens</i>		Island endemic		
MOLLUSCS	<i>Gonostomopsis auridens</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte obesa</i>		Island endemic		
MOLLUSCS	<i>Pleurodonte parilis</i>		Island endemic		
MOLLUSCS	<i>Cerion nanus</i>	CR	Island endemic		
MOLLUSCS	<i>Brachypodella raveni</i>		ABC islands		
MOLLUSCS	<i>Cistulops raveni</i>		ABC islands		
MOLLUSCS	<i>Cerion uva</i>		ABC islands		
MOLLUSCS	<i>Tudora megacheilos</i>		ABC islands		
MOLLUSCS	<i>Succinea gyrata</i>		ABC islands		
MOLLUSCS	<i>Gastrocopta curacoana</i>		South-eastern Caribbean		
MOLLUSCS	<i>Gastrocopta octonaria</i>		South-eastern Caribbean		
MOLLUSCS	<i>Leptinaria gloynii</i>		South-eastern Caribbean		
MOLLUSCS	<i>Microceramus bonairensis</i>		South-eastern Caribbean		

MOLLUSCS	<i>Stoastomps walkeri</i>		Island endemic		
MOLLUSCS	<i>Thysanophora vanattai</i>		Island endemic		
MOLLUSCS	<i>Tudora aurantia</i>		Island endemic		
MOLLUSCS	<i>Tudora maculata</i>		Island endemic		
MOLLUSCS	<i>Tudora rupis</i>		Island endemic		
MOLLUSCS	<i>Guppya moolengraaffi</i>		Island endemic		
MOLLUSCS	<i>Hemitrochus nemoralinus</i>		GA		
MOLLUSCS	<i>Conus hennequini</i>	VU	Island endemic		
MOLLUSCS	<i>Conus riosi</i>		Island endemic		
MOLLUSCS	<i>Conus norai</i>		Island endemic		
MOLLUSCS	<i>Conus burryae</i>		Island endemic		
MOLLUSCS	<i>Conus magellanicus</i>		Island endemic		
MOLLUSCS	<i>Muricopsis schrammi</i>		Island endemic		
MOLLUSCS	<i>Triphora guadaloupensis</i>		Island endemic		
MOLLUSCS	<i>Timbellus phyllopterus</i>		LA		
MOLLUSCS	<i>Siratus cailleti</i>		Island endemic		
MOLLUSCS	<i>Sveltia yoyottei</i>		Island endemic		
MOLLUSCS	<i>Terebra lamyi</i>		Island endemic		
MOLLUSCS	<i>Kanamarua francroberti</i>		Island endemic		
MOLLUSCS	<i>Costoanachis roberti</i>		Island endemic		
MOLLUSCS	<i>Hemipolygona lamyi</i>		Island endemic		
MOLLUSCS	<i>Cantrainea yoyottei</i>		Island endemic		
MOLLUSCS	<i>Conus mazei</i>		Eastern Caribbean islands		
MOLLUSCS	<i>Conus roberti</i>		Eastern Caribbean islands		
MOLLUSCS	<i>Conus hieroglyphus</i>	VU	Island endemic		
MOLLUSCS	<i>Persicola cypraeoides</i>		Island endemic		
MOLLUSCS	<i>Decipifus kristenseni</i>		Island endemic		
MOLLUSCS	<i>Murexiella macgintyi</i>		Island endemic		
MOLLUSCS	<i>Terebra curacaoensis</i>		Island endemic		
MOLLUSCS	<i>Chicoreus spectrum</i>		ABC islands		
MOLLUSCS	<i>Conus aurantius</i>		ABC islands		
MOLLUSCS	<i>Anachis dicomata</i>		Island endemic		
MOLLUSCS	<i>Cosmioconcha humfreyi</i>		Island endemic		
MOLLUSCS	<i>Mitrella idalina</i>		Island endemic		
MOLLUSCS	<i>Anachis demani</i>		Island endemic		
MOLLUSCS	<i>Engina stootsi</i>		Island endemic		
MOLLUSCS	<i>Engina demani</i>		Island endemic		
MOLLUSCS	<i>Engina willemsae</i>		Island endemic		
MOLLUSCS	<i>Olivia reclusa</i>		Island endemic		
MOLLUSCS	<i>Teralatirus ernesti</i>		Island endemic		
MOLLUSCS	<i>Ancilla balteata</i>		Island endemic		
MOLLUSCS	<i>Ancilla lienardi</i>		Island endemic		
MOLLUSCS	<i>Persicula chrysomelina</i>		Island endemic		
MOLLUSCS	<i>Crassispira verbernei</i>		Island endemic		
MOLLUSCS	<i>Inodrillia vinki</i>		Island endemic		
MOLLUSCS	<i>Compsodrillia gonae</i>		Island endemic		
MOLLUSCS	<i>Conus curassaviensis</i>		Island endemic		
MOLLUSCS	<i>Pusia bibsae</i>		Island endemic		
MOLLUSCS	<i>Cypraeolina antillensis</i>		Island endemic		
MOLLUSCS	<i>Persicula cordorae</i>		Island endemic		
MOLLUSCS	<i>Latirus eppi</i>		Island endemic		
MOLLUSCS	<i>Muricopsis praepauxillus</i>		Island endemic		
MOLLUSCS	<i>Conus attenuatus</i>		Island endemic		
MOLLUSCS	<i>Crassispira mennoi</i>		Island endemic		

MOLLUSCS	<i>Cerodrillia hannya</i>		Island endemic		
MOLLUSCS	<i>Daphnella louisae</i>		Island endemic		
MOLLUSCS	<i>Minipyrene dormitory</i>		South-eastern Caribbean		
MOLLUSCS	<i>Anachis plicatula</i>		South-eastern Caribbean		
MOLLUSCS	<i>Vasum capitellum</i>		South-eastern Caribbean		
MOLLUSCS	<i>Olivia fulgurator</i>		South-eastern Caribbean		
MOLLUSCS	<i>Oliviella ankei</i>		South-eastern Caribbean		
MOLLUSCS	<i>Oliviella floralia</i>		South-eastern Caribbean		
MOLLUSCS	<i>Persicula muralis</i>		South-eastern Caribbean		
MOLLUSCS	<i>Persicula maculosa</i>		South-eastern Caribbean		
MOLLUSCS	<i>Pusiolina veldhoveni</i>		South-eastern Caribbean		
MOLLUSCS	<i>Pusia pulchella</i>		South-eastern Caribbean		
MOLLUSCS	<i>Calotrophon velero</i>		South-eastern Caribbean		
MOLLUSCS	<i>Murex consuelae</i>		South-eastern Caribbean		
MOLLUSCS	<i>Cosa caribbaea</i>		Island endemic		
MOLLUSCS	<i>Transenella gerrardi</i>		Island endemic		
MOLLUSCS	<i>Alcadia lewisi</i>		Island endemic		
MOLLUSCS	<i>Brachypodella caymanensis</i>		Island endemic		
MOLLUSCS	<i>Cerion martinianum</i>		Island endemic		
MOLLUSCS	<i>Cerion pannosum</i>		Island endemic		
MOLLUSCS	<i>Choanopoma caymanense</i>		Island endemic		
MOLLUSCS	<i>Chondropoma caymanbracense</i>		Island endemic		
MOLLUSCS	<i>Chondropoma caymanense</i>		Island endemic		
MOLLUSCS	<i>Cyclopilsbrya fonticula</i>		Island endemic		
MOLLUSCS	<i>Eutrochatella fisheri</i>		Island endemic		
MOLLUSCS	<i>Geomelania alemon</i>		Island endemic		
MOLLUSCS	<i>Hemitrochus lewisiana</i>		Island endemic		
MOLLUSCS	<i>Hemitrochus streator</i>		Island endemic		
MOLLUSCS	<i>Lacteoluna caymanbracensis</i>		Island endemic		
MOLLUSCS	<i>Lacteoluna caymanensis</i>		Island endemic		
MOLLUSCS	<i>Lacteoluna steveni</i>		Island endemic		
MOLLUSCS	<i>Lacteoluna summa</i>		Island endemic		
MOLLUSCS	<i>Lacteoluna trochella</i>		Island endemic		
MOLLUSCS	<i>Lucidella caymanensis</i>		Island endemic		
MOLLUSCS	<i>Microceramus caymanensis</i>		Island endemic		
MOLLUSCS	<i>Pineria perpusillus</i>		Island endemic		
MOLLUSCS	<i>Proserpinula lewisi</i>		Island endemic		
MOLLUSCS	<i>Spiraxis caymanensis</i>		Island endemic		
MOLLUSCS	<i>Spiraxis subrectaxis</i>		Island endemic		
MOLLUSCS	<i>Stoastoma atomus</i>		Island endemic		
MOLLUSCS	<i>Strobilops wenziana</i>		Island endemic		
MOLLUSCS	<i>Tudora rosenbergiana</i>		Island endemic		
MOLLUSCS	<i>Varicella adolescentia</i>		Island endemic		
MOLLUSCS	<i>Varicella caymanensis</i>		Island endemic		
MOLLUSCS	<i>Varicella infantia</i>		Island endemic		
MOLLUSCS	<i>Varicella pinchoti</i>		Island endemic		

ARTHROPODS	<i>Holothele sulfurensis</i>		Island endemic		
ARTHROPODS	<i>Avicularia versicolor</i>		Island endemic		
ARTHROPODS	<i>Acanthoscurria antillensis</i>		LA		
ARTHROPODS	<i>Camillina jeris</i>		Island endemic		
ARTHROPODS	<i>Selenops curaçaoe</i>		ABC islands		
ARTHROPODS	<i>Olios sanctivicenti</i>		LA		
ARTHROPODS	<i>Lyssomanes michae</i>		Island endemic		
ARTHROPODS	<i>Cyrtopholis femoralis</i>		Island endemic		
ARTHROPODS	<i>Ammotrechella beatriceae</i>		Island endemic		
ARTHROPODS	<i>Agaeu arubaensis</i>		Island endemic		
ARTHROPODS	<i>Diplocentrus hasethi</i>		ABC islands		
ARTHROPODS	<i>Rhopalurus hasethi</i>		ABC islands		
ARTHROPODS	<i>Centruroides barbudensis</i>		LA		
ARTHROPODS	<i>Oiclus purvesii</i>		LA		
ARTHROPODS	<i>Tityus marechali</i>		Island endemic		
ARTHROPODS	<i>Oiclus questeli</i>		Island endemic		
ARTHROPODS	<i>Centruroides pococki</i>		Island endemic		
ARTHROPODS	<i>Pseudochthonius arubense</i>		Island endemic		
ARTHROPODS	<i>Pachychitra curazavia</i>		Island endemic		
ARTHROPODS	<i>Pachyolpium arubense</i>		Island endemic		
ARTHROPODS	<i>Pachyolpium confusum</i>		Island endemic		
ARTHROPODS	<i>Apocheiridium caribicum</i>		Island endemic		
ARTHROPODS	<i>Garypus bonairiensis</i>		Island endemic		
ARTHROPODS	<i>Amblyolpium martinensis</i>		Island endemic		
ARTHROPODS	<i>Charinus bruneti</i>		Island endemic		
ARTHROPODS	<i>Phrynus goesii</i>		LA		
ARTHROPODS	<i>Solenoptera chalumeau</i>		Island endemic		
ARTHROPODS	<i>Phyllophaga stehlei</i>		Island endemic		
ARTHROPODS	<i>Phyllophaga sanbarthensis</i>		LA		
ARTHROPODS	<i>Cratomorphus dorsalis</i>		Island endemic		
ARTHROPODS	<i>Anthonomus aestuans</i>		Island endemic		
ARTHROPODS	<i>Anthonomus homunculus</i>		LA		
ARTHROPODS	<i>Lachnopus memnonius</i>		Island endemic		
ARTHROPODS	<i>Tylocerus crassicornis</i>		LA		
ARTHROPODS	<i>Blapstinus opacus</i>		LA		
ARTHROPODS	<i>Diastolinus perforatus</i>		LA		
ARTHROPODS	<i>Amniscus praemorsus</i>		LA		
ARTHROPODS	<i>Styloleptus posticalis</i>		LA		
ARTHROPODS	<i>Urgleptes cobbeni</i>		LA		
ARTHROPODS	<i>Artipus corycaeus</i>		LA		
ARTHROPODS	<i>Litostylus pudens</i>		LA		
ARTHROPODS	<i>Ministymon ligia</i>		South-eastern Caribbean		
ARTHROPODS	<i>Brephidium exilis</i>		South-eastern Caribbean		
ARTHROPODS	<i>Electrostrymon angerona</i>		LA		
ARTHROPODS	<i>Urbanus obscurus</i>		LA		
ARTHROPODS	<i>Anaea minor</i>		LA		
ARTHROPODS	<i>Antichloris toddi</i>		Island endemic		
ARTHROPODS	<i>Chlorostrymon lalitae</i>		Island endemic		
ARTHROPODS	<i>Rejectaria karukerensis</i>		Island endemic		
ARTHROPODS	<i>Tricentrogyna crocantha</i>		Island endemic		
ARTHROPODS	<i>Castnia pinchoni</i>		Island endemic		
ARTHROPODS	<i>Strymon basilides</i>		Island endemic		
ARTHROPODS	<i>Cyclargus huntingtoni</i>		Island endemic		
ARTHROPODS	<i>Hesperia curassavica</i>		Island endemic		

ARTHROPODS	<i>Calisto anegadensis</i>		Island endemic		
ARTHROPODS	<i>Copaeodes eoa</i>		Island endemic		
ARTHROPODS	<i>Stenoonops tortola</i>		Island endemic		
ARTHROPODS	<i>Polycricus bredini</i>		Island endemic		
ARTHROPODS	<i>Cyrtopholis bartholomei</i>		GA		
ARTHROPODS	<i>Catabenoides lazelli</i>		Island endemic		
ARTHROPODS	<i>Anaea intermedia</i>		Island endemic		
ARTHROPODS	<i>Strymon acis</i>		Island endemic		
ARTHROPODS	<i>Bahadzia stocki</i>		Island endemic		
ARTHROPODS	<i>Bahalana caicosana</i>		Island endemic		
ARTHROPODS	<i>Deevaya spiralis</i>		Island endemic		
ARTHROPODS	<i>Erebonectoides macrochaetus</i>		Island endemic		
ARTHROPODS	<i>Fosshagenia ferrarii</i>		Island endemic		
ARTHROPODS	<i>Godzillius robustus</i>		Island endemic		
ARTHROPODS	<i>Kaloketos pilosus</i>		Island endemic		
ARTHROPODS	<i>Lasionectes entrichoma</i>		Island endemic		
ARTHROPODS	<i>Pelagomacellicephala iliffei</i>		Island endemic		
ARTHROPODS	<i>Spelaeonicippe provo</i>		Island endemic		
ARTHROPODS	<i>Speonebilia cannoni</i>		Island endemic		
ARTHROPODS	<i>Papilio andraemon</i>		GA		
ARTHROPODS	<i>Barbouria cubensis</i>	CR	GA		
ARTHROPODS	<i>Typhlatya garciai</i>		GA		
ARTHROPODS	<i>Heteronebo caymanensis</i>		Island endemic		
ARTHROPODS	<i>Leptophilus caribeanus</i>		Island endemic		
ARTHROPODS	<i>Tisbe caymanensis</i>		Island endemic		
ARTHROPODS	<i>Protoneura romanae</i>	CR	Island endemic		
ARTHROPODS	<i>Macrothemis meurgeyi</i>	EN	Island endemic		
ARTHROPODS	<i>Argia concinna</i>		LA		
ARTHROPODS	<i>Brechmorhoga archboldi</i>		LA		
ARTHROPODS	<i>Protoneura ailsa</i>		LA		
ARTHROPODS	<i>Hesperophasma pavisae</i>		Island endemic		
ARTHROPODS	<i>Lamponius lethargicus</i>		Island endemic		
ARTHROPODS	<i>Paraclonistria nigramala</i>		Island endemic		
ARTHROPODS	<i>Pseudobacteria donskoffi</i>		Island endemic		
ARTHROPODS	<i>Diapherodes martinicensis</i>		Island endemic		
ARTHROPODS	<i>Clonistria guadeloupensis</i>		Island endemic		
ARTHROPODS	<i>Bacteria ferula</i>		LA		
ARTHROPODS	<i>Diapherodes gigas</i>		LA		
ARTHROPODS	<i>Anelaphus curaçaoensis</i>		Island endemic		
ARTHROPODS	<i>Anthicus laterotuberculatus</i>		ABC islands		
ARTHROPODS	<i>Atenizoides curaçaoae</i>		Island endemic		
ARTHROPODS	<i>Blapstinus curassavicus</i>		ABC islands		
ARTHROPODS	<i>Blapstinus hummelinki</i>		ABC islands		
ARTHROPODS	<i>Eburia bonairensis</i>		Island endemic		
ARTHROPODS	<i>Ecnomosternum vermiculatum</i>		ABC islands		
ARTHROPODS	<i>Diastolinus curtatus</i>		ABC islands		
ARTHROPODS	<i>Elaphidion curaçaoae</i>		Island endemic		
ARTHROPODS	<i>Epitragus hummelincki</i>		Island endemic		
ARTHROPODS	<i>Heterachtes arubae</i>		Island endemic		
ARTHROPODS	<i>Methia trium</i>		ABC islands		
ARTHROPODS	<i>Rhyppasma mariagratiae</i>		ABC islands		
ARTHROPODS	<i>Rhyppasma venezuelense</i>		South-eastern Caribbean		
ARTHROPODS	<i>Stizocera curaçaoae</i>		Island endemic		
ARTHROPODS	<i>Stizocera insolita</i>		Island endemic		
ARTHROPODS	<i>Urgleptes hummelincki</i>		Island endemic		

ARTHROPODS	<i>Stictoderia subseriata</i>		South-eastern Caribbean		
ARTHROPODS	<i>Tapinocomus subnudus</i>		ABC islands		
ARTHROPODS	<i>Zophobas batavarum</i>		ABC islands		
ARTHROPODS	<i>Adesmus chalumeaui</i>		Island endemic		
ARTHROPODS	<i>Anisopodus dominicensis</i>		LA		
ARTHROPODS	<i>Eburia inexpectata</i>		Island endemic		
ARTHROPODS	<i>Fortuneleptura cameneni</i>		Island endemic		
ARTHROPODS	<i>Gourbeyrella madininae</i>		Island endemic		
ARTHROPODS	<i>Mionochroma rufescens</i>		Island endemic		
ARTHROPODS	<i>Nesanoplium dalensi</i>		LA		
ARTHROPODS	<i>Parandra pinchoni</i>		Island endemic		
ARTHROPODS	<i>Solenoptera metallescens</i>		Island endemic		
ARTHROPODS	<i>Solenoptera quadrilineata</i>		Island endemic		
ARTHROPODS	<i>Solenoptera canaliculata</i>		Island endemic		
ARTHROPODS	<i>Taeniotes leucogrammus</i>		LA		
ARTHROPODS	<i>Trachyderes maxillosus</i>		Island endemic		
ARTHROPODS	<i>Rosalba arawakiana</i>		Island endemic		
ARTHROPODS	<i>Arawakia inopinata</i>		Island endemic		
ARTHROPODS	<i>Achrestus fortunei</i>		Island endemic		
ARTHROPODS	<i>Anchastus insularis</i>		LA		
ARTHROPODS	<i>Chalcolepidius validus</i>		LA		
ARTHROPODS	<i>Photinus vanderberghi</i>		Island endemic		
ARTHROPODS	<i>Madiniella christinae</i>		Island endemic		
ARTHROPODS	<i>Plectris martinicensis</i>		Island endemic		
ARTHROPODS	<i>Pseudocanthos caeranus</i>		LA		
ARTHROPODS	<i>Acropteron chabrieri</i>		LA		
ARTHROPODS	<i>Antimachus ardoini</i>		Island endemic		
ARTHROPODS	<i>Cyrtosoma martiniquensis</i>		Island endemic		
ARTHROPODS	<i>Castnia pinchoni</i>		Island endemic		
ARTHROPODS	<i>Pterinoxylus crassus</i>		LA		
ARTHROPODS	<i>Agraecia cesairei</i>		Island endemic		
ARTHROPODS	<i>Nesonotus vulneratus</i>		Island endemic		
ARTHROPODS	<i>Nesonotus salomonoides</i>		Island endemic		
ARTHROPODS	<i>Polistes dominicus</i>		LA		
ARTHROPODS	<i>Tityus marechali</i>		Island endemic		
ARTHROPODS	<i>Peridinetus insignis</i>		Island endemic		
ARTHROPODS	<i>Carneades bicincta</i>		Island endemic		
ARTHROPODS	<i>Strategus syphax</i>		LA		
ARTHROPODS	<i>Cryptostemma cobbeni</i>		Island endemic		
ARTHROPODS	<i>Dictyla alia</i>		ABC islands		
ARTHROPODS	<i>Micracanthia drakei</i>		ABC islands		
ARTHROPODS	<i>Ctenolepisma dubitalis</i>		ABC islands		
ARTHROPODS	<i>Hebrus elimatus</i>		ABC islands		
ARTHROPODS	<i>Meinertellus xerophilus</i>		Island endemic		
ARTHROPODS	<i>Turpilia punctata</i>		LA		
ARTHROPODS	<i>Caribacusta saba</i>		LA		
ARTHROPODS	<i>Nesonotus tricornis</i>		LA		
ARTHROPODS	<i>Carylla proalbifrons</i>		LA		
ARTHROPODS	<i>Antillicharis fulvescens</i>		LA		
ARTHROPODS	<i>Orocharis angustus</i>		LA		
ARTHROPODS	<i>Lactista eustatia</i>		Island endemic		
ARTHROPODS	<i>Orophus decoratus</i>		LA		
ARTHROPODS	<i>Amphiacusta sanctaecrucis</i>		LA		
ARTHROPODS	<i>Orocharis fulvescens</i>		LA		
ARTHROPODS	<i>Orocharis minutus</i>		LA		

ARTHROPODS	<i>Orocharis proalbifrons</i>		LA		
ARTHROPODS	<i>Orochirus maculatus</i>		LA		
ARTHROPODS	<i>Cycloptilum eustatiensis</i>		LA		
ARTHROPODS	<i>Cyrtoxipha orientalis</i>		LA		
ARTHROPODS	<i>Anthophora (Mystacanthophora) eustatiensis</i>		LA		
ARTHROPODS	<i>Xylocopa (Neoxylocopa) mordax</i>		LA		
ARTHROPODS	<i>Clinidium planum</i>		Island endemic		
ARTHROPODS	<i>Eohomopterus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Selenophorus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Aeletes lissosternus</i>		Island endemic		
ARTHROPODS	<i>Aculomicrus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Zeadolopus sp.</i>		Island endemic		
ARTHROPODS	<i>Coproporus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Nacaeus foveolus</i>		Island endemic		
ARTHROPODS	<i>Echiaster microps</i>		Island endemic		
ARTHROPODS	<i>Neoxantholinus hubbardi</i>		Island endemic		
ARTHROPODS	<i>Anomala n.sp. insularis</i>		Island endemic		
ARTHROPODS	<i>Scirtes n.sp.</i>		Island endemic		
ARTHROPODS	<i>Polycesta n.sp.</i>		Island endemic		
ARTHROPODS	<i>Micrasta sp.</i>		Island endemic		
ARTHROPODS	<i>Chalcolepidius n. sp.</i>		Island endemic		
ARTHROPODS	<i>Anchastus sp.</i>		Island endemic		
ARTHROPODS	<i>Tytthonyx n. sp.</i>		Island endemic		
ARTHROPODS	<i>Tylocerus picipennis</i>		Island endemic		
ARTHROPODS	<i>Thonalmus hubardi</i>		Island endemic		
ARTHROPODS	<i>Thonalmus sinuaticostis</i>		Island endemic		
ARTHROPODS	<i>Calymmaderus sp. nr. dufai</i>		Island endemic		
ARTHROPODS	<i>Cryptorama sp. 1</i>		Island endemic		
ARTHROPODS	<i>Trichodesma sp.</i>		Island endemic		
ARTHROPODS	<i>Stichtoptenus n.sp. nr. dufai</i>		Island endemic		
ARTHROPODS	<i>Temnochila sp.</i>		Island endemic		
ARTHROPODS	<i>Colydobius n.sp.</i>		Island endemic		
ARTHROPODS	<i>Nemosoma n.sp.</i>		Island endemic		
ARTHROPODS	<i>Albrechrus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Cilleaus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Lepidophloeus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Hapalips nr. guadeloupensis</i>		Island endemic		
ARTHROPODS	<i>Neaptera viola</i>		Island endemic		
ARTHROPODS	<i>Zilus sp.</i>		Island endemic		
ARTHROPODS	<i>Calloeneis n.sp.</i>		Island endemic		
ARTHROPODS	<i>Loirelus n. sp.</i>		Island endemic		
ARTHROPODS	<i>Hymenorus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Lobopoda n.sp.</i>		Island endemic		
ARTHROPODS	<i>Corticeus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Cryptozoon n.sp.</i>		Island endemic		
ARTHROPODS	<i>Nesocyrtosoma n.sp.</i>		Island endemic		
ARTHROPODS	<i>Cyrtosoma n.sp.</i>		Island endemic		
ARTHROPODS	<i>Talanus sp.</i>		Island endemic		
ARTHROPODS	<i>Megistops n. sp. nr. granulate</i>		Island endemic		
ARTHROPODS	<i>Homoschema n.sp.</i>		Island endemic		
ARTHROPODS	<i>Cyrsylus montserrati</i>		Island endemic		
ARTHROPODS	<i>Megascelis n. sp.</i>		Island endemic		
ARTHROPODS	<i>Nesanoplium n.sp.</i>		Island endemic		
ARTHROPODS	<i>Gourbeyella n. sp.</i>		Island endemic		
ARTHROPODS	<i>Strangalia benitiespinali</i>		Island endemic		

ARTHROPODS	<i>Cyclopoliarus montserratensis</i>		Island endemic		
ARTHROPODS	<i>Paraprosotropis marmorata</i>		Island endemic		
ARTHROPODS	<i>Flatoidinus caesalpiniai</i>		Island endemic		
ARTHROPODS	<i>Antillormenis albicostalis</i>		Island endemic		
ARTHROPODS	<i>Ilesia septempunctata</i>		Island endemic		
ARTHROPODS	<i>Catonia montserratensis</i>		Island endemic		
ARTHROPODS	<i>Kapala sulcifacies</i>		Island endemic		
ARTHROPODS	<i>Liris n.sp.</i>		Island endemic		
ARTHROPODS	<i>Ommatius prolongatus</i>		Island endemic		
ARTHROPODS	<i>Efferia n.sp.</i>		Island endemic		
ARTHROPODS	<i>Leptogastrinae n. sp.</i>		Island endemic		
ARTHROPODS	<i>Chrysotus lamellicaudus</i>		LA		
ARTHROPODS	<i>Chrysotus minimus</i>		LA		
ARTHROPODS	<i>Chrysotus n.sp. nr. callichromus</i>		Island endemic		
ARTHROPODS	<i>Chrysotus n.sp. nr. integer</i>		Island endemic		
ARTHROPODS	<i>Chrysotus n.sp. nr. pseudoniger</i>		Island endemic		
ARTHROPODS	<i>Chrysotus n.sp. nr. pseudopacus</i>		Island endemic		
ARTHROPODS	<i>Chrysotus n.sp. nr. robustus</i>		Island endemic		
ARTHROPODS	<i>Chrysotus n.sp. nr. subcaudatus</i>		Island endemic		
ARTHROPODS	<i>Condylostylus n.sp. nr. nigripilosus</i>		Island endemic		
ARTHROPODS	<i>Diaphorus n.sp. nr. flavipes</i>		Island endemic		
ARTHROPODS	<i>Diaphorus n.sp. nr. mundus</i>		Island endemic		
ARTHROPODS	<i>Diaphorus n.sp. nr. parvulus</i>		Island endemic		
ARTHROPODS	<i>Medetera n. sp. nr. crassicauda</i>		Island endemic		
ARTHROPODS	<i>Medetera n.sp.</i>		Island endemic		
ARTHROPODS	<i>Systemus n. sp.</i>		Island endemic		
ARTHROPODS	<i>Thrypticus n. sp. nr. delicatus</i>		Island endemic		
ARTHROPODS	<i>Lepidomyia n.sp.</i>		Island endemic		
ARTHROPODS	<i>Meromacrus n.sp.</i>		Island endemic		
ARTHROPODS	<i>Guinotia dentata</i>		LA		
ARTHROPODS	<i>Epilobocera sinuatifrons</i>		GA		
ARTHROPODS	<i>Salmoneus arubae</i>		ABC islands		
ARTHROPODS	<i>Angeliara dubitans</i>		Island endemic		
ARTHROPODS	<i>Arubolana imula</i>	VU	Island endemic		
ARTHROPODS	<i>Ingolfiella fontinalis</i>		Island endemic		
ARTHROPODS	<i>Curassanthura halma</i>		ABC islands		
ARTHROPODS	<i>Cyathura curassavica</i>		Island endemic		
ARTHROPODS	<i>Cyathura hummelincki</i>		Island endemic		
ARTHROPODS	<i>Halosbaena acanthura</i>		Island endemic		
ARTHROPODS	<i>Ingolfiella grandispina</i>		Island endemic		
ARTHROPODS	<i>Ingolfiella putealis</i>		Island endemic		
ARTHROPODS	<i>Ingolfiella tabularis</i>		Island endemic		
ARTHROPODS	<i>Leptocaris echinatus</i>		Island endemic		
ARTHROPODS	<i>Mesocyclops intermedius</i>		Island endemic		
ARTHROPODS	<i>Metacyclops botosaneanui</i>		Island endemic		
ARTHROPODS	<i>Metacyclops mutatus</i>		Island endemic		
ARTHROPODS	<i>Methaniphargus curassavicus</i>		Island endemic		
ARTHROPODS	<i>Methaniphargus longipes</i>		Island endemic		
ARTHROPODS	<i>Microcharon herrerae</i>		Island endemic		
ARTHROPODS	<i>Neocyclops (Protoneocyclops) geltrudeae</i>		Island endemic		
ARTHROPODS	<i>Neocyclops stocki</i>		Island endemic		
ARTHROPODS	<i>Psammogammarus caesicolus</i>		ABC islands		
ARTHROPODS	<i>Psammogammarus longidactylus</i>		Island endemic		
ARTHROPODS	<i>Saliweckelia emarginata</i>		ABC islands		
ARTHROPODS	<i>Saliweckelia holsingeri</i>		Island endemic		

PLANTS	<i>Melocactus intortus</i>		Eastern Caribbean islands	AIII	AII
PLANTS	<i>Consolea rubescens</i>		GA - LA		AII
PLANTS	<i>Mammillaria nivosa</i>		Eastern Caribbean islands		AII
PLANTS	<i>Pilosocereus royenii</i>		Eastern Caribbean islands		AII
PLANTS	<i>Opuntia triacantha</i>		Eastern Caribbean islands		AII
PLANTS	<i>Guaiacum officinale</i>	EN		AIII	AII
PLANTS	<i>Guaiacum sanctum</i>	EN			AII
PLANTS	<i>Rondeletia anguillensis</i>		Island endemic		
PLANTS	<i>Vachellia anegadensis</i>	CR	Island endemic		
PLANTS	<i>Metastelma anegadense</i>	CR	Island endemic		
PLANTS	<i>Senna polyphylla</i>		Island endemic		
PLANTS	<i>Pitcairnia jareckii</i>		Island endemic		
PLANTS	<i>Calyptanthes kiaerskovii</i>	CR	GA		
PLANTS	<i>Croton fishlockii</i>		GA		
PLANTS	<i>Galactia eggersii</i>		GA		
PLANTS	<i>Reynosia guama</i>		GA		
PLANTS	<i>Varronia rupicola</i>	CR	GA		
PLANTS	<i>Machaonia woodburyana</i>	CR	GA		
PLANTS	<i>Leptocereus quadricostatus</i>	CR	GA		AII
PLANTS	<i>Maytenus cymosa</i>	EN	GA		
PLANTS	<i>Calyptanthes thomasiana</i>	EN	GA		
PLANTS	<i>Zanthoxylum thomasianum</i>	EN	GA	AI	
PLANTS	<i>Zanthoxylum flavum</i>	VU			
PLANTS	<i>Miconia thomasiana</i>		GA		
PLANTS	<i>Sabal causiarum</i>		GA		
PLANTS	<i>Opuntia repens</i>		GA		AII
PLANTS	<i>Bastardiopsis eggersii</i>		GA		
PLANTS	<i>Erythrina eggersii</i>		GA		
PLANTS	<i>Coccothrinax barbadensis</i>		GA		
PLANTS	<i>Malpighia woodburyana</i>		GA		
PLANTS	<i>Epidendrum boricuarum</i>		GA - LA		AII
PLANTS	<i>Odontosoria aculeata</i>		GA		
PLANTS	<i>Arachniodes chaerophylloides</i>		GA		
PLANTS	<i>Anthurium crenatum</i>		GA		
PLANTS	<i>Anthurium x selloum</i>		GA		
PLANTS	<i>Roystonea borinquena</i>		GA		
PLANTS	<i>Agave missionum</i>		GA		
PLANTS	<i>Psychilis kraenzlinii</i>		GA		AII
PLANTS	<i>Psychilis macconnelliae</i>		GA		AII
PLANTS	<i>Tolumnia prionochila</i>		GA		AII
PLANTS	<i>Digitaria eggersii</i>		GA		
PLANTS	<i>Ilex urbaniana</i>		GA		
PLANTS	<i>Lepidaploa sericea</i>		GA		
PLANTS	<i>Piptocoma antillana</i>		GA		
PLANTS	<i>Cordia rickseckeri</i>		GA		
PLANTS	<i>Ipomoea steudelii</i>		GA		
PLANTS	<i>Poitea florida</i>		GA		
PLANTS	<i>Neea buxifolia</i>		GA		
PLANTS	<i>Manilkara pleeana</i>		GA		
PLANTS	<i>Argythamnia stahlia</i>		GA		
PLANTS	<i>Stenandrium carolinae</i>	CR	Island endemic		
PLANTS	<i>Agave caymanensis</i>	VU	Island endemic		
PLANTS	<i>Hohenbergia caymanensis</i>	CR	Island endemic		

PLANTS	<i>Melocactus stramineus</i>	EN	Island endemic		
PLANTS	<i>Verbesina caymanensis</i>	CR	Island endemic		
PLANTS	<i>Lepidium filicaule</i>	EN	Island endemic		
PLANTS	<i>Argythamnia argentea</i>	EN	Island endemic		
PLANTS	<i>Metastelma stipitatum</i>		Island endemic		
PLANTS	<i>Phyllanthus caymanensis</i>	VU	Island endemic		
PLANTS	<i>Banara caymanensis</i>	CR	Island endemic		
PLANTS	<i>Casearia staffordiae</i>	CR	Island endemic		
PLANTS	<i>Nectandra krugii</i>	EN			
PLANTS	<i>Salvia caymanensis</i>	CR	Island endemic		
PLANTS	<i>Chamaecrista caribaea</i>	VU	GA		
PLANTS	<i>Dendropemon caymanensis</i>	CR	Island endemic		
PLANTS	<i>Magnolia dodecapetala</i>	VU	LA		
PLANTS	<i>Cedrela odorata</i>	VU			AIII
PLANTS	<i>Swietenia mahagoni</i>	EN			AII
PLANTS	<i>Swietenia macrophylla</i>	VU			AII
PLANTS	<i>Pisonia margaretae</i>	CR	Island endemic		
PLANTS	<i>Chionanthus caymanensis</i>	EN	Island endemic		
PLANTS	<i>Epidendrum montserratense</i>	CR	Island endemic		AII
PLANTS	<i>Dendrophyllax fawcettii</i>	CR	Island endemic		AII
PLANTS	<i>Encyclia kingsii</i>	CR	Island endemic		AII
PLANTS	<i>Encyclia caicensis</i>	EN	Island endemic		AII
PLANTS	<i>Myrmecophila thomsoniana</i>	EN	Island endemic		AII
PLANTS	<i>Coccothrinax proctorii</i>	EN	Island endemic		
PLANTS	<i>Pinus caribaea</i> var. <i>bahamensis</i>	VU	GA		
PLANTS	<i>Limonium bahamense</i>	EN	Island endemic		
PLANTS	<i>Spermacoce brittonii</i>		Island endemic		
PLANTS	<i>Bursera frenningae</i>		GA		
PLANTS	<i>Rondeletia buxifolia</i>	CR	Island endemic		
PLANTS	<i>Spermacoce capillaris</i>	EN	Island endemic		
PLANTS	<i>Scolosanthus roulstonii</i>	EN	Island endemic		
PLANTS	<i>Agalinis kingsii</i>	CR	Island endemic		
PLANTS	<i>Jacquinia proctorii</i>	VU	GA		
PLANTS	<i>Freziera cordata</i>	VU	LA		
PLANTS	<i>Aegiphila caymanensis</i>	CR	Island endemic		
PLANTS	<i>Picrasma excelsa</i>	VU			
PLANTS	<i>Terminalia eriostachya</i>	EN			
PLANTS	<i>Cordia sebestena</i> var. <i>caymanensis</i>	VU	Island endemic		
PLANTS	<i>Pectis caymanensis</i> var. <i>robusta</i>	CR	Island endemic		
PLANTS	<i>Pouteria pallida</i>	EN	LA		
PLANTS	<i>Pouteria semecarpifolia</i>	VU	LA		
PLANTS	<i>Galactia nummularia</i>		Island endemic		
PLANTS	<i>Calyptanthes boldinghii</i>		Island endemic		
PLANTS	<i>Ipomoea sphenophylla</i>		Island endemic		
PLANTS	<i>Eremothecella microcephalica</i>		Island endemic		
PLANTS	<i>Gonolobus aloiensis</i>		Island endemic		
PLANTS	<i>Lobelia persicifolia</i>		Island endemic		
PLANTS	<i>Clidemia guadalupensis</i>		Island endemic		
PLANTS	<i>Inga guadeloupensis</i>		Island endemic		
PLANTS	<i>Ocotea dussii</i>		Island endemic		
PLANTS	<i>Ocotea l'herminieri</i>		Island endemic		
PLANTS	<i>Anthurium dussii</i>		Island endemic		
PLANTS	<i>Megalastrum macrotheca</i>		Island endemic		
PLANTS	<i>Polystichum guadalupense</i>		Island endemic		
PLANTS	<i>Galactica albiflora</i>		Island endemic		

PLANTS	<i>Miconia vulcanica</i>		Island endemic	
PLANTS	<i>Peperomia balbisii</i>		Island endemic	
PLANTS	<i>Myrsine rolletii</i>		Island endemic	
PLANTS	<i>Spermacoce dussii</i>		Island endemic	
PLANTS	<i>Meliosma pardonii</i>		Island endemic	
PLANTS	<i>Pilea corymbosa</i>		Island endemic	
PLANTS	<i>Specklinia mazei</i>		Island endemic	
PLANTS	<i>Clidemia tetragona</i>		LA	
PLANTS	<i>Acrocomia karukerana</i>	EN	LA	
PLANTS	<i>Agave arubensis</i>		Island endemic	
PLANTS	<i>Agave ruttensiae</i>		Island endemic	
PLANTS	<i>Agave scheurmaniana</i>		LA	
PLANTS	<i>Psychilis correllii</i>		LA	All
PLANTS	<i>Tetramicra canaliculata</i>		LA-PR Bank	All
PLANTS	<i>Tetramicra elegans</i>		LA	All
PLANTS	<i>Malaxis major</i>		LA	All
PLANTS	<i>Ponthieva petiolata</i>		LA	All
PLANTS	<i>Leochilus puertoricensis</i>		GA - LA	All
PLANTS	<i>Cranichis ovata</i>		GA - LA	All
PLANTS	<i>Malaxis massonii</i>		GA - LA	All
PLANTS	<i>Malaxis umbelliflorai</i>		GA - LA	All
PLANTS	<i>Epidendrum jamaicense</i>		GA - LA	All
PLANTS	<i>Epidendrum revertianum</i>		LA	All
PLANTS	<i>Elleanthus dussii</i>		LA	All
PLANTS	<i>Epidendrum boricuarum</i>		LA	All
PLANTS	<i>Campylocentrum pygmaeum</i>		LA	All
PLANTS	<i>Epidendrum patens</i>		LA	All
PLANTS	<i>Lepanthes aurea</i>		LA	All
PLANTS	<i>Oncidium altissimum</i>		GA - LA	All
PLANTS	<i>Stelis ophioglossoides</i>		LA	All
PLANTS	<i>Clidemia umbrosa</i>		LA	
PLANTS	<i>Rondelitia parviflora</i>		LA	
PLANTS	<i>Chamaesyce balbisii</i>		LA	
PLANTS	<i>Calliandra slanaeae</i>		LA	
PLANTS	<i>Cordia martinicensis</i>		LA	
PLANTS	<i>Cordia nesophila</i>		LA	
PLANTS	<i>Croton bixoides</i>		LA	
PLANTS	<i>Croton guildingii</i>		LA	
PLANTS	<i>Tabebuia pallida</i>		LA	
PLANTS	<i>Galactia longiflora</i>		LA	
PLANTS	<i>Chromolaena macrantha</i>		LA	
PLANTS	<i>Begonia retusa</i>		LA	
PLANTS	<i>Xylosma serratum</i>		Island endemic	
PLANTS	<i>Charianthus purpureus</i>		LA	
PLANTS	<i>Charianthus alpinus</i>		LA	
PLANTS	<i>Charianthus corymbeus</i>		LA	
PLANTS	<i>Freziera undulata</i>		LA	
PLANTS	<i>Marila racemosa</i>		LA	
PLANTS	<i>Sloanea truncata</i>		LA	
PLANTS	<i>Marcgravia umbellata</i>		LA	
PLANTS	<i>Cyathea muricata</i>		LA	
PLANTS	<i>Hymenophyllum macrothecum</i>		LA	
PLANTS	<i>Blechnum nesioticum</i>		LA	
PLANTS	<i>Selaginella flabellata</i>		LA	
PLANTS	<i>Agave karatto</i>		LA	
PLANTS	<i>Agave dussiana</i>		LA	

PLANTS	<i>Furcraea tuberosa</i>	LA
PLANTS	<i>Marsdenia macroglossa</i>	LA
PLANTS	<i>Schefflera attenuata</i>	LA
PLANTS	<i>Chromolaena dussii</i>	LA
PLANTS	<i>Eupatorium integrifolium</i>	LA
PLANTS	<i>Eupatorium trigonocarpum</i>	LA
PLANTS	<i>Mikania latifolia</i>	LA
PLANTS	<i>Blechnum ryanii</i>	LA
PLANTS	<i>Blechnum binervatum</i>	LA
PLANTS	<i>Aechmea smithiorum</i>	LA
PLANTS	<i>Glomeropitcairnia penduliflora</i>	LA
PLANTS	<i>Werauhia guadelupensis</i>	LA
PLANTS	<i>Tillandsia antillana</i>	LA
PLANTS	<i>Lobelia digitalifolia</i>	LA
PLANTS	<i>Cyathea grandifolia</i>	LA
PLANTS	<i>Asplundia insignis</i>	LA
PLANTS	<i>Sloanea massoni</i>	LA
PLANTS	<i>Sapium caribaeum</i>	LA
PLANTS	<i>Grammitis eggertii</i>	LA
PLANTS	<i>Hymenophyllum hirsutum</i>	LA
PLANTS	<i>Nectandra dominicana</i>	LA
PLANTS	<i>Galactia dubia</i>	LA
PLANTS	<i>Elaphoglossum impressum</i>	LA
PLANTS	<i>Wercklea tulipiflora</i>	LA
PLANTS	<i>Henriettea lateriflora</i>	LA
PLANTS	<i>Miconia coriacea</i>	LA
PLANTS	<i>Miconia cornifolia</i>	LA
PLANTS	<i>Tetrazygia discolor</i>	LA
PLANTS	<i>Tibouchina ornata</i>	LA
PLANTS	<i>Miconia globuliflora</i>	LA
PLANTS	<i>Miconia striata</i>	LA
PLANTS	<i>Passiflora rotundifolia</i>	LA
PLANTS	<i>Peperomia trifolia</i>	LA
PLANTS	<i>Spermacoce berteriana</i>	LA
PLANTS	<i>Thelypteris clypeolutata</i>	LA
PLANTS	<i>Alternanthera crucis</i>	GA - LA
PLANTS	<i>Cynanchum cubense</i>	GA - LA
PLANTS	<i>Aristida suringari</i>	GA - LA
PLANTS	<i>Monstera adansonii</i>	LA
PLANTS	<i>Vriesea antillana</i>	LA
PLANTS	<i>Justicia eustachiana</i>	GA - LA
PLANTS	<i>Chromolaena integrifolia</i>	LA
PLANTS	<i>Clusia major</i>	LA
PLANTS	<i>Galactia rubra</i>	LA
PLANTS	<i>Gesneria ventricosa</i>	GA - LA
PLANTS	<i>Pisonia subcordata</i>	GA - LA
PLANTS	<i>Aiphanes luciana</i>	LA
PLANTS	<i>Aniba ramageana</i>	LA
PLANTS	<i>Calyptanthes elegans</i>	LA
PLANTS	<i>Cinnamomum falcatum</i>	LA
PLANTS	<i>Clusia mangle</i>	LA
PLANTS	<i>Duranta stenostachya</i>	LA
PLANTS	<i>Eugenia chrysobalanoides</i>	LA
PLANTS	<i>Eugenia trinervia</i>	LA
PLANTS	<i>Exostema sanctae-luciae</i>	LA
PLANTS	<i>Genipa americana</i>	LA

PLANTS	<i>Geonoma dussiana</i>	LA
PLANTS	<i>Ilex dioica</i>	LA
PLANTS	<i>Licaria sericea</i>	LA
PLANTS	<i>Protium attenuatum</i>	LA
PLANTS	<i>Prunus pleuradenia</i>	LA
PLANTS	<i>Psychotria pleeana</i>	LA
PLANTS	<i>Sloanea dentata</i>	LA
PLANTS	<i>Sterculia caribaea</i>	LA
PLANTS	<i>Styrax glaber</i>	LA
PLANTS	<i>Syagrus amara</i>	LA
PLANTS	<i>Talauma dodecapetala</i>	LA
PLANTS	<i>Tapura latifolia</i>	LA
PLANTS	<i>Ternstroemia elliptica</i>	LA
PLANTS	<i>Ternstroemia oligostemon</i>	LA
PLANTS	<i>Aiphanes minima</i>	LA
PLANTS	<i>Vernonia albicaulis</i>	GA - LA
PLANTS	<i>Diplazium legalloi</i>	LA
PLANTS	<i>Lobelia guadeloupensis</i>	LA
PLANTS	<i>Hymenophyllum latifrons</i>	LA
PLANTS	<i>Odontosoria flexuosa</i>	LA
PLANTS	<i>Cohniella cebolleta</i>	LA
PLANTS	<i>Moranopteris knowltoniorum</i>	LA
PLANTS	<i>Thelypteris antillana</i>	LA
PLANTS	<i>Eriosorus hispidulus</i>	LA
PLANTS	<i>Drypetes serrata</i>	LA
PLANTS	<i>Selaginella rotundifolia</i>	LA
PLANTS	<i>Thelypteris consanguinea</i>	LA
PLANTS	<i>Thelypteris hydrophila</i>	LA
PLANTS	<i>Thelypteris limbata</i>	LA
PLANTS	<i>Thelypteris interrupta</i>	LA
PLANTS	<i>Blechnum rufum</i>	LA
PLANTS	<i>Grammitis knowltoniorum</i>	LA
PLANTS	<i>Byrsonima trinitensis</i>	LA
PLANTS	<i>Byrsonima lucida</i>	LA
PLANTS	<i>Eugenia duchassaingana</i>	LA
PLANTS	<i>Eugenia gregii</i>	LA
PLANTS	<i>Eugenia hodgei</i>	LA
PLANTS	<i>Eugenia trinitatis</i>	LA
PLANTS	<i>Euterpe dominicana</i>	LA
PLANTS	<i>Geonoma martinicensis</i>	LA
PLANTS	<i>Acrocomia aculeata</i>	LA
PLANTS	<i>Licaria salicifolia</i>	LA-PR
PLANTS	<i>Chrysobalanus cuspidatus</i>	LA
PLANTS	<i>Pityrogramma chrysophylla</i>	LA-PR
PLANTS	<i>Ctenitis meridionalis</i>	LA
PLANTS	<i>Clibadium erosum</i>	LA-PR
PLANTS	<i>Blechnum insularum</i>	LA-PR
PLANTS	<i>Cordia reticulata</i>	LA
PLANTS	<i>Tournefortia filiflora</i>	LA-PR
PLANTS	<i>Dacryodes excelsa</i>	LA-PR
PLANTS	<i>Ipomoea repanda</i>	LA-PR
PLANTS	<i>Aniba bracteata</i>	LA-PR
PLANTS	<i>Acacia glauca</i>	LA
PLANTS	<i>Peperomia myrtifolia</i>	LA-VI
PLANTS	<i>Piper dussii</i>	LA
PLANTS	<i>Podocarpus coriaceus</i>	LA-PR

PLANTS	<i>Psychotria urbaniana</i>		LA		
PLANTS	<i>Paullinia vespertilio</i>		LA		
PLANTS	<i>Solanum racemosum</i>		LA-VI		
PLANTS	<i>Agave boldinghiana</i>		ABC islands		
PLANTS	<i>Agave cocui</i>		South-eastern Caribbean		
PLANTS	<i>Agave vivipara</i>		ABC islands		
PLANTS	<i>Aristida arubensis</i>		ABC islands		
PLANTS	<i>Chloris suringari</i>		ABC islands		
PLANTS	<i>Cynanchum boldinghii</i>		ABC islands		
PLANTS	<i>Melocactus macracanthos</i>		ABC islands		All
PLANTS	<i>Mammillaria mammillaris</i>		Eastern Caribbean islands		All
PLANTS	<i>Maytenus versluysii</i>		ABC islands		
PLANTS	<i>Myrcia curassavica</i>		ABC islands		
PLANTS	<i>Paspalum bonairensis</i>		ABC islands		
PLANTS	<i>Paspalum curassavicus</i>		ABC islands		
PLANTS	<i>Peltophorum acutifolium</i>		South-eastern Caribbean		
PLANTS	<i>Cereus repandus</i>		South-eastern Caribbean		All
PLANTS	<i>Opuntia wentiana</i>		South-eastern Caribbean		All
PLANTS	<i>Opuntia curassavica</i>		Eastern Caribbean islands		All
PLANTS	<i>Pereskia guamacho</i>		South-eastern Caribbean		
PLANTS	<i>Pilosocereus lanuginosus</i>		South-eastern Caribbean		All
PLANTS	<i>Stenocereus griseus</i>		South-eastern Caribbean		
PLANTS	<i>Schomburgkia humboldtii</i>		South-eastern Caribbean		
PLANTS	<i>Machaonia ottonis</i>		South-eastern Caribbean		
PLANTS	<i>Ficus brittonii</i>		South-eastern Caribbean		
PLANTS	<i>Condalia henriquezii</i>		South-eastern Caribbean		
PLANTS	<i>Capparis linearis</i>		South-eastern Caribbean		
PLANTS	<i>Bursera tomentosa</i>		South-eastern Caribbean		
PLANTS	<i>Bursera karsteniana</i>		South-eastern Caribbean		
PLANTS	<i>Ruprechtia coriacea</i>		South-eastern Caribbean		
PLANTS	<i>Tanaecium crucigerum</i>		Eastern Caribbean islands		
PLANTS	<i>Grammitis stipitata</i>	CR	Island endemic		
PLANTS	<i>Lindsaea lherminieri</i>	CR	Island endemic		
PLANTS	<i>Polygala planellasi</i>	CR	Island endemic		
PLANTS	<i>Aechmea flemingii</i>	EN	Island endemic		
PLANTS	<i>Heliotropium microphyllum</i>		LA		
PLANTS	<i>Echinodorus zombiensis</i>	VU	Island endemic		
PLANTS	<i>Juncus guadeloupensis</i>	VU	Island endemic		
PLANTS	<i>Verbesina guadeloupensis</i>	VU	Island endemic		
PLANTS	<i>Epidendrum mutelianum</i>		Island endemic	AIII	All
PLANTS	<i>Stelis dussii</i>		Island endemic		All
PLANTS	<i>Octomeria ffrenchiana</i>	CR	Island endemic		All

PLANTS	<i>Pseudocentrum guadalupense</i>	CR	Island endemic		All
PLANTS	<i>Pleurothallis mazei</i>	CR	Island endemic		
PLANTS	<i>Galactia albiflora</i>		Island endemic		
PLANTS	<i>Ipomoea walpersiana</i>		Island endemic	AI	
PLANTS	<i>Myrcia martinicensis</i>		Island endemic		
PLANTS	<i>Comocladia undulata</i>		Island endemic		
PLANTS	<i>Oreopanax ramosissimus</i>		Island endemic		
PLANTS	<i>Buxus subcolumnaris</i>		Island endemic		
PLANTS	<i>Sloanea dussii</i>		Island endemic		
PLANTS	<i>Charianthus nodosus</i>		Island endemic		
PLANTS	<i>Ardisia magdalenae</i>		Island endemic		
PLANTS	<i>Coccoloba caravellae</i>		Island endemic		
PLANTS	<i>Rondeletia martinicensis</i>		Island endemic		
PLANTS	<i>Gonolobus absalonensis</i>		Island endemic		
PLANTS	<i>Gonolobus martinicensis</i>		Island endemic		
PLANTS	<i>Gonolobus dussii</i>		LA		
PLANTS	<i>Pitcairnia spicata</i>		Island endemic		
PLANTS	<i>Anthurium lanceolatum</i>		Island endemic		
PLANTS	<i>philodendron dussii</i>		Island endemic		
PLANTS	<i>Metastelma martinicensis</i>		Island endemic		
PLANTS	<i>Eupatorium medullosum</i>		Island endemic		
PLANTS	<i>Operculina leptoptera</i>		Island endemic		
PLANTS	<i>Besleria lanceolata</i>		Island endemic		
PLANTS	<i>Calathea martinicensis</i>		Island endemic		
PLANTS	<i>Palicourea martinicensis</i>		Island endemic		
PLANTS	<i>Schefflera urbaniana</i>	CR	Island endemic		
PLANTS	<i>Inga martinicensis</i>	VU	Island endemic		
PLANTS	<i>Aechmea reclinata</i>	CR	Island endemic		
PLANTS	<i>Aechmea serrata</i>	CR	Island endemic		
PLANTS	<i>Byrsonima martinicensis</i>	CR	Island endemic		
PLANTS	<i>Erithalis acuminata</i>	CR	Island endemic		
PLANTS	<i>Eugenia gryposperma</i>	CR	Island endemic		
PLANTS	<i>Polygala antillensis</i>	CR	Island endemic		
PLANTS	<i>Stylogyne canaliculata</i>	CR	Island endemic		
PLANTS	<i>Wallenia lamarckiana</i>	CR	Island endemic		
PLANTS	<i>Clidemia latifolia</i>	EN	Island endemic		
PLANTS	<i>Cybianthus dussii</i>	EN	Island endemic		
PLANTS	<i>Drypetes dussii</i>	EN	Island endemic		
PLANTS	<i>Arthrostylidium obtusatum</i>	VU	Island endemic		
PLANTS	<i>Lobelia conglobata</i>	VU	Island endemic		
PLANTS	<i>Chamaesyce bruntii</i>	CR	Island endemic		
PLANTS	<i>Chionanthus caymanensis longipetala</i>	EN	Island endemic		
PLANTS	<i>Turnera triglandulosa</i>		Island endemic		
PLANTS	<i>Crossopetalum caymanense</i>		Island endemic		
PLANTS	<i>Caesalpinia caymanensis</i>		Island endemic		
PLANTS	<i>Argythamnia proctorii</i>		Island endemic		
PLANTS	<i>Daphnopsis occidentalis</i>		GA		
PLANTS	<i>Pleurothallis caymanensis</i>		GA		
PLANTS	<i>Consolea millspaughii</i>		GA		
PLANTS	<i>Diospyros revoluta</i>		GA - LA		
PLANTS	<i>Chamaecrista obcordata</i>		GA - LA		
PLANTS	<i>Tolumnia urophylla</i>		GA - LA		
PLANTS	<i>Eugenia cordata</i>		GA - LA		
PLANTS	<i>Jacquemontia solanifolia</i>		GA - LA		
PLANTS	<i>Mitracarpus polycladus</i>		GA - LA		

PLANTS	<i>Justicia androsaemifolia</i>		LA		
PLANTS	<i>Rauvolfia biauriculata</i>		GA - LA		
PLANTS	<i>Anthurium hookeri</i>		LA		
PLANTS	<i>Anthurium palmatum</i>		LA		
PLANTS	<i>Anthurium willdenowii</i>		LA		
PLANTS	<i>Oreopanax dussii</i>		LA		
PLANTS	<i>Aristolochia rugosa</i>		LA		
PLANTS	<i>Erigeron polycladus</i>		LA		
PLANTS	<i>Mikania ovalis</i>		LA		
PLANTS	<i>Senecio lucidus</i>		LA		
PLANTS	<i>Begonia obliqua</i>		LA		
PLANTS	<i>Tournefortia caribaea</i>		LA		
PLANTS	<i>Guzmania dussii</i>		LA		
PLANTS	<i>Guzmania megastachya</i>		LA		
PLANTS	<i>Pitcairnia bifrons</i>		LA		
PLANTS	<i>Swartzia caribaea</i>		LA		
PLANTS	<i>Hirtella pendula</i>		LA		
PLANTS	<i>Licania ternatensis</i>		LA		
PLANTS	<i>Connarus grandifolius</i>		LA		
PLANTS	<i>Asplundia dussii</i>		LA		
PLANTS	<i>Asplundia rigida</i>		LA		
PLANTS	<i>Rhynchospora tenuis</i>		LA		
PLANTS	<i>Dioscorea duchassaingii</i>		LA		
PLANTS	<i>Gaultheria domingensis</i>		GA - LA		
PLANTS	<i>Gonocalyx smilacifolius</i>		LA		
PLANTS	<i>Amanoa caribaea</i>		LA		
PLANTS	<i>Phyllanthus mimosoides</i>		LA		
PLANTS	<i>Phyllanthus ovatus</i>		LA		
PLANTS	<i>Sebastiania hexaptera</i>		LA		
PLANTS	<i>Andira inermis</i>		LA		
PLANTS	<i>Galactia striata</i>		LA		
PLANTS	<i>Xylosma martinicense</i>		LA		
PLANTS	<i>Irlbachia frigida</i>		LA		
PLANTS	<i>Besleria filipes</i>		LA		
PLANTS	<i>Ocotea alpina</i>		LA		
PLANTS	<i>Ocotea dominicana</i>		LA		
PLANTS	<i>Ocotea eggersiana</i>		LA		
PLANTS	<i>Ocotea imrayana</i>		LA		
PLANTS	<i>Ocotea jacquini</i>		LA		
PLANTS	<i>Ocotea martinicensis</i>		LA		
PLANTS	<i>Persea urbaniana</i>		LA		
PLANTS	<i>Lobelia stricta</i>		LA		
PLANTS	<i>Psittacanthus martinicensis</i>		LA		
PLANTS	<i>Palhinhaea cernua</i>		LA		
PLANTS	<i>Heteropterys leona</i>		LA		
PLANTS	<i>Malpighia martinicensis</i>		LA		
PLANTS	<i>Marcgravia lineolata</i>		LA		
PLANTS	<i>Marcgravia trinitatis</i>		LA		
PLANTS	<i>Ruyschia clusiifolia</i>		LA		
PLANTS	<i>Blakea pulverulenta</i>		LA		
PLANTS	<i>Charianthus corymbosus</i>		LA		
PLANTS	<i>Miconia furfuracea</i>		LA		
PLANTS	<i>Miconia martinicensis</i>		LA		
PLANTS	<i>Miconia trichotoma</i>		LA		
PLANTS	<i>Cybianthus parasiticus</i>		LA		
PLANTS	<i>Cybianthus rostratus</i>		LA		

PLANTS	<i>Myrsine trinitatis</i>		LA		
PLANTS	<i>Stylogyne lateriflora</i>		LA		
PLANTS	<i>Eugenia duchassaingiana</i>		LA		
PLANTS	<i>Myrcia antillana</i>		LA		
PLANTS	<i>Plinia pinnata</i>		LA		
PLANTS	<i>Guapira suborbiculata</i>		LA		
PLANTS	<i>Ouratea longifolia</i>		LA		
PLANTS	<i>Epidendrum calanthum</i>		LA		
PLANTS	<i>Epidendrum secundum</i>		LA		
PLANTS	<i>Octomeria graminifolia</i>		LA		
PLANTS	<i>Passiflora andersonii</i>		LA		
PLANTS	<i>Passiflora stenosepala</i>		LA		
PLANTS	<i>Peperomia hirta</i>		LA		
PLANTS	<i>Isachne disperma</i>		LA		
PLANTS	<i>Coccoloba dussii</i>		LA		
PLANTS	<i>Jamesonia hispidula</i>		LA		
PLANTS	<i>Diplazium apollinaris</i>		LA		
PLANTS	<i>Diplazium godmanii</i>		LA		
PLANTS	<i>Diplazium legalloii</i>		LA		
PLANTS	<i>Blechnum rufum</i>		LA		
PLANTS	<i>Blechnum lechleri</i>		LA		
PLANTS	<i>Elaphoglossum hirtum</i>		LA		
PLANTS	<i>Elaphoglossum smithii</i>		LA		
PLANTS	<i>Lellingeria phlegmaria</i>		LA		
PLANTS	<i>Moranopteris serricula</i>		LA		
PLANTS	<i>Lellingeria tenuicula</i>		LA		
PLANTS	<i>Thelypteris muscicola</i>		LA		
PLANTS	<i>Thelypteris rustica</i>		LA		
PLANTS	<i>Rubus ferrugineus</i>		LA		
PLANTS	<i>Hoffmannia tubiflora</i>		LA		
PLANTS	<i>Manettia dominicensis</i>		LA		
PLANTS	<i>Psychotria muscosa</i>		LA		
PLANTS	<i>Rondeletia parviflora</i>		LA		
PLANTS	<i>Rudgea citrifolia</i>		LA		
PLANTS	<i>Paullinia plumieri</i>		LA		
PLANTS	<i>Smilax guianensis</i>		LA		
PLANTS	<i>Symplocos guadeloupensis</i>		LA		
PLANTS	<i>Gyrotaenia crassifolia</i>		LA		
PLANTS	<i>Pilea forsythiana</i>		LA		
PLANTS	<i>Pilea ovalis</i>		LA		
PLANTS	<i>Petrea volubilis</i>		LA		
PLANTS	<i>Renealmia pyramidalis</i>		LA		
PLANTS	<i>Jatropha divaricata</i>	VU	GA		
PLANTS	<i>Harrisia caymanensis</i>		Island endemic		
PLANTS	<i>Myrmecophila thomsoniana</i> var. <i>thomsoniana</i>	EN	Island endemic		
PLANTS	<i>Myrmecophila thomsoniana</i> var. <i>minor</i>	EN	Island endemic		
PLANTS	<i>Chionanthus caymanensis</i> var. <i>caymanensis</i>	EN	Island endemic		
PLANTS	<i>Pectis caymanensis</i>		GA		
PLANTS	<i>Malpighia cubensis</i>		GA		
PLANTS	<i>Encyclia phoenicia</i>		GA		
PLANTS	<i>Peperonia pseudopereskiiifolia</i>		GA		
PLANTS	<i>Polygala propinqua</i>		GA		
PLANTS	<i>Tabernaemontana laurifolia</i>		GA		

PLANTS	<i>Lepidaploa divaricata</i>		GA		
PLANTS	<i>Cionosicyos pomiformis</i>		GA		
PLANTS	<i>Astrocasia tremula</i>		GA		
PLANTS	<i>Peperonia simplex</i>		GA		
PLANTS	<i>Casearia odorata</i>		GA		
PLANTS	<i>Consolea millspaughii caymanensis</i>	CR	GA		
PLANTS	<i>Terminalia eriostachya</i> var. <i>margaretiae</i>	CR	Island endemic		
PLANTS	<i>Epiphyllum phyllanthus</i> var. <i>plattsii</i>	CR	Island endemic		

Abbreviations

End.: endemic

LA: Lesser Antilles

GA: Greater Antilles

PR: Puerto Rico

VI: Virgin Islands

TCI: Turks and Caicos Islands

A - Aruba; B- Bonaire; C-Curaçao

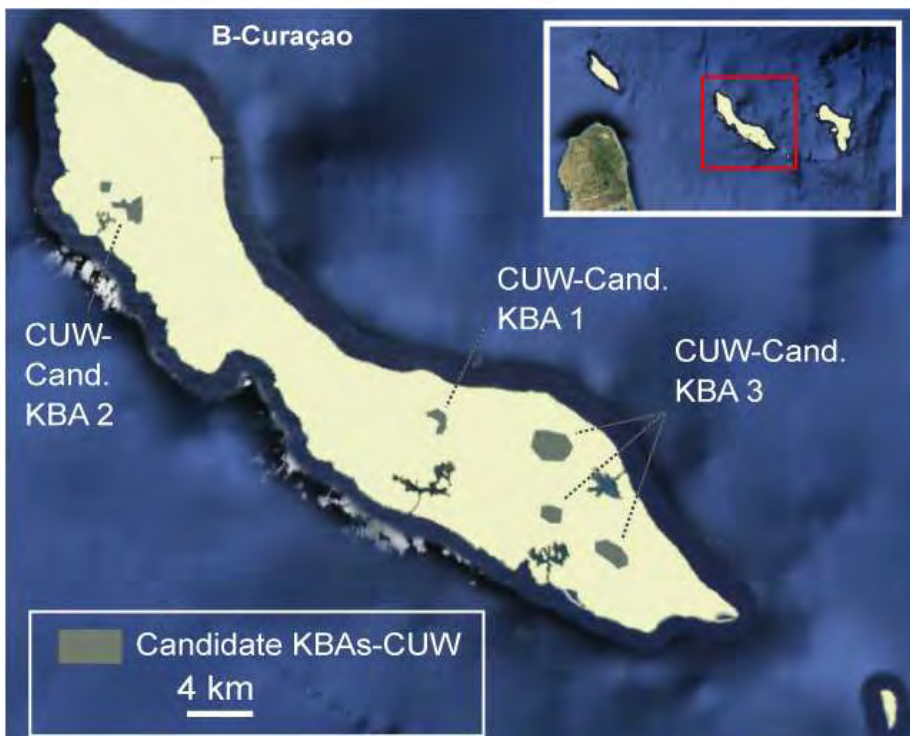
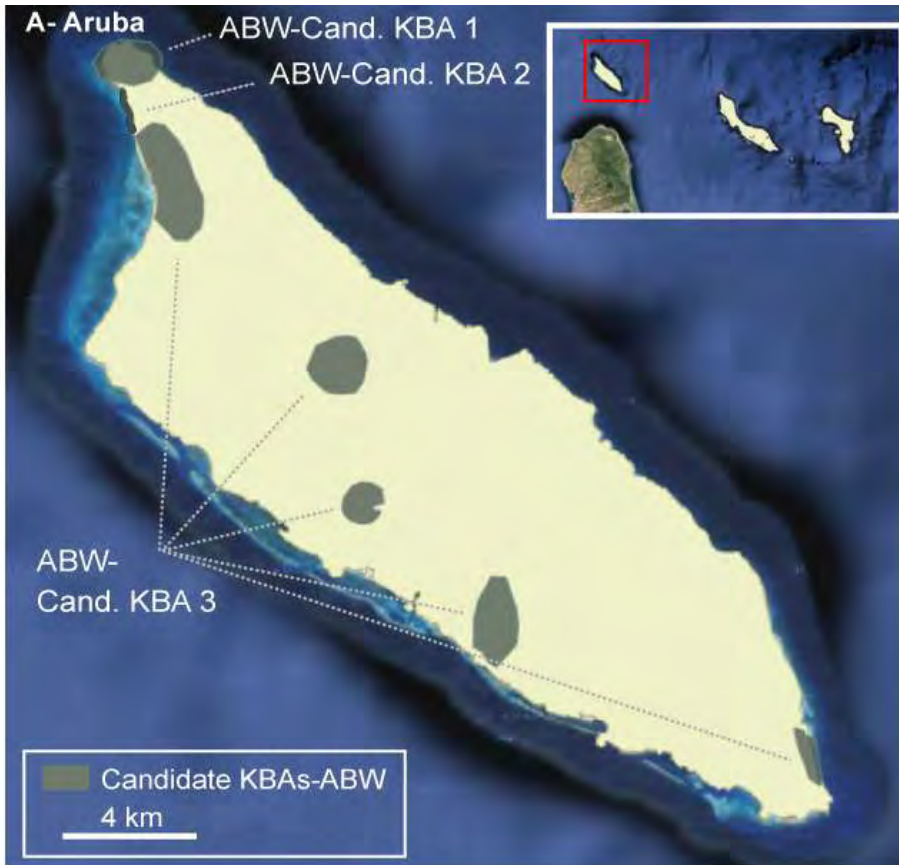
APPENDIX 3. LIST OF IBAS.

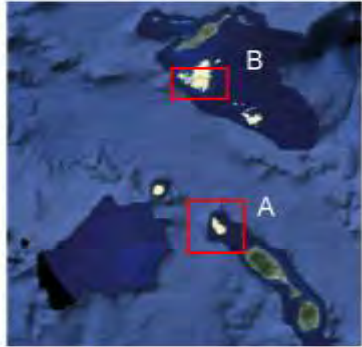
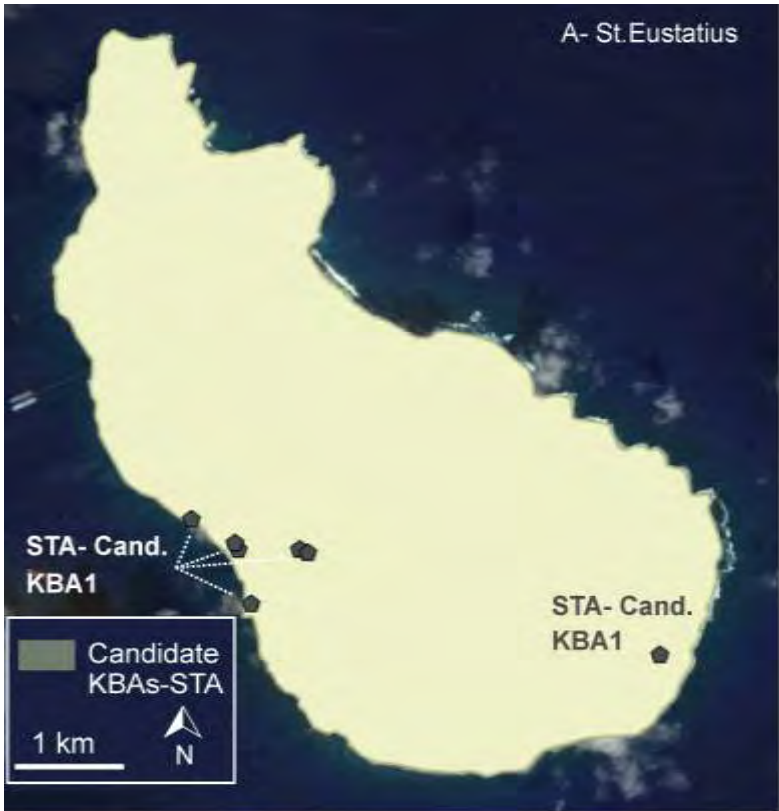
EU Member State	OCTs and ORs	Name of the IBA	Area (ha)
NL	Saba	Saba	2145
	St Eustatius	Boven	1016
		The Quill	470
	Bonaire	Washington-Slagbaai National Park	6906
		Lac Bay	2076
		Pelkermeer Saltworks	6851
		Washikemba: Fontein: Onima	5959
		Klein Bonaire	1810
		Dos Pos	234
	Aruba	San Nicolas Bay Reef Islands	248
		Tierra del Sol Salina	1
		Bubali Wetlands	53
		Oranjestad Reef Islands	309
	Curaçao	Malpais-St Michiel	1100
		Jan Thiel Lagoon	432
		Muizenberg	64
		Klein Curaçao	1131
		NE Curaçao parks and coast	13554
	St Maarten	Pelikan Rock	328
		Little Bay	8
Fresh Pond		14	
Great Salt Pond		188	
Fort Amsterdam		278	
FR	Guadeloupe	Massif forestier de l'île de Basse-Terre	38705
		Pointe des Châteaux	1292
		îlets de la Petite-Terre	1385
		Falaises Nord et Îlet de Vieux-Fort de Marie-Galante	1780
		Falaises du Nord Grande-Terre	3960
		Barrage de Gaschet	290
		Grand Cul-de-Sac Marin's eastern coastline	2785
		Digue du port de pêche de Saint-François	50
		Îlet Tête à l'Anglais	339
		Martinique	Îlets et falaises de Sainte Anne
	Grand Macabou		157
	Presqu'île de la Caravelle		960
	Pointe Pain de Sucre		8700
	Îlets Boiseau et Petit Piton		7300
	Rocher du Diamant		4130
	Pitons du Carbet		12423
	Mangrove de Fort de France		3361
	Massif forestier entre Le Diamant et les Trois-Îlets		6619
	Forêts du Nord et de la Montagne Pelée		9262
	St Barthélemy	Îlet Tortue	370
		Petite Islette	325
		Îlets les Petits Saints et Gros Îlets	360
	St Martin	Tintamarre	665
		Pic Paradis	205
		Grand Etang	18

UK	Anguilla	Dog Island	1333
		Scrub Island	1672
		Sombrero	618
		Cove Pond	43
		Prickly Pear (East and West)	973
		Long Salt Pond	23
		Grey Pond	191
		Merrywing Pond System	9
		Katouche Canyon	75
		Cauls Pond	43
		Road Salt Pond	43
		West End Pond	19
		Forest Bay Pond	3
		Meads Bay Pond	21
		Rendezvous Bay Pond	24
		Mimi Bay	1
	Montserrat	Centre Hills	1112
		Northern Forested Ghauts	498
		South Soufriere Hills	35
	Virgin Islands	Anegada: Western salt ponds and coastal areas	4000
		Great Tobago	1695
		Green Cay	425
	Turks and Caicos Islands	Wades Green and Teren Hill	226
		Fish Ponds and Crossing Place Trail	1024
		North, Middle and East Caicos Ramsar Site	58562
		Middle Caicos Forest	1374
		East Caicos and adjacent areas	30440
		Caicos Bank Southern Cays	153182
		Grand Turk Salinas and Shores	268
		Turks Bank Seabird Cays	1815
	Salt Cay Creek and Salinas	251	
	Cayman Islands	Booby Pond Nature Reserve	136
		Crown Wetlands	516
Sparrowhawk Hill		152	
Bluff Forest		473	
Mastic Reserve		446	
Central Mangrove Wetland		3553	
Botanic Park and Salina Reserve		276	
Franklin's Forest		111	
Frank Sound Forest		223	
Eastern Dry Forest	239		

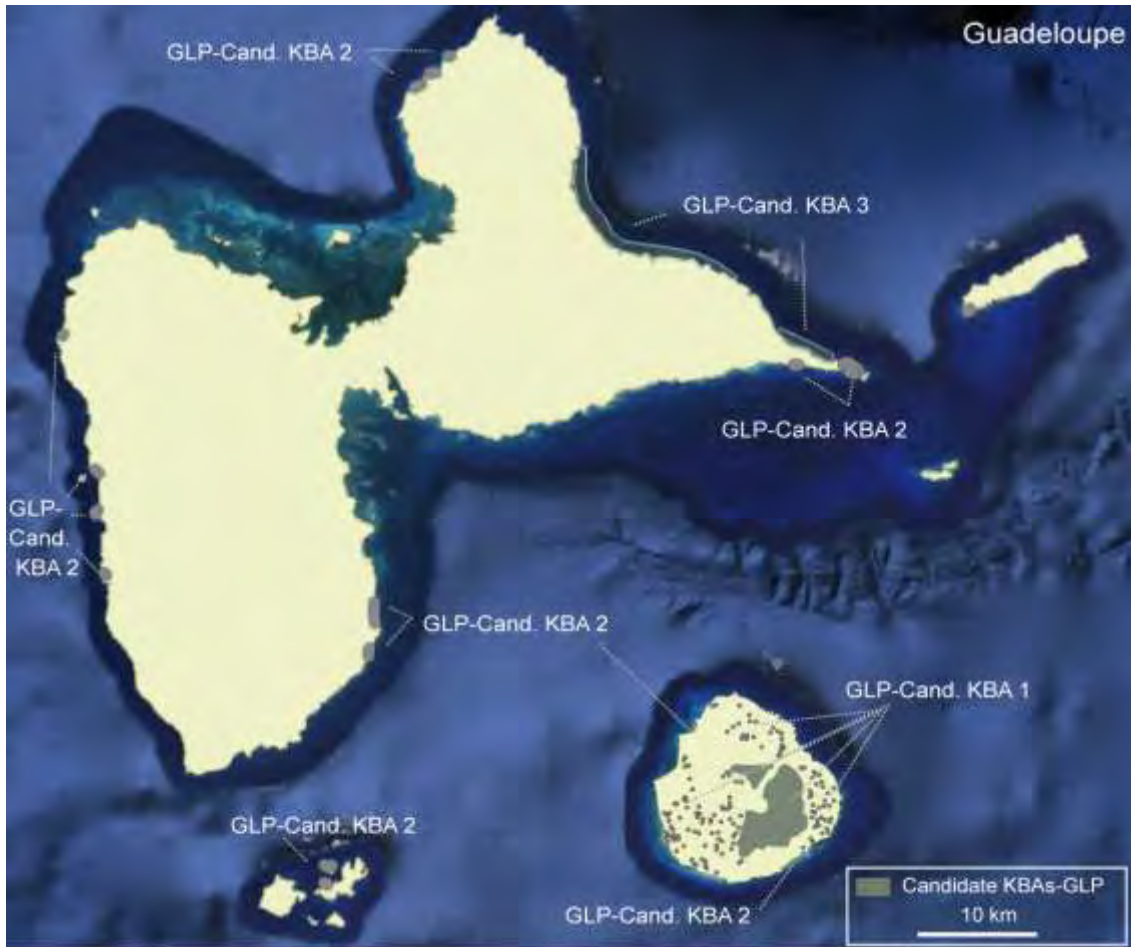
APPENDIX 4. MAPS OF CANDIDATE KBAS IDENTIFIED FOR THE EU OVERSEAS ENTITIES

- Dutch OCTs

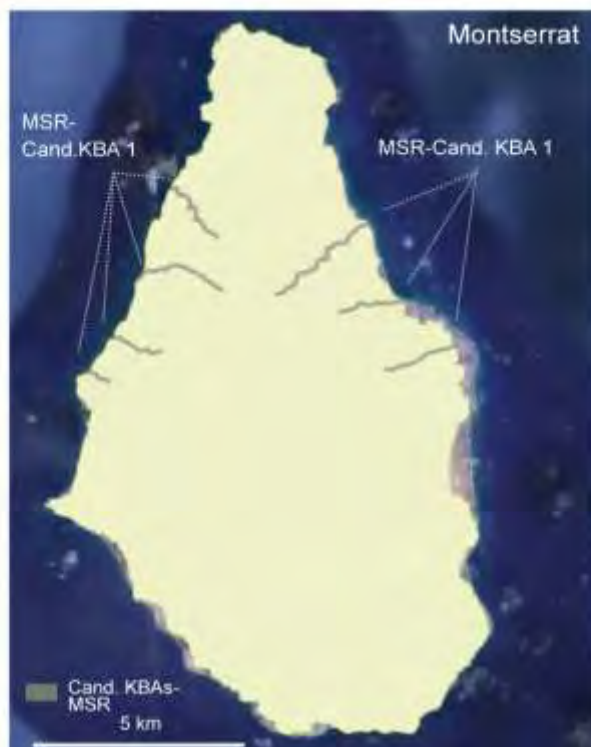


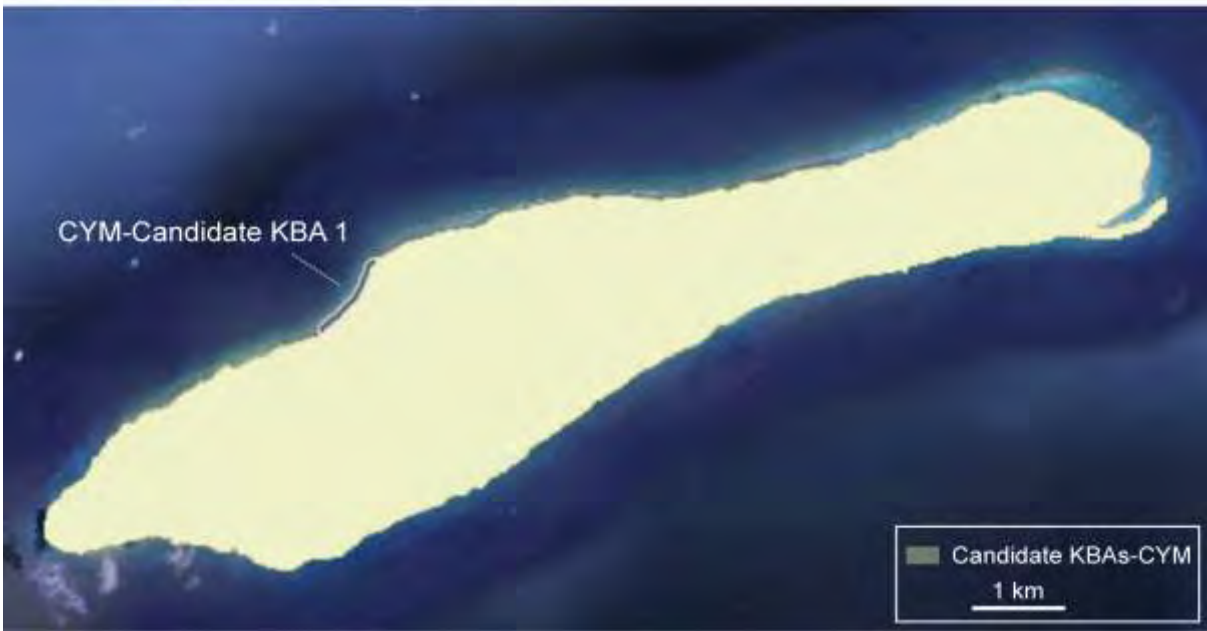


- French ORs



- UK OTs







**APPENDIX 5. ECOSYSTEM PROFILE FACTSHEETS FOR THE 15 EU
OVERSEAS ENTITIES**



This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - ARUBA

Policy and Socioeconomic context

➤ Political Status



- Aruba lies off the north-west coast of Venezuela and is the westernmost of the 3 Dutch islands (c.80km from Curacao). Curacao, Aruba and Bonaire (also called the ABC islands) form the Leeward Islands of the Kingdom of the Netherlands. Aruba is the nearest Dutch island to mainland Venezuela and is located 27km north from Paraganá peninsula. The maximum depth between Aruba and the Venezuelan coast does not exceed 135 m, whereas BC islands are separated from South American mainland by a deep water trench (c. 1000m).

- Since January 1986, Aruba became an independent country within the Kingdom of the Netherlands. St Maarten and Curaçao followed in October 10th 2010. This island is a European Oversea Country of the Kingdom of the Netherlands.

➤ Demographic Trends and Socio-economic context (Central Bureau of Statistics)

- Area: 193 km² (Mount Jamanota, 188m)
- EEZ: 25,287 km², EEZ of the ABC Islands: 68,873 km²
- Population (2014): 107,394 inhabitants, density: 556 inhabitants /km²
- GDP (US\$/ inhabitant): 25,300 (2011) - Aruba is one of the richest countries in the Caribbean.
- Main economic activities: tourism, with associated services and construction industries; oil trans-shipment facilities (the oil refinery is no operational since 2012); off-shore financial services.

Protected and/or managed areas (References: DCNA 2012a)

➤ List of protected areas

- **Parke Nacional Arikok** (created in 2000 over 3,400 ha) is managed by Fundacion Parke Nacional Arikok. This land area covers about 18% of the island, includes Mount Jamanota (island's highest peak, 188m) and significant areas of cactus scrubs. There are 15 privately owned plots of land within the Park.

- In Aruba's Zoning policy document of 2009 four marine areas were indicated to be managed as marine protected areas (Ruimtelijk Ontwikkelingsplan Aruba - Planbeschrijving 2009). These 4 marine areas include important coral reefs and seagrass beds: coastal and marine area contiguous to Parke Nacional Arikok, coral reefs close to Oranjestad, "Eastern Cape" Sero Colorado and Mangel Halto-Isla di Oro. Currently, there is no marine park around Aruba.

BEST III - Working document - Aruba

Some of these areas are already included in KBAs, the remaining terrestrial areas are proposed as candidate KBAs as there is no particular information regarding species and ecosystems to meet the criteria of the BEST methodology for the identification of KBAs.

International recognition of natural habitats and wildlife

- 1 area listed as Ramsar site (70 ha): Spaans Lagoen. An Aruban government bill has been drafted in order to ratify Spaans Lagoen as a Ramsar site.
- 4 Important Bird Areas (IBA) over 611 ha designated by Birdlife International.

Action, management plans & Programs

- Management Plan for the natural resources of the EEZ of the Dutch Caribbean (Meesters et al. 2010)
- Conservation Action Plan for the Aruba Island rattlesnake
- Bat research and Conservation Plan for ABC islands, Bat Conservation Program for Aruba
- Policy Plan for Nature and Environment by the Government of Aruba
- Multiannual Research and Monitoring Program to support the Nature and Environment Policy (including seabird monitoring, coral reef monitoring, other keystone species monitoring, etc.)
- Sea Turtle Recovery Action Plan (STRAP 1993, CEP technical Report no 25)

Biological importance of the ecosystems

Species outcomes

Table 1 - List of threatened species. References: UICN RedList, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, Barendsen et al. 2008, Debrot et al. 2006, Luksenburg 2013, Nassar and Simal 2014, Structuurnota Natuur en Landscape 1996, van Buurt 2006)

Taxonomic group	Threatened species
Plants	
EN	<i>Melocactus stramineus</i> , <i>Guaiaacum sanctum</i> , <i>Guaiaacum officinale</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i> , <i>Mycetophyllia ferox</i>
Molluscs	
VU	<i>Conus hieroglyphus</i>
Crustaceans	
VU	<i>Arubolana imula</i>
Fish	
CR	<i>Epinephelus itajara</i> , <i>Hyporthodus nigritus</i>
EN	<i>Epinephelus striatus</i> , <i>Pagrus pagrus</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Hippocampus erectus</i> , <i>Hyporthodus flavolimbatus</i> , <i>Hyporthodus niveatus</i> , <i>Hypoplectrus providencianus</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Mycteroperca interstitialis</i> , <i>Thunnus obesus</i> , <i>Batrachoides manglae</i> , <i>Makaira nigricans</i> , <i>Megalops atlanticus</i>
Sharks and rays	
EN	<i>Sphyrna mokarran</i> , <i>Sphyrna lewini</i>
VU	<i>Carcharhinus longimanus</i> , <i>Isurus oxyrinchus</i> , <i>Alopias vulpinus</i> , <i>Alopias superciliosus</i> , <i>Sphyrna zygaena</i> , <i>Manta birostris</i> , <i>Cetorhinus maximus (occ.)</i> , <i>Rhincodon typus (occ.)</i>
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Chelonia mydas</i> , <i>Caretta caretta</i>
VU	<i>Dermochelys coriacea</i>
Mammals	
VU	<i>Leptonycteris curasoae</i> , <i>Physeter macrocephalus (occ.)</i>

Occ., occasional species by themselves do not qualify for a KBA.

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- The DNM is working on a list of protected flora and fauna species (endangered or valuable) according to the Nature conservation Ordinance. The list is a draft and will be examined by the national advisory board and the department of legislation and legal affairs. A draft of the list is presented to Aruba's minister of environment and to the council of ministers (Gisbert Boekhoudt pers. com. 2015).

Table 2 - List of species geographically restricted (References: Barendsen et al. 2008, DCNA 2012b, Debrot et al. 2006, Hulsman et al. 2008, Luksenburg 2013, Miller et al. 2003, Nassar and Simal 2014, van Buurt 2006, Gisbert Boekhoudt, Robert Kock, pers. com. 2015)

Taxonomic group	Number of endemic species
Plants	<ul style="list-style-type: none"> - 3 plant species endemic of Aruba (<i>Melocactus stramineus</i>, <i>Agave arubensis</i>, <i>A. rutteniae</i>) - 5 plant species endemic to ABC islands (<i>Agave vivipara</i>, <i>Aristida arubensis</i>, <i>Cynanchum boldinghii</i>, <i>Paspalum curassavicus</i>, <i>Melocactus macracanthos</i>) - at least 7 plant species endemic of ABC islands and the northern Venezuela and Colombia region - several plant subspecies are strictly endemic to Aruba such as <i>Melocactus curvispinus koolwijkianus</i>.
Invertebrates - Molluscs - Arachnids - Insects - Crustaceans - Echinoderms	<ul style="list-style-type: none"> - 18 species endemic of Aruba (including 17 marine molluscs) - 9 species endemic of the ABC islands, including the Vulnerable Hieroglyphic Cone (<i>Conus hieroglyphus</i>) - 22 species endemic of ABC islands, northern Venezuela and Columbia region - 2 pseudoscorpions endemic of Aruba (<i>Pseudochthonius arubense</i>, <i>Pachyolpium arubense</i>) and 2 arachnids endemic of ABC islands (<i>Selenops curaçaoe</i>, <i>Rhopalurus hasethi</i>) - 4 species endemic of Aruba (<i>Epitragus hummelincki</i>, <i>Heterachtes arubae</i>, <i>Urgleptes hummelincki</i>, <i>Meinertellus xerophilus</i>) - 9 species endemic of ABC islands and 3 endemic of ABC islands, northern Venezuela - 4 species endemic of Aruba (including the VU isopod <i>Arubolana imula</i>) and 1 species endemic of AC islands - 1 species endemic of ABC, northern Venezuela and Columbia region (<i>Nemaster grandis</i>)
Freshwater fishes	- 2 freshwater Molly fishes endemic of ABC, northern Venezuela and Columbia region (<i>Cyprinodon dearborni</i> , <i>Poecilia vandepolli</i>)
Reptiles	<ul style="list-style-type: none"> - 3 species endemic of Aruba (<i>Cnemidophorus arubensis</i>, <i>Phyllodactylus julienni</i>, <i>Crotalus unicolor</i>) - 1 species endemic of AC islands (<i>Anolis lineatus</i>) - 1 subspecies endemic of Aruba and Venezuela (<i>Leptodeira annulata bakeri</i>)
Birds	- 2 subspecies endemic to Aruba: Brown-throated Parakeet (<i>Aratinga pertinax arubensis</i>), Aruban Burrowing Owl (<i>Athene cunicularia arubensis</i>)
Mammals	<ul style="list-style-type: none"> - 1 bat species restricted to ABC islands-northern Venezuela and Colombia region (<i>Leptonycteris curasoae</i>) - 1 mouse species restricted to ABC islands-northern Venezuela and Colombia region (<i>Calomys hummelincki</i>) - 1 rabbit subspecies restricted to AC islands and northern Venezuela region: (<i>Sylvilagus floridanus nigronuchalis</i>)

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➤ **Species aggregations / List of species occurring at key stages of their life-cycles**

- Seabird species (particularly terns) congregate in high numbers at the reef islands in the San Nicolas Bay (IBA) from February till September. Ten species of terns breed at this location.
- A high diversity of tern species (Roseate terns, Common terns, Cayenne terns, Bridled tern, and probably Sooty terns) and also Brown noddy, Black noddy, forage in a marine area located 45km north from Aruba. This site congregates thousands of these bird species that actively forage in this area (Adrian del Nevo, pers. com. 2015). Due to the lack of data information regarding the number of birds occurring in this area, this marine site is therefore proposed as a candidate KBA.
- 4 sea turtles nest on Aruba's coastal areas (mainly Leatherbacks, Green turtles and Loggerheads) and 2 species are foraging in Aruban waters during their juvenile and sub adult stages (Richard van der Wal Turtugaruba Foundation pers. com. 2015).

Habitat outcomes

➤ **Terrestrial areas**

- The Parke Nacional Arikok (PNA) is home to several endangered and/or restricted-range species, including: the endemic Aruban Rattlesnake, endangered plant species (*Melocactus stramineus*, which is also island endemic, *Guaiaacum sanctum*), the endemic plant species *Agave arubensis*, *A. rutteniae*, *Capparis linearis*; and several endemic bird subspecies (*Aratinga pertinax arubensis* and *Athene cunicularia arubensis*).

- Ponds and wetlands:

- The RAMSAR site of Spaans Lagoen (Spanish Lagoon) is bordered by mangroves, it is an important site for waterbirds but is not recognized as an IBA.
- Mangroves are mostly located along the western and southern side of the island, this ecosystem occurs on different locations at the shoreline as well as along the islets in the western area: Renaissance Island, around Isla di Oro, Savaneta, islet in front of Oranjestad (Aruba's Zoning policy 2009, Gisbert Boekhoudt, Robert Kock, Adrian del Nevo pers. com. 2015).
- The restricted-range euryhaline Molly fish *Poecilia vandepolli* is observed in 3 ponds (Lake Noord, Tanki Sabana and a pond within the Bubali wetland (IBA) (Hulsman et al. 2008).
- Bubali wetlands (IBA) are partially artificial wetlands. A part has been created to contain water from waste water treatment facility, the adjacent part is natural and collects rain water (Adrian del Nevo, Greg Peterson, pers. com. 2016).

➤ **Habitats for reptiles** (van Buurt 2006, Reinert surveys)

- The current distribution of the endemic Aruban Rattlesnake (*Crotalus unicolor*) is estimated at 76 km² and is mainly associated to dense vegetation. About half of this range is found within Parke Nacional Arikok. Persons who find rattlesnake near their home can call park rangers who will release the snakes within the boundaries of the park (van Buurt 2006).
- The endemic Aruban Whiptail Lizard (*Cnemidophorus arubensis*) has a general distribution on the island and also occurs in almost all IBAs, such as San Nicolas islets (IBA) (Del Nevo 2008).
- The endemic Anole lizard (*Anolis lineatus*) and Aruba Leaf-toed Gecko (*Phyllodactylus julieni*) are generally distributed around the island and occur in the Terrestrial Park and also urban areas (Gisbert Boekhoudt, Robert Kock, pers. com. 2015).

➤ **Coastal areas: sea turtle nesting areas** (References: Barmes et al. 1993, Dow et al. 2007, Richard van der Wal Turtugaruba Foundation pers. com. 2015 on nesting activity surveys 2006-2015)

- 4 sea turtle species nest on Aruba beaches (2015 dataset, Turtugaruba Foundation): Leatherbacks (47 nests recorded in 2015), Green turtles (30 nests), Loggerheads (20 nests) and Hawksbill sea turtles (8 nests).

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- Hawksbill and Green turtles are present (in juvenile and subadult stages) year round in the Aruban waters feeding on reefs (sponges) and seagrass beds.

- **4 beaches are identified as KBAs** following the dataset on sea turtle nesting activity from 2011 to 2015 performed by the local NGO Turtugaruba Foundation (Richard van der Wal, pers. com. 2015):

- Boca Grandi-Grapefield - all sections (4 km): for Leatherbacks, Loggerheads, Green turtles
- Fishermen's Huts: for Loggerheads,
- Dos Playa: Green turtles, Leatherbacks. This beach is located within Parke Nacional Arikok.
- Eagle Beach: Leatherbacks

Candidate KBAs, with less than 10 clutches per species and per year are Arashi sandy section for Leatherbacks and Arashi, Boca Grandi-Grapefield - all sections (4 km), Dos Playa for Hawksbills.

➤ **Marine areas**

- Currently, there is no marine park around Aruba. The designation of a Marine Park in Aruba is under discussion.

- The Aruba Marine Park Foundation aims to protect island's marine environment through the creation of a Marine Park in the south-western part of the island. The Foundation is not currently involved in area management.

- Parke Nacional Arikok is a viable alternative to manage an Aruban marine park. The coordination of the terrestrial and marine parks under one administrative authority will ensure management uniformity and consistency and minimize duplicative and unnecessary overhead costs (Adrian del Nevo, Greg Peterson, pers. com. 2016).

- Coral reefs occur all around the island and seagrass habitats are mainly present along the northern and south-western coasts and in San Nicolas Bay. Inter-connectivity between these 2 ecosystems is mostly observed along the northern coast (Structuurnota Natuur en Landschap 1996).

- **4 marine areas have been proposed** to become Marine Protected Areas, these sites are particularly important due to the connectivity between coral reefs, seagrass beds and mangroves. It is interesting also to note the proposed MPA located on the eastern coast of Aruba that is contiguous to Parke Nacional Arikok (Aruba's Zoning policy document, Ruimtelijk Ontwikkelingsplan Aruba - Planbeschrijving 2009).

- The lagoons between the main island and the reef islands on the South coast also have a lot of seagrass beds. The West coast has several different sites with seagrass beds. Coral reefs occur along the entire south coast and are frequently used as recreational dive sites. The fewer dive sites along the west coast are more typically artificial reefs, such as ship-wrecks (Robert Kock, Adrian del Nevo pers. com. 2015).

- 3 marine areas have been identified as refuge and feeding areas for marine mammals.

➤ **Important Bird Areas (IBAs)** (References: Brown et al. 2009, Del Nevo 2008, 2009, Williams 2012)

- Observations by Aruba Birdlife Conservation Foundation has led to a national bird checklist of 300 species of birds for Aruba.

- **4 IBAs** are identified (611 ha, including their marine extensions) and represent 3% of the island's land area. The IBAs are located outside the limits of the terrestrial park: 1 IBA is privately owned (on a golf course) and 3 IBAs are state owned.

- 11 bird species congregate in high numbers over San Nicolas Bay (IBA) that gather particularly high abundance of Terns (Cayenne Terns, Sooty Terns, Common Terns, Laughing gulls and significant populations of Brown and Black Noddies.

- The Bare-eyed Pigeon (*Patagioenas corensis*), considered as a biome-restricted species, mainly occur in the 2 northern IBAs. There is no restricted-range species, but 2 endemic subspecies: the Burrowing Owl *Athene cunicularia arubensis* and Brown-throated Parakeet *Aratinga pertinax arubensis*.

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- The restricted range Yellow-shouldered Amazon (*Amazona barbadensis*) is now extirpated on Aruba, although occasional sightings may include escaped captive birds or possibly wild birds from Curacao or Bonaire following exceptional storm/hurricane events. The species is still observed on Curacao and particularly Bonaire, a re-introduction project on Aruba has previously been considered (Williams 2012, Adrian del Nevo, Greg Peterson, pers. com. 2016).

➤ Areas for mammals

- The vulnerable Curaçaoan Long-nosed Bat (*Leptonycteris curasoae*) is known to occur at 4 sites (c. 1075 specimens): Quadirikiri Cave, Miralamar Mine, Fontein Cave, Tunnel of Love Cave (Baranca Sunu) and Wela Mine are located inside the Parke Nacional Arikok, whereas the Lago Colony cave (southern tip of the island) is located outside the park's protection. The sites Tunnel of Love (island's main breeding site) followed by Miralamar Mine host the largest colony of the species (Nassar and Simal 2014, Daniela Simal, pers. com. 2015).

A roost is located in the southern tip of the island, the Lago Colony cave (Daniela Simal, pers. com. 2015).

- The regional endemic Hummelinck's Vesper Mouse (*Calomys hummelincki*) is mostly located on non-urban sites, in areas with high grass coverage (such as along the North coast) (Bekker 1996, Gisbert Boekhoudt, Robert Kock, pers. com. 2015).

➤ Corridors

- Nature Policy Plan of Aruba: development of a nature network to create ecological corridors between habitats. The designation of these ecological corridors is in progress (Robert Kock, pers. com. 2015).

- ABC Islands are important resting areas for migratory birds and have a diverse bird community due to the seasonal occurrence of Neotropical migrants as well as the occurrence of South American species.

- The dry (ephemeral) riverbeds located in scattered areas on the island are important corridors for the Burrowing Owl (*Athene cunicularia arubensis*) and Aruban Whiptail Lizard (*Cnemidophorus arubensis*) and other bird species e.g., ruby-topaz hummingbird, yellow oriole, red-naped sparrow (Adrian del Nevo Robert Kock, pers. com. 2015). The Burrowing Owl typically occurs in open habitats, but opportunistically occupies sand piles, pipelines and gardens when nest sites become available (Adrian del Nevo Robert Kock, pers. com. 2015-2016).

- Sea turtles migrate within the Caribbean region. Migratory routes of 4 sea turtles species tagged in Aruba are currently under study (Turtugaruba, pers. com. 2015). A satellite-tracking program of 24 sea turtles breeding on Bonaire revealed wide migrations to coastal waters all over the Caribbean region: ABC islands, Venezuela's coasts, Panama, Nicaragua, Mexico, Cuba, Dominican Rep., Puerto Rico, Virgin Islands (Stapleton et al. 2013).

- The tagging of endangered bat species suggest that specimens move frequently among the 4 caves, which are a few miles apart. The Curaçaoan long-nosed bats on Aruba depend on a system of roosts rather than a single cave (Nassar and Simal 2014). Even if some of these caves are included in the Terrestrial Park, some of these roosts remain unprotected and highly frequented as these sites are considered as tourist attractions (Robert Kock, pers. com. 2015). These results strongly support the need for a system of protected caves on Aruba in the form of a Bat Reserve.

Marine mammals

- Aruba has 18 cetacean species in its water (Aruba Marine Mammal Foundation-AMMF, Angiolina Henriquez, pers. com. 2016): 16 Odontoceti species (including the dolphin species and the Sperm whale) and 2 whales including breeding populations of the Humpback whales.

Among the dolphin species, several species constitute important groups with about 700 individuals: *Stenella frontalis*, *Stenella longirostris*.

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- AMMF 's collected and analyzed cetacea activity data indicate that Aruba's water (shared with Venezuela's) is a migration corridor for Humpback whales from the South as well as from the North; regular year round Sperm whales migration in local waters (note: live sightings and 4 dead strandings of this species of which 3 were caused by entanglement, 2 were mother and calf together).
- Aruba's water is also year round a feeding ground for the Orca (feeding on turtles, whales, fish) and Pseudorca (feeding on rays) and several smaller dolphin species.

Based on analysis of collected data (1998-2015) Aruba's coastal water is also a breeding, nursing and healing refuge corridor for several dolphin species including the local groups of Atlantic spotted, Bottlenose, Rough toothed, and Spinner. Arashi/Malmok, Eaglebeach/Palmbeach, Mangelhalto/Oranjestad Harbor Southside reef lagoons for birthing and healing when injured. They stay 4- 10 days each time.

* The feeding and nursing corridor belt being 6 miles from coastline.

**The vulnerable birthing/injury healing refuge being a 2 mile belt along coastline and inside the South side reef lagoons from MangelHalto to Oranjestad Harbor and from Eagle Beach to Arashi.

International Treaties and Conventions - Kingdom of the Netherlands

- The Convention on Biological Diversity (CBD)
- Ramsar Convention on Wetlands of International Importance
- The Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife)
- The Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) ratified by the Kingdom of the Netherlands (constitutionally Dutch overseas entities cannot be separate contracting parties)- Convention for Migratory Species (CMS 1985), Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks, 2011)
- International Convention for the prevention of pollution from ships (MarPol)

Aruba Policy Plans and Policies (Reference: EU Environmental profile 2007)

- National Development Plan (2003-2017): main document for the environmental strategy and policy of Aruba.
- Nature and Environment Policy (in progress)
- Multiyear plan for development cooperation NL-Aruba 2006-2009 (*Fondo Desaroyo Aruba*). This plan includes environmental awareness-raising activities
- Smart Island Strategy for Aruba (The Government of Aruba, Carbon War Room and the New America Foundation): initiative for the sustainable transition for the island (100% renewable energy, regenerative agriculture sector, improve public health...)
- Spatial Development Plan (2009)
- Directive Spatial Management Beaches (July 2014)
- Specific strategy for sustainable development
- Environmental Management Policy (2003)
- National Oil Pollution Contingency Plan (1993)
- A 2016 Marine Mammal Action plan, prepared by Aruba Marine Mammal Foundation (AMMF), which includes locally observed threats and mitigation proposals to the Aruba Government will be handed in February 2016.

Plans in preparation:

- Nature and Environment policy 2015-2019
- Spatial Development Plan 2015
- National Sustainable Tourism Policy
- Waste reduction strategy
- Coastal Zone Management Plan to identify areas of importance and those requiring protection and conservation

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Table 3 - KBAs identified on the territory and justification.

N. KBA	KBAs	Criteria
KBA 1	Parke Nacional Arikok	<p>- Area of the National Park: highest terrestrial biodiversity on the island</p> <p>Plants</p> <p>- Presence of threatened and/or restricted-range plant species (<i>Melocactus stramineus</i> (EN), Roughbark Lignum-vitae <i>Guaiaacum sanctum</i> (EN), <i>Agave arubensis</i>, <i>A. rutteniae</i>, <i>Peltophorum acutifolium</i>, <i>Capparis linearis</i>)</p> <p>Reptiles</p> <p>- Presence of the endemic Aruban Rattlesnake (<i>Crotalus unicolor</i>), endemic Anole lizard (<i>Anolis lineatus</i>) and Aruba Leaf-toed Gecko (<i>Phyllodactylus julieni</i>)</p> <p>- Presence of the endemic Aruban Whiptail Lizard (<i>Cnemidophorus arubensis</i>).</p> <p>- Breeding presence of 4 species of sea turtles at beaches within the National Park.</p> <p>Birds</p> <p>- Presence of 2 endemic bird subspecies: Brown-throated Parakeet (<i>Aratinga pertinax arubensis</i>), Aruban Burrowing Owl (<i>Athene cunicularia arubensis</i>)</p> <p>Mammals</p> <p>- Presence of the threatened bat species Curaçaoan Long-nosed Bat (<i>Leptonycteris curasoae</i>)</p> <p>- 5 out of 6 bat roosts occur within the National Park.</p> <p>- presence of the regional endemic Hummelinck's Vesper Mouse (<i>Calomys hummelincki</i>).</p>
KBA 2	4 marine areas proposed as MPAs (in project)	<p>- Area proposed as MPA: highest marine biodiversity on the island</p> <p>- Presence of 9 threatened coral species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea franksi</i>, <i>Mycetophyllia ferox</i>) and 18 fish species (<i>Epinephelus itajara</i>, <i>E. striatus</i>, <i>Thunnus thynnus</i>, <i>T. obesus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Hyporthodus flavolimbatus</i>, <i>H. niveatus</i>, <i>H. nigritus</i>, <i>Hypoplectrus providencianus</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>L. cyanopterus</i>, <i>Mycteroperca interstitialis</i>, <i>M. venenosa</i>, <i>Batrachoides manglae</i>, <i>Makaira nigricans</i>, <i>Megalops atlanticus</i>)</p> <p>- Presence of threatened sea turtles (<i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>, <i>Caretta caretta</i>, <i>Dermochelys coriacea</i>)</p> <p>- Presence of the threatened mollusc species Hieroglyphic Cone (<i>Conus hieroglyphus</i>)</p> <p>- Connectivity between coral reefs and seagrass beds</p> <p>- Presence of mangroves (Savaneta, islet close to Oranjestad)</p>

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		<ul style="list-style-type: none"> - Project to establish a MPAs - 1 of the 4 MPAs (on the eastern side) is contiguous to Parke Nacional Arikok.
	San Nicolas Bay	<ul style="list-style-type: none"> - IBA: congregatory bird species (10 tern species) - Presence of the endemic Aruban Whiptail Lizard (<i>Cnemidophorus arubensis</i>) - Area proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
	Oranjestad Reef Islands	<ul style="list-style-type: none"> - IBA: presence of congregatory bird species: Sandwich Tern (<i>Sterna sandvicensis</i>), Common Tern (<i>Sterna hirundo</i>), <i>Sterna antillarum</i>. - Area proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
KBA 3 - Spaans Lagoen	Spaans Lagoen (Spanish Lagoon) and mangrove areas along the westernside of Aruba	<ul style="list-style-type: none"> - Spaans Lagoen: Bordered by dense saltmarshes and mangroves, connectivity at the entrance of the lagoon with seagrass beds and coral reefs. - Important feeding and breeding habitat for waterbirds and marine species (fishes, crustaceans) including threatened species: <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>, <i>Megalops atlanticus</i> - Mangrove habitats: Connectivity with seagrass beds and coral reefs. - Spaans Lagoen: Ramsar site - Area proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
KBA 4 - Sea turtle nesting beaches	Sea turtles nesting beaches	<p>Monitoring data of 16 beaches show that 4 beaches qualify for KBA</p> <ul style="list-style-type: none"> - Boca Grandi-Grapefield - all sections (4 km): for Leatherbacks, Loggerheads, Green turtles - Fishermen's Huts: for Loggerheads, - Dos Playa: Green turtles, Leatherbacks - Eagle Beach: Leatherbacks
KBA 5 - inland ponds and terrestrial sites	Tanki Sabana & Lake Noord Ponds	<ul style="list-style-type: none"> - Presence of the restricted-range euryhaline Molly fish species (<i>Poecilia vandepolli</i>) - Presence of the endemic Aruban Whiptail Lizard around the pond (<i>Cnemidophorus arubensis</i>)
	Bubali area	<ul style="list-style-type: none"> - IBA: presence of threatened species (American Coot - <i>Fulica americana</i>, LC) and biome-restricted bird species (Bare-eyed Pigeon - <i>Patagioenas corensis</i>) (and 2 endemic bird sub-species) - Presence of the restricted-range euryhaline Molly fish species (<i>Poecilia vandepolli</i>)

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		<ul style="list-style-type: none"> - Presence of the endemic Aruban Whiptail Lizard around the pond (<i>Cnemidophorus arubensis</i>) - Area proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
KBA 6 - Lago Cave	Lago Colony Cave	<ul style="list-style-type: none"> - Bat roost outside the delineation of Park Nacional Arikok. - Presence of the endemic and threatened bat species: <i>Leptonycteris curasoae</i>
KBA 7 - Tierra del Sol Saliña	Tierra del Sol Saliña	<ul style="list-style-type: none"> - IBA identified with a biome-restricted species (Bare-eyed Pigeon - <i>Patagioenas corensis</i>) and a threatened species (American Coot - <i>Fulica americana</i>, LC) - Presence of the endemic Aruban Whiptail Lizard around the pond (<i>Cnemidophorus arubensis</i>) - Area proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
Corridor 1	Important areas for marine mammals	<ul style="list-style-type: none"> - 2 coastal areas are reported as marine mammal (mostly for dolphins) nursery, breeding and resting habitats (Aruba Marine Mammal Foundation, Directie Natuur en Milieu Aruba). - 2 inshore corridors important as dolphin refuges (Aruba Marine Mammal Foundation): from Arashi to Eagle Beach and from Airport to Santo Largo - species occurring in these areas in important aggregations: <i>Stenella frontalis</i>, <i>S. longirostris</i>, <i>Tursiops truncatus</i>, <i>Steno bredanensis</i>.
Corridor 2	Inter connectivity between proposed MPAs	<p>Ecological corridor located along the eastern side of the island and connected between the proposed MPAs. Corridor important for the larval dispersal of threatened coral and fish species.</p>
Corridor 3	Bird foraging area	<p>Important feeding area located on the Northern part of the island for a diverse array of bird species including Terns (Adrian del Nevo, pers. com. 2015).</p>
Candidate KBA	<ul style="list-style-type: none"> - California Duinen, - Saliña Malmok - Saliña di Palmbeach - mangrove areas near the airport 	<ul style="list-style-type: none"> - Wetlands (including mangrove areas) - Areas proposed within the 16 terrestrial areas to be included in the terrestrial PAs network.
Candidate KBA	Sea turtle nesting beaches	<p>Arashi beach qualifies as candidate KBA for Leatherback and Hawksbill Sea turtles.</p>
Candidate KBA	Bird foraging area	<p>Important feeding area located on the Northern part of the island for a diverse array of bird species including Terns (Adrian del Nevo, pers. com. 2015).</p>



Key Biodiversity Areas in Aruba

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Socio-economic context , government and civil society with a role in biodiversity

➤ **Table 4 - Government, local institutions and organizations, private sector**

ARUBA	
Government of the Netherlands	Ministry of Infrastructure and the Environment
	Directorate-General for the Environment and International Affairs (DGMI)
	Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
	Directorate General for Nature and Regional Policy
	Ministry of Public Health and Social Development
	Department of Environment and Nature (MINA)
Island Government of Aruba	Independent country of the Kingdom of the Netherlands
	Ministry of Economic Affairs, Communications, Energy and Environment (EACEE)
	Directorate of Nature and Environment (DNM)
	Department of Economic Affairs, Commerce and Industry (DEACI)
	Central Bureau of Statistics - collect and analyze information to provide integrative socio-economically and environmentally sound policy
	Ministry of General Affairs, Innovation, Sustainable Development and Science
	Disaster Prevention Department
	Ministry of Health and Sports
	The Aruba Veterinary Service (CITES fauna authority). This service participates to bird monitoring (IBA surveys) through funding and logistical support.
	Ministry of Tourism, Transport, Culture and Primary Sector
	Department of Agriculture, Husbandry and Fishery (DLVVM) (CITES Flora authority)
	Ministry of Infrastructure, Physical Planning and Integration
	Department of Infrastructure and Planning
	Public Works Department
Institutions and companies	
SELIMAR	The publicly-owned company SELIMAR collects, transports and disposes of all solid waste including bulky household waste and car wrecks. SELIMAR reports to the environmental minister.
NGOs	
Fundacion Parke Nacional Arikok	The NGO manages the National Park and is in charge of biodiversity conservation, outreach and communication events (46 members in 2012). The park is engaged with the local community through events and a Junior Ranger programme. The Foundation also acts as advisory body for projects that may impact the environment.
Dutch Caribbean Nature Alliance (DCNA)	DCNA supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
StimAruba	Local NGO with more than 300 members and a general nature awareness program. It organizes educational nature walks, outreach events and participate to research on flora and fauna on the island.
FANAPA	Fundacion Arubano pa Naturalesa y Parke (FANAPA - Aruba's Foundation for Nature and Parks) has been created in 1971 and is involved in the protection of nature and the environment in Aruba.
Aruba Marine Park Foundation	This local NGO has been created in 2010 to ensure a sustainable use of marine resources and to strengthen the protection of the marine environment and wildlife. This NGO seeks to protect the island's marine environment through the establishment of a marine park. The foundation concentrates efforts on the national lionfish control programme and the implementation of a new public mooring programme.
Aruba BirdLife Conservation Foundation	Local NGO involved in grassroots nature awareness, with focus on bird wildlife of Aruba; Nature conservation lobby work (16 additional areas to PNA); Bird monitoring; Works together with other local NGOs.
Vogelbescherming Nederland - BirdLife International	Nongovernmental conservation organization associated to the International Organization BirdLife. The NGO has a special focus on bird conservation and conduct surveys in the Dutch Caribbean.
Aruba Marine Mammal Foundation (AMMF)	Aruba Marine Mammal Foundation (AMMF), is active since 1998, and legally founded in 2002; with the conservation of wild dolphins and whales and their habitat in Aruba waters, by means of protection, education and research as it's objectives. AMMF 's work includes: coordination, execution, and documentation of local marine mammal strandings and necropsies; collection of local and regional data of biodiversity, scars, treaths, and individual 's ID; protection of marine mammals at sea in the refuge corridor when in need; production of education programs/material, scientific research-projects, and management action plan proposals; negotiation for mitigation measures. AMMF works in alliance with the Aruba Coast Guard (ACG), the Aruba Cites official, the Directorate of Nature and Environment ,and a local and international network. AMMF is the co-founder of the Wider Caribbean Orca Project, a regional institutional data base cooperation, to consolidate and analyze data; and to collectively publish scientific papers of the Orcinus Orca and other Cetacea in the Caribbean Region.
Turtugaruba Foundation	Local NGO for the Protection and Conservation of Sea Turtles, focussing on conservation, monitoring, research, education and public awareness.
Aruba Sustainable Development Foundation	Aims to collaborate with local, regional and international partners in addressing barriers and challenges to the sustainable development in Aruba and other island communities around the globe. It is funded jointly by the Aruban and Dutch governments to administer development funds.
Research institutions	
IMARES UR	Institute for Marine Resources and Ecosystem Studies based in Wageningen. Institute involved in scientific surveys and environmental monitoring in the Netherlands and Caribbean region.
NIOZ Royal Netherlands Institute of Sea research	NIOZ is the national oceanographic institution for the Netherlands, it facilitates and supports fundamental as well as applied marine research and education in the Netherlands and Europe.
CARMABI	The Caribbean Marine Biological Institute has been created in 1955 in Curacao to manage the protected areas and to provide facilities and logistical support to researchers and students. CARMABI is also involved in research programs on Aruba.
Collaboration with Universities and Research institutes	Centro de Ecologia, Instituto Venezolano de Investigaciones Cientificas in Venezuela (bat monitoring) - College of New Jersey (USA) for rattlesnake study

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- A number of different non-governmental organizations (NGOs) have been established to address different environmental concerns and focus upon marine environment, cetaceans, reptiles (sea turtles, snakes), and seabirds surveys.

➤ **Table 5 - Funding dedicated to biodiversity and conservation** (DCNA Annual report 2012)

Source of funding	Amount (US\$) (year)	Beneficiaries
Admission Fees/Service	337,068 (2011)	Fundacion Parke Nacional Arikok
- DCNA-Trust fund for the Dutch Antilles: funds from Dutch Ministry of the Interior, Dutch Postcode Lottery	129,500 (2011)	Fundacion Parke Nacional Arikok
Aruba Government's subsidies	1,434,334 (2011)	Fundacion Parke Nacional Arikok
Other incomes	29,363 (2011)	Fundacion Parke Nacional Arikok
DCNA-Trust fund for the Dutch Antilles: Dutch Postcode Lottery "Save our sharks"	20,000 (2015) 20,000 (2016) 20,000 (2017)	Fundacion Parke Nacional Arikok
Wide CAST (satellite tracking of sea turtles)		

➤ **Economic sectors and population** (Central Bureau of Statistics)

- The main **economic activities** are tourism and offshore banking. Oil refining has been a major economic activity but has stopped since 2012. About 1.5 million of tourists visit the island per year with 75% coming from the US. Construction continues to grow with hotel capacity reaching five times the 1985 level.

- **Population:** The population of Aruba has almost doubled since the 1960s. In 2014, about 107,394 inhabitants live on Aruba.

➤ **Priorities of action in terms of biodiversity and conservation (DNM pers. com. 2016)**

- Designation of a National Marine Protected Area in Aruba (identified by DNM as a high priority)
- Update protected species law: a new law has been drafted by DNM to extend the currently protected species.
- Preservation of mangroves and ponds areas (wetlands in general)
- Conservation of beaches as sea turtle nesting habitats
- Strengthen or build local capacities in terms of biodiversity conservation: alien invasive species control or eradication, mangrove restoration, terrestrial habitats restoration
- monitor the endangered and ecologically valuable species.
- draft an action plan to address the invasive species.
- study and establish terrestrial corridors to connect different (candidate) KBA with each other.
- establish a vegetation map for the island.

➤ **Major threats affecting biodiversity**

- A major threat on Aruba is related to the degradation and fragmentation of habitats that directly impact biodiversity.
- Human disturbances represent a main threat, particularly on San Nicolas bay reef islands and turtle nesting beaches.
- Several invasive species constitute a significant threats on habitats and native species (invasive species: cats, rats, goats, lionfish and boa).
- Increased frequency of strong winds and strong waves have a significant effect on low-lying reefs and sand islets along the south coast (most notably within San Nicolas Bay).

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem Profile Factsheet - BONAIRE

Policy and Socioeconomic context

➤ Political Status



- Bonaire is located on the north-west coast of Venezuela (12°10'N, 68°15'W) and is the easternmost of the three Dutch islands of the Southern Caribbean region. This island is 50 km east from Curacao and the furthest island from mainland Venezuela (c.85 km). Curacao, Aruba and Bonaire (also called the ABC islands) form the Leeward Islands of the Kingdom of the Netherlands. ABC islands are separated from South American mainland by a deep water trench.

- Since October 10th 2010, Bonaire (such as Saba and St. Eustatius) is a special municipality of the Kingdom of the Netherlands and an European Oversea Territory.

➤ Demographic Trends and Socio-economic context (Central Bureau Statistics - Caribbean Netherlands 2012, 2013)

- Area: 288 km² (highest peak: Mount Brandaris, 241m)
- EEZ: 13,188 km², EEZ of the ABC Islands: 68,873 km²
- Population: 17,408 inhab., density: 60 inhab./km² (Bonaire's population is significantly less than AC islands).
- GDP US\$ 372 million;: US\$ 21,900 /inhabitant
- Main economic activities: The main economy sector is the tourism centered on scuba diving in the Marine Park, with associated services and construction industries (about 130,000 visitors/year arriving by air in 2013). Bonaire is listed in the top five destination for diving in the Caribbean. Other economic activities include salt production industry, a small oil transfer facility, banking services and fishing.

Protected and/or managed areas (References: DCNA 2012a, STINAPA 2005,2006)

➤ List of protected areas

- **Washington Slagbaai National Park** (created in 1969 over 5600 ha) is the first and largest terrestrial park of Dutch Caribbean. It encompasses the greatest geographic relief of the island, including the highest point (Mount Brandaris). This terrestrial Park cover about 19% of the island land area. However, this terrestrial park has never been legally established as a protected area other than through an island zoning plan designation and does not actually have the National Park status (Paul Hoetjes, pers. comm. 2015).

- **Bonaire National Marine Park** (created in 1979, 2700 ha) is the first marine protected area of the Dutch Caribbean and has been declared as a National Park in 2012. It extends around all Bonaire island and Klein Bonaire, an uninhabited island of 600 ha located c. 1 km off Bonaire's western shore. The Marine Park extends from high-waters to 60m deep. Since 2008, two no-take zones and 2 no-diving zones are designated

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within the Marine Park. The Marine Park consists of Bonaire surrounding waters and the mangroves, seagrass beds and coral reefs. The island of Klein Bonaire is state owned and is protected within the Bonaire National Marine Park.

The 2 Parks are managed by a local NGO called **STINAPA Bonaire National Park Foundation**. The Marine Park is primarily financed through scuba-diving user fees. The Marine Park is considered as a world leader in conservation management and has been designated a UNEP/ICRAN Demonstration Site for the Caribbean.

- Establishment in 2015 of "Yarari" marine mammal and shark sanctuary that encompasses the EEZ of Saba and Bonaire (Dutch Caribbean Nature Policy Plan 2013-2017, Project "Save our sharks", Debrot et al. 2011). Yarari Sanctuary will form part of the network of marine mammal sanctuaries in the region, with Agoa Sanctuary in the French EEZ, Silver Banks Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the northern USA.

On-going projects - Projects under study

- Bonaire National Marine Park is on the provisional list to be recognized as an UNESCO World Heritage site
- Goat eradication project in Washington Slagbaai Park started late 2014 with Dutch funding from the Ministry of Economic Affairs. The project intends to reduce the number of roaming goats in the park to a level that will not impact the vegetation and can be kept down indefinitely through routine management.

- Reforestation project for Klein Bonaire started on a small scale about 8 years ago when all goats were removed, but has been intensified over the past two years with the help of a group of volunteers and hundreds of trees being planted yearly. The goal is to restore the uninhabited island to its former forested state.

- Endemic parrot food/nesting - tree/reforestation project. The local NGO Echo has been mapping food trees for the restricted-range Yellow-shouldered Amazon parrot (*Amazona barbadensis*) and has initiated a tree planting program to restore the number of nesting and food trees on the island. The NGO has also a project to develop a breeding program on the island for this threatened bird species.

The local NGO has a Dutch funding from the Ministry of Economic Affairs to conduct monitoring and control efforts on the invasive pigs. The first phase of the project is to estimate the population size and then we will begin an active control program involving trapping and hunting of the pigs.

- Lac restoration project: Water circulation in the Ramsar site Lac will be improved through restoring some of the old channels through the mangroves and re-opening silted up a former sea access. The project will start this year with Dutch funding.

- Each nesting season, Sea Turtle Conservation Bonaire monitor the distribution patterns of sea turtles using satellite transmitters. This project aims to track their movement from Bonaire and provides important information regarding their foraging and breeding habitats.

International recognition of natural habitats and wildlife

- SPAW label for Bonaire National Marine Park.

- 5 areas listed as RAMSAR sites (1940 ha): Klein Bonaire Island and adjacent sea area, Slagbaai, Gotomeer, Pekelmeer, Lac

- 6 Important Bird Areas (IBA), over 23,836 ha

- "No name beach" on Klein Bonaire is listed as sea turtle index beach by Inter-American Convention for protection of Sea Turtles (IAC)

Action, management plans & Programs

- Bonaire National Marine Park Management Plan (STINAPA 2006)

- Washington Slagbaai National Park Management Plan (STINAPA 2005)

- Yellow-shouldered Amazon Species Management Plan (Williams DCNA 2012)

- Bat research and Conservation Plan for ABC islands. All Chiroptera species are officially protected on Bonaire. This initiative has been already internationally recognized by the Latin American and Caribbean Network for Bat Conservation (RELCOM).

- Management Plan for the natural resources of the EEZ of the Dutch Caribbean (Meesters et al. 2010)

- DCNA Multi Year Plan 2013-2017 (DCNA 2013)

- Bonaire Global Zoning Plan

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- Sea Turtle Conservation Bonaire (STCB): sea turtle research and monitoring program of foraging and nesting grounds

Biological importance of the ecosystems **Species outcomes**

➤ **Table 1** - List of species assessed as **globally threatened** References: UICN RedList, Bak et al. 2005, Debrot 2013, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, Freitas 2008, Smith 2012, SPAW report, Steneck et al. 2013.

Taxonomic group	Threatened species
Plants	
EN	<i>Guaiacum officinale</i> , <i>G. sanctum</i>
VU	<i>Zanthoxylum flavum</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i>
Fish	
CR	<i>Epinephelus itajara</i> (extremely rare)
EN	<i>Epinephelus striatus</i> (occ.), <i>T. thynnus</i> (rare), <i>Pagrus pagrus</i>
VU	<i>Balistes vetula</i> (common), <i>Lutjanus cyanopterus</i> (common), <i>Lutjanus analis</i> (common), <i>Mycteroperca interstitialis</i> (occ), <i>Lachnolaimus maximus</i> (common), <i>Hyporthodus flavolimbatus</i> (occ), <i>Makaira nigricans</i> (occ), <i>Kajikia albida</i> (occ), <i>Megalops atlanticus</i> (common), <i>Thunnus obesus</i> (occ)
Sharks and rays	
EN	<i>Sphyrna mokarran</i> (occ.), <i>S. lewini</i> (rare)
VU	<i>Manta birostris</i> (occ.), <i>Alopias vulpinus</i> (rare), <i>Isurus oxyrinchus</i> (rare), <i>Rhincodon typus</i> (occ.), <i>Cetorhinus maximus</i> (rare)
Birds	
VU	<i>Amazona barbadensis</i> (common), <i>Dendrocygna arborea</i> (rare)
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Chelonia mydas</i> , <i>Caretta caretta</i>
VU	<i>Dermochelys coriacea</i> (occ.), <i>Lepidochelys olivacea</i> (rare)
Mammals	
EN	<i>Balaenoptera physalus</i> (rare)
VU	<i>Leptonycteris curasoae</i> , <i>Physeter macrocephalus</i> (occ.); <i>Trichechus manatus</i> (rare)

occ., occasional species

➤ **Table 2** - List of species geographically restricted (References: Echo, DCNA 2012ab, Debrot 2006, Diaz 1995, Freitas et al. 2008, Miller et al. 2003, Smith 2012, Wells and Debrot 2009)

Taxonomic group	Number of endemic species
Plants	- 5 plant species endemic to Bonaire and Curacao (<i>Agave boldinghiana</i> , <i>Chloris suringari</i> , <i>Maytenus versluysii</i> , <i>Myrcia curassavica</i> , <i>Paspalum bonairensis</i>) - 5 plant species endemic to ABC islands (<i>Agave vivipara</i> , <i>Aristida arubensis</i> , <i>Cynanchum boldinghii</i> , <i>Paspalum curassavicus</i> , <i>Melocactus macracanthos</i>) - at least 13 plant species endemic of ABC islands and the northern Venezuela

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	and Colombia region
Invertebrates - Annelids - Molluscs - Arachnids - Insects - Crustacea - Echinoderms	- 1 worm endemic of Bonaire (<i>Diachaeta bonairensis</i>) - 3 land snails endemic of Bonaire (<i>Stoastomps walkeri</i> , <i>Tudora aurantia</i> , <i>T. maculata</i>), 3 molluscs species endemic of ABC islands (<i>Succinea gyrata</i> , <i>Chicoreus spectrum</i> , <i>Conus aurantius</i>) - 6 species endemic of ABC islands and Venezuela islands - 1 pseudoscorpion endemic of Bonaire (<i>Garypus bonairiensis</i>) - 1 spider (<i>Selenops curaçaoe</i>) and 2 scorpions (<i>Diplocentrus hasethi</i> , <i>Rhopalurus hasethi</i>) species endemic of ABC islands - 1 beetle (<i>Eburia bonairensis</i>) and 1 heteroptera (<i>Cryptostemma cobbeni</i>) species endemic of Bonaire - 5 and 8 insects endemic of BC and ABC islands; 5 insect species endemic of ABC islands-Venezuela northern area - 9 isopods endemic of Bonaire and 3 isopods endemic of BC islands - 1 crinoid endemic of ABC islands and northern Venezuela and Colombia region (<i>Nemaster grandis</i>)
Freshwater fishes	- 2 Molly fishes endemic of ABC islands and the northern Venezuela and Colombia region (<i>Cyprinodon dearborni</i> , <i>Poecilia vandepolli</i>)
Reptiles	- 1 anole endemic of Bonaire: Anole lizard (<i>Anolis bonairensis</i>) - 2 lizards endemic of BC islands: Whiptail lizard species (<i>Cnemidophorus murinus</i>), Gecko (<i>Phyllodactylus martini</i>) and 1 lizard endemic of BC and Venezuelan islands Antilles Gecko (<i>Gonatodes antillensis</i>)
Birds	- 3 bird species restricted to BC islands-northern Venezuela region or the eastern Caribbean islands (EBA bird species): Yellow-shouldered Amazon (<i>Amazona barbadensis</i> - this species occurs on Bonaire island and northern Venezuela and it is not present in the wild in Curaçao), Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>)
Mammals	- 1 bat species restricted to ABC islands-northern Venezuela and Colombia region: Curaçaoan Long-nosed Bat (<i>Leptonycteris curasoae</i>)
Total	- 17 species strictly endemic of Bonaire - 34 species endemic of ABC islands - 32 species endemic of Leeward islands-northern Venezuela-Colombia region

Habitat outcomes

➤ **Terrestrial areas**

- The vegetation is mainly xerophytic with many areas dominated by columnar cactus intermixed with low scrub and large expanses of land devoid of vegetation (especially along the eastern coast). Many trees have been removed in the early 19th century and into the 20th century vegetation continued to be cut for charcoal production. Most of the vegetation types can be considered as secondary mainly due to overgrazing by free-roaming goats and donkeys that have a negative impact on vegetated areas (de Freitas et al 2005).

- Restricted-range plant species, a number of globally threatened species and patches of thicker and the most extensive continuous-area of dry-forests with taller (3-4 m) thorn scrub forests remain within the Washington-Slagbaai National Park (de Freitas et al 2005, Smith et al. 2012).

- Some other areas outside the WS National Park gather restricted-range plant species and important ecosystems (Smith et al. 2012):

- the Terrace Landscape Middle Bonaire

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- the area Bolivia (eastern part of the island)
- mangrove species are found around Lac Bay and Washikemba/Bakuna area, and very sparse along south western coast.

- **Rocky shores** are found around the whole island, interspersed with small beaches and/or inlets and act as a barrier from the pounding waves providing essential shore protection (SPAW report).

- Ponds, salinas and mangroves

- 5 RAMSAR sites are identified on the island: the island of Klein Bonaire and 4 salinas or Bay (Lac Bay, Slagbaai, Gotomeer and Pekelmeer). All these RAMSAR sites are included in IBAs and 2 sites are within the WS Nat. Park.

- Numerous salinas (hypersaline lakes) occur on the both sides of the island. They are a stop-over habitat for many migratory birds and are recognized as RAMSAR sites.

- 4 mangrove species are present on the island with the dominance of *Rhizophora mangle* and *Avicennia germinans*. This ecosystem mainly only occurs around Lac Bay and a small area at Washikemba/Bakuna (Smith 2012). Mangroves are protected within the Marine Park.

- **Lac Bay** is a shallow lagoon of 700 ha in the southeastern side of the island that supports Bonaire's only significant mangrove woodland (c. 80 ha). Along the northern outer rim of Lac Bay are hypersaline ponds and extensive seagrass beds are on the shallow bottom. The open bay area is separated from the ocean by a fringing reef with considerable Acropora stands. It is considered as an important nursery area for fishes, conch and an important feeding area for turtles (green turtles and hawksbills). The mangrove system in Lac Bay is unique in the Caribbean because being entirely seawater driven with no fluvial (river or estuary) input into the system and only limited seasonal inflow of fresh water from rainfall and runoff. The loss of mangroves in Lac Bay has been balanced by new growth during a 35 year period, but healthy open water surface has declined (Debrot et al. 2010).

Lac Bay is state-owned and the marine environment and mangroves are managed by STINAPA. This area is also identified as an IBA and a RAMSAR site.

The increase of recreational pressure in combination with land use issues are the main threats affecting Lac Bay. A zoning plan of the Bay has been defined to confine usage of the area to specific zones and to propose an area that should be left undisturbed (Wentink and Wulfsen 2011).

- The IBA Pekelmeer Saltworks is under active management (90%) for salt production. Low bushes of buttonwood (*Conocarpus erectus*) grow along the shores.

- Salinas and ponds within the WS Nat. Park host populations of the restricted-range euryhaline fish *Cyprinodon dearborni* (Hulsman et al. 2008). This species also occurs along outer edges of Lac Bay (Sabine Engel, pers. com. 2015).

➤ **Terrestrial habitats for amphibians and reptiles** (STINAPA 2005)

- 3 restricted-range reptiles occur within the WS Nat. Park, including the Bonaire endemic species (*Anolis bonairensis*).

- The only one amphibian present on the island has been introduced from South America (Colombian Four-eyed Frog, *Pleurodema brachyops*).

➤ **Sea turtle nesting areas and migration patterns** (References: Nava 2010, 2011, 2012, Stapelton et al. 2013, 2014 Sea Turtle Conservation Bonaire: <http://www.bonaireturtles.org/>)

- 3 sea turtle species regularly nest on Bonaire: hawksbills, loggerheads and green turtles. The leatherback is seen infrequently (1 nest was recorded in 2013 on Playa Chikitu).

- Loggerhead and almost all hawksbills nest on Klein Bonaire (mostly on No Name beach, respectively), whereas green turtles mainly nest on Playa Chikitu (a beach located within WS Nat. Park, between 35 (in 2013) and 2 (in 2014) nests recorded over the past 5 years; Stapelton et al. 2013, 2014). Few green turtles nested on No Name Beach on Klein Bonaire in 2012 (3 nests) (Nava 2012).

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- Loggerhead nest also on Playa Chikitu and along the beach near the Saltwork area (southwestern part of the island) (Nava 2012, Stapelton et al. 2013, 2014).
- The island of Klein Bonaire is one of the major nesting site (i.e. between 39 nests in 2010 and 82 nests reported in 2012) and "No Name Beach" serves as the index beach for evaluating trends in abundance (Stapelton et al. 2013, 2014). In 2014, 45 hawksbills and 18 loggerheads nest on "No Name Beach", this nesting activity is relatively consistent with the levels registered since 2012, with a small decrease of nesting activity reported for hawksbill turtles in 2013 and 2014 (Stapelton et al. 2013, 2014). This islet is state owned, protected within the Bonaire National Marine Park and designated as a RAMSAR site. Even if goats have been eradicated in the 1980s, some exotic predator are still present such as cats and rats.
- Underwater surveys of sea turtles show high abundance of green turtles in and outside Lac Bay and high number of sightings of green and hawksbill turtle along the coral reef bordering the Bay (Stapelton et al. 2013). Lac Bay is considered as an important foraging area for green turtles and individuals observed in this bay are significantly larger than those in other regions of Bonaire (SPAW report, Stapelton et al. 2014, 2013). The foraging conditions in Lac Bay may provide an environment conducive to rapid growth (Stapelton et al. 2013).
- Green turtles also occur in Lagoen, located on the east coast (Stapelton et al. 2014).



- Each year during the nesting season, Sea Turtle Conservation Bonaire monitors sea turtles migration patterns using satellite transmitters (data loggers collecting GPS positions and depth information) in order to study their feeding and breeding areas. These surveys show a strong connectivity across the Caribbean region for green, hawksbill and loggerhead sea turtles.

Map of the migration patterns of sea turtles tracked in 2013 from Bonaire island (reference: Sea Turtle Conservation Bonaire)

➤ Marine areas

- Bonaire's coral reefs remain among the healthiest and most resilient reefs in the Caribbean due to high abundance of grazing herbivores and few seaweed overgrown coral reef systems (Steneck et al. 2013, Jackson et al. 2014). The Marine Park encompasses coral reefs (with about 60 species of hard corals and high coral coverage), seagrass and mangrove ecosystems.
- The main island and Klein Bonaire are surrounded by continuous, fringing coral reefs from the shoreline seaward to depths in excess of 70 m (area of c. 2,700ha). Average coral coverage has been relatively stable over years (over c. 45% of hard coral coverage) and has decreased under 40% of coverage since 2010 coral bleaching event (Steneck et al. 2013). This coral coverage remains high in comparison to other coral reefs in the Caribbean, with higher values (between 44 and 48%) recorded for Klein Bonaire (Forest site) and within the no-take zone on the mainland in front of Klein (Reef Scientifico site). Dominant coral species include the endangered *Montastraea annularis* and *M. faveolata* that account for 20% of the coral cover (Steneck et al. 2013). Endangered Acroporid species (*Acropora palmata*, *A. cervicornis*) occur in shallow reefs.
- A double reef stretches from Punt Vierkant in the South of the Island to Salt city dive site. At these sites, a 'second' reef can be found after a sand channel at the bottom of the initial reef slope (SPAW report).
- Deep reefs (at 30-40m) are dominated by *Agaricia* sp (including the endangered species *Agaricia lamarcki*). The coral coverage is up to 60% and there has been no decrease in coral cover over the last 30 years (Bak et al. 2005).

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- Two areas of inter-linked seagrass and mangrove occur on Bonaire (windward coast) at Lac Bay and Lagoen and Washikemba-Bakuna (SPAW report, STINAPA 2005). In Lac Bay, the connectivity of ecosystems (mangroves-seagrass-coral reefs) improve coral health and ensure fish feeding and recruitment (Mumby et al. 2006, Steneck et al. 2013).
- Shallow mangrove bay habitats, such as Lac Bay, constitute important nursery areas for diverse reef fish communities, including the Rainbow parrotfish (*Scarus guacamaia*) (Hylkema et al. 2015).
- About 360 fish species are observed in the Marine Park, with high densities of parrotfishes (c. 13 ind/100m²) (Steneck et al. 2013). A ban on parrotfishes was set in 2010. The threatened parrotfish *Scarus guacamaia* is relatively common on Bonaire's reefs and is known to recruit from mangroves to coral reefs (Mumby et al. 2006, Steneck et al. 2013). Grouper densities and biomass show higher values within fish protected areas (no-take zones and marine reserves within the MP) (Steneck et al. 2013).
- Parrotfish catches is banned around all Bonaire island (Marine Park) since 2010.

➤ **Important Bird Areas (IBAs)** (References: Brown et al. 2009, Wells and Debrot 2009, Williams 2012)

- Of the 210 bird species recorded on the island, only 55 species are breeding residents and the remaining are Neotropical migrants or occasional migrants. A smaller number of species are of South American origin.
- **6 IBAs** are identified (23,830 ha, including their marine extensions) and encompass 55% of the island's land area. The IBAs of Washington-Slagbaai National Park, Lac Bay and Klein Bonaire are formally protected within the national system; remaining IBAs are privately or state owned and are unmanaged (Geelhoed et al. 2013).

Key endangered bird species

- There are about 1,000 Yellow-shouldered Amazon Parrots (*Amazona barbadensis*, YSAP) on Bonaire with approx. 60% of the population occurring outside protected areas (data based on roosts-counts). Dos Pos IBA is an important breeding and roosting site for this species. The NGO Echo, located in Dos Pos, is a local NGO involved in the protection of the endangered Yellow-shouldered Amazon and conducts conservation management and education programs to restore the dry-forest, reduce various anthropogenic threats and raise awareness of this threatened species. The main threats for the parrot population are the degradation and fragmentation of the dry-forest habitat, illegal collection for trade and conflict with fruit growers. Another major concern is the negative impact of invasive Africanized honey bees that are taking over bird nesting cavities and have stung young chicks to death (Sam Williams - Echo, Sabine Engel pers. comm. 2015).
- Surveys of YSP population conducted in 2012 (distance sampling method) provided estimates of about 3054 parrots in 2012 over all the island (Rivera-Milan et al. 2012).

- Africanized honey bees are taking over nest cavities in cliff faces and can have stung young YSAP chicks to death. To address this issue, the local NGO Echo brought some bee experts in from the States in 2014 to develop a plan. Several traps were "baited" with pheromones to attract swarms in alternative sites for bee colonies.

- There is a critical need for conservation management primarily the control of introduced herbivores, restoration of plant diversity; and outreach to address barriers achieving these management actions with public support, namely: the low perceived value of the dry forest and nature. The development of nature-based recreation and sustainable economic activities will play a key role in establishing a nature loving culture (Sam Williams, Echo pers. comm. 2015).

- 3 (out of 38) bird species have a distribution restricted to Bonaire, northern Venezuela, AB islands or some islands of the Lesser Antilles, including the endangered Yellow-shouldered Amazon (*Amazona barbadensis*) and the Bare-eyed Pigeon (*Patagioenas corensis*) that are also considered as biome-restricted species.

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- The Saltwork Salinas (IBA Pekelmeer Saltworks) is an important site for the 5 congregatory bird species and gathers c. 5000 breeding individuals of the Caribbean Flamingo, and 580 individuals of the Least Tern. Much of this IBA is leased by the government to salt work company, with the exception of a Flamingo Breeding Reserve that was set aside in 1969.

- The WS Nat. Park is known to support seasonally at least 1% of the global population of the YS Amazon that use this site as a roosting, breeding and feeding areas (Geelhoed et al. 2013).

➤ **Areas for terrestrial mammals** (References: Smith et al. 2012)

- Bonaire's fauna in general and in the Park in particular shows a lack of mammals (STINAPA 2005).

- 8 bat species are considered native of the island, including the vulnerable Curaçaoan Long-nosed Bat (*Leptonycteris curasoae*). This species is known to occur in the WS Nat. Park, along the eastern coast (Bolivia area) and the Terrace Landscape Middle Bonaire (Smith et al. 2012).

➤ **Corridors**

- ABC Islands are important resting areas for migratory birds and have a diverse bird community due to the seasonal abundance of Neotropical migrants as well as the occurrence of South American species.

- A satellite-tracking program of 24 sea turtles breeding on Bonaire revealed wide migrations to coastal waters all over the Caribbean region: ABC islands, Venezuela's coasts, Panama, Nicaragua, Mexico, Cuba, Dominican Rep., Puerto Rico, Virgin Islands (Stapleton et al. 2013).

- A post-nesting female hawksbill turtle was satellite-tracked in 2013 from Bonaire to Honduras (5,000 km, over 85 days). The turtle passed through six national territorial waters to reach a general area proven to be important foraging grounds for Bonaire breeding turtles. The waters between Nicaragua, Honduras and Colombia has proven to be of great importance as foraging areas for sea turtles breeding on Bonaire (Stapleton et al. 2013).

- Sighting frequency of humpback whales is lower in the Leeward islands (5% of all marine mammal observations) compared to the Windward islands (45%). Occurrence of the endangered Sperm Whale remains low (Debrot et al. 2011).

➤ **Ecosystem services**

- In 2012, a TEEB-study was conducted in Bonaire and aimed to assess the economic value of the main ecosystem services that are provided by the island's natural resources. More than 10 ecosystem services provided by marine and terrestrial ecosystems have been identified and the total economic value (TEV) is \$105 million/year for the island (Wolfs and van Beukering 2012).

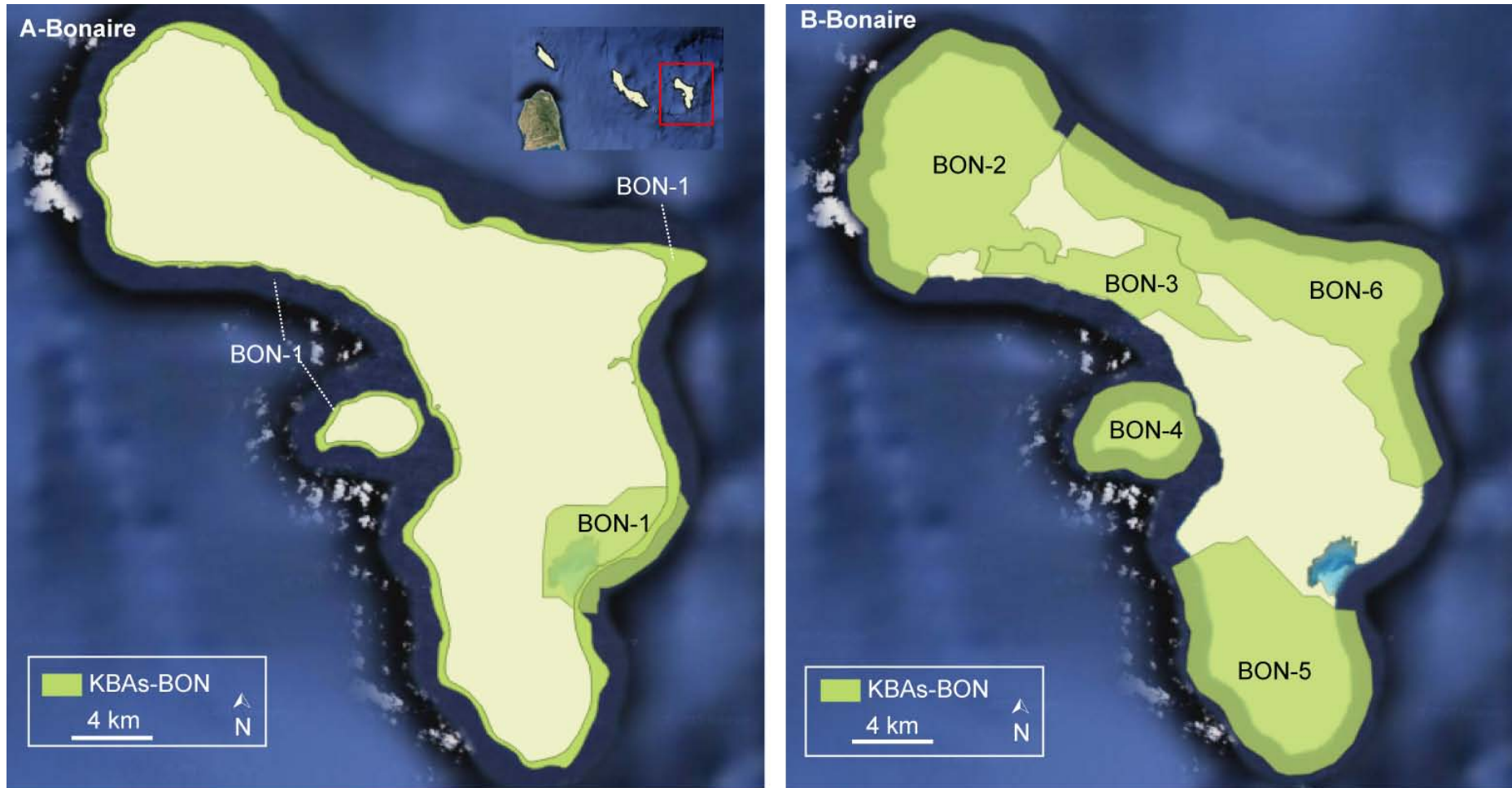
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Table 3 - KBAs identified on the territory and justification.

N. KBA	KBAs	Justification
KBA 1 - Marine Park	Bonaire National Marine Park (from high waters to 60m deep)	<ul style="list-style-type: none"> - Presence of threatened coral species in shallow fringing reefs (up to 25m deep) (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>) and in deeper reefs (30-40 m depth) (<i>Agaricia lamarcki</i>) - Bonaire's coral reefs are recognized in good health for the Caribbean region and are characterized by high coral coverage. - Presence of threatened fish species (<i>Balistes vetula</i>, <i>Lutjanus cyanopterus</i>, <i>Lutjanus analis</i>, <i>Lachnolaimus maximus</i>, <i>Megalops atlanticus</i>)
	Lac Bay	<ul style="list-style-type: none"> - Presence of inter-connected ecosystems: mangroves, seagrass beds, coral reefs - In Lac Bay, seagrass beds are important foraging areas for Green turtles - Lac Bay: important nursery area for a high diversity of coral reef fishes - IBA and RAMSAR site with congregatory and restricted-range bird species
KBA 2 - Washington-Slagbaai National Park & Dos Pos	Washington-Slagbaai National Park (WS)	<p>Plants</p> <ul style="list-style-type: none"> - Presence of threatened plant species (<i>Zanthoxylum flavum</i>, <i>Guaiacum officinale</i>, <i>G. sanctum</i>) and restricted-range plant species (<i>Cynanchum boldinghii</i>, <i>Maytenus versluysii</i>, <i>Myrcia curassavica</i>, <i>Cereus repandus</i>, <i>Opuntia wentiana</i>, <i>O. curassavica</i>, <i>Pilocereus lanuginosus</i>, <i>Stenocereus griseus</i>, <i>Schomburgkia humboldtii</i>, <i>Machaonia ottonis</i>, <i>Ficus brittonii</i>, <i>Condalia henriquezii</i>, <i>Capparis linearis</i>, <i>Bursera tomentosa</i>, <i>B. karsteniana</i>). - The largest extant of continuous dry forest habitat of the island. - 1 RAMSAR site within the Park (Slagbaai lagoon) <p>Invertebrates</p> <ul style="list-style-type: none"> - Presence of endemic terrestrial snails (<i>Stoastomps walkeri</i>, <i>Tudora aurantia</i>, <i>T. maculata</i>) <p>Vertebrates</p> <ul style="list-style-type: none"> - Presence of ponds where restricted-range freshwater fishes occur (<i>Cyprinodon dearborni</i>, <i>Poecilia vandepolli</i>) - Presence of endemic reptiles (<i>Anolis bonairensis</i>, <i>Cnemidophorus murinus</i>, <i>Phyllodactylus martini</i>) - Playa Chikitu: main nesting beach for Green turtles (EN redlist) - The Park is within an IBA and is home to the threatened <i>Amazona barbadensis</i> and supports at least 1% of the global population. - Presence of caves with threatened and restricted-range bat species (<i>Leptonycteris curasoae</i>)
	Dos Pos	<ul style="list-style-type: none"> - IBA - Presence of the threatened and restricted-range Yellow-shouldered Amazon bird species (<i>Amazona barbadensis</i>), about 60% of the population occurs within WS-Dos Pos IBAs - Presence of restricted-range bird species: Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Trasher (<i>Margarops</i>

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		<p><i>fuscatus</i>)</p> <ul style="list-style-type: none"> - Presence of the biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>)
<p>KBA 3 - Terrace Landscape</p>	<p>Terrace Landscape Middle Bonaire</p>	<ul style="list-style-type: none"> - Presence of threatened plant species (<i>Guaiacum sanctum</i>) and endemic species (<i>Maytenus versluysii</i>, <i>Machaonia ottonis</i>) - Presence of caves with threatened and restricted-range bat species (<i>Leptonycteris curasoae</i>)
<p>KBA 4 - Klein Bonaire</p>	<p>Klein Bonaire</p>	<ul style="list-style-type: none"> - Presence of threatened plant species (<i>Zanthoxylum flavum</i>) - Presence of endemic reptiles (<i>Anolis bonairensis</i>, <i>Cnemidophorus murinus</i>) - RAMSAR site - IBA: Congregation of Least tern (<i>Sternula antillarum</i>). Presence of restricted-range Caribbean Elaenia (<i>Elaenia martinica</i>) and biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>). - Important nesting sites for Hawksbill (CR redlist) and Loggerhead turtles (EN redlist) - Corridor towards sea turtle nesting area located on the mainland (nesting site close to the airport): Important nesting sites for Hawksbill (CR redlist)
<p>KBA 5 - Pekelmeer Saltworks</p>	<p>Pekelmeer Saltworks</p>	<ul style="list-style-type: none"> - RAMSAR and IBA - Include important nesting sites for Loggerhead turtles (EN redlist) (close to south salinas)
<p>KBA 6 - Washikemba-Onima</p>	<p>Washikemba-Onima</p>	<ul style="list-style-type: none"> - IBA: Presence of congregatory bird species, restricted-range species and threatened species. - Mangroves around Washikemba/Bakuna
	<p>Bolivia area</p>	<ul style="list-style-type: none"> - Presence of caves with threatened and restricted-range bat species (<i>Leptonycteris curasoae</i>)



Map of KBAs in Bonaire

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International Treaties and Conventions - Kingdom of the Netherlands

- The Convention on Biological Diversity (CBD)
- RAMSAR Convention on Wetlands of International Importance
- the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife)
- the Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)
- Convention for Migratory Species (CMS 1985), Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks, 2011)

National Legislation

- National Nature Policy Plan, Caribbean Netherlands (2013-2017)
- National Nature Conservation Framework Act BES (Bonaire-St. Eustatius-Saba)
- National Fisheries Act BES (PB 1991) and Resolution (PB 1992): regulations regarding fishing in the territorial sea and the EEZ of the Kingdom of the Netherlands.
- National Maritime Management Act BES
- National Ordinance for the Prevention of Pollution from Ships (PB 1993, no. 108)
- National Ordinance on Civil Liability Oil Tankers (PB 1998, no. 169)
- National Oil Pollution Compensation Ordinance (PB 1998, no. 170)

Bonaire Legislation (Reference: STINAPA 2006)

- Bonaire Nature Policy Plan 1999–2004 (ratified by the Island Council in 1999):
this plan defines protected zones and recommends a number of areas of the island to be designated with varying levels of conservation protection
- Marine Environment Ordinance (A.B. 1991 Nr.8) - regulates use of Marine Park, fisheries and Lac
- Building and housing ordinance (A.B. 1991, no. 8) - regulates building and housing practices
- Harbour ordinance (A.B. 1975, nr. 33) - regulates shipping and use of the harbour
- Water safety ordinance (A.B. 1974, no. 5) regulates speed and behaviour on the water
- Regulation of waste (Ao. 1994, no. 5) - solid waste and litter
- Bonaire Development plan (Ao. 1994, no. 22) - aims to promote responsible spatial development and sustainable environmental management
- Nuisance ordinance (Ao. 1995, no. 4)
- Spatial Planning Department: project on wetlands

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Socio-economic context , government and civil society with a role in biodiversity

➤ Government, local institutions and organizations, private sector

BONAIRE	
Special municipality of the Kingdom of the Netherlands	
Government of the Netherlands	Ministry of Infrastructure and the Environment
	Directorate-General for the Environment and International Affairs (DGMI)
	Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
	Directorate General for Nature and Regional Policy
	Ministry of Public Health and Social Development
	Department of Environment and Nature (MINA)
Island Government of Bonaire	
	Bonaire Department of Environment and Natural Resources (DROB)
	Directorate for Urban Planning, Space and Development (DUPSD)
NGOs	
Dutch Caribbean Nature Alliance (DCNA)	DCNA supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
STINAPA Bonaire National Park Foundation	STINAPA is legally mandated by the Island Government to manage Terrestrial and Marine National Parks. The NGO has a co-management structure with stakeholders, conservationists and local interest groups represented on the Board.
Environmental Protection in the Caribbean (EPIC)	Foundation for environmental education and awareness based on St. Maarten. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects on Bonaire focus on bird research and environmental outreach and education.
Foundation Sea Turtle Conservation Bonaire (STCB)	This local NGO ensures since 1991 the protection and recovery of sea turtle populations on the island. Its aims to monitor sea turtle nesting areas, tag sea turtles and conduct public outreach events.
Coral Restoration Foundation Bonaire (CRF)	Non-profit organization based in Florida that has a broad expertise in coral restoration programs. It aims to develop affordable, effective strategies to protect coral reefs and train and empower local communities to implement those strategies.
Echo	This local NGO is involved in parrot population monitoring (including nest and chicks monitoring program), parrot habitat, reforestation and the conservation of flora and fauna from Bonaire. It is also involved in educational programs to raise awareness on this threatened bird species and the loss of its natural habitat on the island. Echo is based in Dos Pos over an area of about 1 ha (with a project of extension to 3 ha). Echo conducts bird surveys overall Bonaire island every 2 years and habitat surveys every 5 years.
Jong Bonaire	The Jong Bonaire youth development program provides young people on Bonaire the chance to learn new skills, find potential career paths and receive guidance from professional youth leaders. Environmental activities range from beach cleanups and sea grass protection to the Junior Park Ranger program, gardening and animal husbandry. Jong Bonaire is funded in great part by the Island and Dutch governments and several foundations and by donations.
Boneiru Duradero	Local NGO created in 2012 named "Sustainable Bonaire" involved in sustainable awareness and activity on Bonaire. The NGO is funded by WWF-NL and the Ministry of Economic Affairs.
Institutions and Research institutions	
CIEE Research Station Bonaire	CIEE Research Station Bonaire provides a learning experience in marine ecology and conservation. Their program is designed to prepare students for graduate programs in marine science, conservation or environmental science. CIEE Research Station Bonaire offers semester and summer courses for American university students and also hosts visiting scientists and faculty-led student groups.
CARMABI Foundation	This marine research institute, created in 1955, is based in Curacao and supports ecological research in Leeward islands, including Bonaire. Some of the thematics concern vegetation mapping or bird surveys. CARMABI works in collaboration with the Royal Netherlands Institute for Sea Research (NIOZ) as well as several Universities in USA, Australia and the Netherlands.
IMARES UR	Institute for Marine Resources and Ecosystem Studies based in Wageningen. Institute involved in scientific surveys and environmental monitoring in the Netherlands and Caribbean region.
Wageningen University	Research on mangrove ecosystems and hydrology.
NIOZ Royal Netherlands Institute of Sea research	NIOZ is the national oceanographic institution for the Netherlands, it facilitates and supports fundamental as well as applied marine research and education in the Netherlands and Europe.
Collaboration with Universities, Institutions and Research institutes	University of Sheffield (UK) (for the Yellow-shouldered Amazon), University of Amsterdam (raptors), Zoological Museum Amsterdam (waterbirds, fishes), University of Maine and Georgia Institute of Technology (coral reef status), National Audubon Society (bird surveys), Vogelbescherming Nederland - BirdLife International (Nongovernmental conservation organization associated to the International Organization BirdLife. The NGO has a special focus on bird conservation and conduct surveys in the Dutch Caribbean).

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➤ Funding resources dedicated to biodiversity and conservation projects

- The Dutch Ministry of EZ dedicated 1.1 million € for the BES islands, with 0.5 million € dedicated to research, monitoring and reporting.

- STINAPA gets fundings such as:

- Admission Fees within the marine and terrestrial Parks;
- the DCNA -Trust fund for the Dutch Antilles: funds from Dutch Ministry of the Interior, Dutch Postcode Lottery;
- WWF
- Bonaire Government's subsidies;
- Donations and souvenir sales;
- Grants and other incomes.

- Sea Turtle Conservation Bonaire receives some funds from WWF Netherlands and grants.

- Echo receives funding through the Dutch Ministry of Economic Affairs (reforestation, pig control project), Disney Conservation Fund for Nature (project on reforestation areas, research, outreach activities), donations and other small grants. The local NGO received field equipment from Idea WILD. From 2012-2014, Echo conducted a small scale reforestation project at Dos Pos involving the planting of 270 trees over two rainy seasons into a 1 ha protected area. Echo has also provided native trees to STINAPA for tree planting festivals inside the Washington-Slagbaai park and for the reforestation project on Klein Bonaire. Other native trees are sold at cultural markets to individuals for use in their private gardens (Echo Annual Report, 2014).

➤ Economic sectors (Central Bureau Statistics - Caribbean Netherlands)

- The main **economic activity** (80% of GDP) is linked to the tourism and associated services (hotels, restaurants...), with a high percentage of scuba-diving oriented tourism. About 70,000 stay-over visitors arrive each year on the island.

- Other economic activities include oil industry (storage and transshipment) and business services. The dry climate is not suitable for agriculture and the export of aloe production continues to provide some income to farmers. Most fishermen practice artisanal fisheries and only few of them commercially fishery (STINAPA 2006).

- **Population:** In 2005, about 13,000 people were considered as permanent residents. The population increased to reach 17,408 inhabitants in 2012 (Central Bureau Statistics 2005, 2012). About 130,000 visitors per year arrive on the island by air.

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App.1. Protected animal and plant species of Bonaire (listed in Bonaire Nature Ordinance)

Latin name	Common name
Sharks and Rays	
<i>Aetobatus narinari</i>	spottedeagleray
<i>Dasyatis americana</i>	southernstingray
<i>Manta birostris</i>	mantaray
<i>Selachimorpha (Euselachii)</i>	sharks
Fishes	
<i>Balistes vetula</i>	queentriggerfish
<i>Dermatolepisinermis</i>	marbledgrouper
<i>Epinephelus itajara</i>	Goliath grouper, jewfish
<i>Epinephelus striatus</i>	nassaugrouper
<i>Lachnolaimus maximus</i>	hogfish
<i>Lutjanus analis</i>	mutton snapper
<i>Lutjanus cyanopterus</i>	cupera snapper
<i>Pagrus pagrus</i>	red porgy
Scaridae	parrotfishes
<i>Thunnus obesus</i>	bigeye tuna
Crustaceans	
<i>Panulirus argus</i>	Caribbean spinylobster
<i>Panulirus guttatus</i>	spottedspinylobster
<i>Panulirus laevicauda</i>	smoothtailspinylobster
Corals	
<i>Antipatharia</i>	black corals (all species)
Gorgoniacea	Gorgonians (all species)
Milleporidae	firecorals (all species)
Scleractinia	stonycorals (all species)
Stylasteridae	lacecorals (all species)
Mollusks	
<i>Strombus gigas</i>	queen conch
Mammals	
Chiroptera	bats
Birds	
<i>Aratinga pertinax xanthogenius</i>	brown-throatedparakeet
<i>Buteo albicaudatus</i>	whitetailedhawk
<i>Margarops fuscates bonairensis</i>	pearlyeyedtrasher
<i>Pandion haliaetus</i>	osprey
<i>Phoenicopterus ruber</i>	Caribbean flamingo
<i>Tyto alba</i>	bamowl
Freshwatershrimp	
<i>Typhlatyamona</i>	Mona caveshrimp
Seagrasses	
<i>Syringodium filiforme (Cymodocea manitorum)</i>	manateegrass
<i>Thalassia testudinum</i>	turtlegrass
Mangroves	

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<i>Avicennia germinans</i>	black mangrove
<i>Conocarpus erectus</i>	buttonwood
<i>Laguncularia racemosa</i>	white mangrove
<i>Rhizophora mangle</i>	mangrove
Trees	
<i>Amyrisignea (A. simplicifolia)</i>	
<i>Capparis tenuisiliqua</i>	
<i>Celtis guanaea</i>	
<i>Clusia</i> sp.	
<i>Crateva tapia</i>	
<i>Euphorbia cotinifolia</i>	
<i>Ficus brittonii</i>	
<i>Geoffroea spinosa (G. superba)</i>	
<i>Guaiacum officinale</i>	lignum-vitae
<i>Guaiacum sanctum</i>	rough bark lignum-vitae
<i>Guapira fragrans (Pisonia fragrans)</i>	
<i>Guapira pacurero (Pisonia bonairensis)</i>	
<i>Krugiodendron ferreum</i>	
<i>Manihot carthaginensis</i>	
<i>Maytenus tetragona (M. sieberiana)</i>	
<i>Maytenus versluysii</i>	
<i>Phoradendron trinervium</i>	
<i>Sabal</i> cf. <i>causiarum (Sabal sp.)</i>	sabal palm
<i>Salicornia perennis</i>	
<i>Schoepfia schreberi</i>	
<i>Spondias mombin</i>	
<i>Strumpfia maritima</i>	
<i>Ximena americana</i>	
<i>Zanthoxylum flavum (Fagara flava)</i>	West Indian satinwood
<i>Zanthoxylum monophyllum (Fagara monophylla)</i>	
Other plants	
<i>Bromelia humilis (B. lasiantha)</i>	bromeliad
<i>Melocactus macracanthus</i>	Turk's cap cactus
Orchidaceae	Orchids (all species)
<i>Tillandsia flexuosa</i>	bromeliad
Varens	Ferns (all species)

Cryptogenic Species (Sabine Engel, Caren Eckrich pers. com. 2015)

<i>Ramicrusta</i> sp.	calcareous alga (family Peyssonneliaceae) (not identify to the species level) - present in one site and growing over corals (not considered as a major threat)
<i>Ramicrusta textilis</i>	

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Invasive Species

Invasive plant species currently present on Bonaire:

<i>Azadirachta indica</i>	Neemtree
<i>Balanitesaegyptica</i>	desert date tree, lamunchi shimaron
<i>Calotropisprocera</i>	<i>catuna di seda</i>
<i>Cenchrusciliaris</i>	buffel grass
<i>Conocarpus erectus shinishi</i>	Silver buttonwood
<i>Cryptostegiagrandiflora</i>	palu di lechi
<i>Leucaena leucocephala</i>	white lead tree
<i>Scaevolataaccada</i>	<i>beachnaupaka</i>
<i>Tabebuiaheterophylla</i>	<i>whitecedar</i>

Invasive animals:

Mammals	
<i>Rattusrattus</i>	black rat
<i>Rattusnorvegicus</i>	brown rat
<i>Canisfamiliaris</i>	dog
<i>Mus musculus</i>	mouse
<i>Sus scrofa</i>	pig
<i>Ovisaries</i>	sheep
<i>Felix domesticus</i>	cat
<i>Caprahircus</i>	goat
<i>Equusasinus</i>	wild ass
Fishes	
<i>Poeciliareticulata</i>	Guppy
<i>Oreochromismossambica</i>	Tilapia
Birds	
<i>Icterus icterus</i>	troupial
<i>Passer domesticus</i>	house sparrow
<i>Quiscaluslugubris</i>	Caribbean grackle
<i>Bubulcus ibis</i>	cattleegret
Amphibians	
<i>Eleutherodactylusjohnstonei</i>	Johnstone'sfrog
<i>Osteopilusseptentrionalis</i>	Cuban tree frog
Reptiles	
<i>Hemidactylusmabouia</i>	Cosmopolitan House Gecko
Earthworms	
<i>Dichogasterbolau</i>	
<i>Polypheretimaelongata</i>	
<i>Potodriluslitoralis</i>	
Insects	
<i>Solenopsisgeminata</i>	Tropicalfireant
<i>Monomoriumfloricola</i>	flowerant,
<i>Monomorium destructor</i>	destroyerant
<i>Tapinomamelanocephalum</i>	ghostant
<i>Hipolymnasmissipus</i>	Mimic butterfly

Fungi:

<i>Clavicepsafricana</i>	sorghum erot
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Marine species:

<i>Pterois miles/P. volitans</i>	Lionfish
<i>Halophila stipulacea</i>	Invasiveseagrass
<i>Trididemnum solidum</i>	Overgrowing Mat Tunicate
<i>Tubastrea coccinea</i>	Orange tube coral

Sea Turtle Conservation work on Bonaire

Bonaire is particularly important for sea turtles as it offers a relatively safe haven for foraging juvenile hawksbill and green turtles, as well as nesting grounds for critically endangered hawksbill and endangered loggerhead turtles. Leatherbacks occasionally and green turtles more frequently, nest on the sandy beaches within the Washington Slagbaai Park. The shallow coral reefs offer prime foraging for juvenile hawksbills and the semi-enclosed bay on Bonaire's windward shore, Lac Bai is a critical foraging habitat for green turtles which show among the highest growth rate recorded in sea turtles in the Caribbean.

Twenty-three years ago Sea Turtle Conservation Bonaire (STCB) began monitoring the status of, and



threats to, Bonaire's sea turtles, using the resulting knowledge to protect them. Comprehensive local laws, as well as international treaties, now protect sea turtles, their nests, and eggs from harvest and harassment.

Today, the most serious threats to Bonaire's sea turtles are not direct threats like poaching, or lack of support for sea turtle protection. Now the main threats are indirect; related to a rapidly increasing human population and the development that goes along with it. These indirect threats to sea turtles are also the

major threats to Bonaire's rich ecosystems, biodiversity, and our own quality of life.

These elements provide the framework for fulfilment of STCB's mission.

- Strategic **management and conservation** actions to protect Bonaire's sea turtles and their environment,
- **Applied research and monitoring** to contribute to the knowledge base of sea turtle conservation/biology, and to guide management practices,
- Effective **communication**, focused on education, training, advocacy, and promotion to increase community-wide awareness of and support for sea turtle conservation issues,
- **Strategic partnerships** and networks to protect Bonaire's turtles locally and throughout their migratory range,
- **Fund development** that generates diverse revenue sufficient to achieve STCB's mission over time, and
- **Organizational development** that leads to effective operation of the organization.



Conservation of Bonaire Amazon Parrot

The Yellow-shouldered Amazon Parrot (Vulnerable) on Bonaire inhabits an equally endangered dry-forest. After felling nearly every tree, early European settlers introduced goats and donkeys. What remains is an uninviting thorny forest heading towards desertification.

Working to safeguard the parrot's future and restore the dry-forest, Echo, an NGO on Bonaire, is tackling the biological and social threats that underpin the current situation.



The Echo team have established a native plant nursery and over 1500 plants representing over 30 native species have been propagated. These include species that are important food and nest trees for the parrot including the *Guaiacum officinale*, and *G. sanctum* which are Endangered (IUCN) and *Zanthoxylum flavum* which is Vulnerable (IUCN).

The propagation of native plants was facilitated by another Echo initiative involving local youth and smart phone technology whereby over 700 trees across the island were mapped and surveyed to determine their phenology.

Government led programs to control invasive herbivores are underway, however these programs will take many years to reduce the density of those species. In order to jump start reforestation efforts and boost further propagation in the short term a strategic network of herbivore exclusion areas are being developed. Planting can occur within these fenced area allowing the abundance and diversity of native plants to increase immediately.

Engaging the local community so they enjoy the benefits of habitat restoration is a critical component of Echo's long-term reforestation strategy. Echo is working to achieve this through realizing the economic value of the forest - tourism and increasing opportunities for recreation. Additionally reforestation on Bonaire will reverse the trend towards desertification and bring positive changes for nature and for human wellbeing through improved micro-climates. Furthermore the restoration of the dry-forest, a local and globally important environment, ensures that is more resilient to future climate change.

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - CURACAO

1. Policy and Socioeconomic context

1.1. Geography, climate and political status



Curaçao (12°2'80"N, 69°10'00"W) lies off the north-west coast of Venezuela, located between Aruba (76 km) and Bonaire (41 km). Curaçao and the islands of Aruba and Bonaire form the Leeward Islands of the Caribbean part of the Kingdom of the Netherlands and are often referred to as the "ABC islands", Curaçao is the largest of the 3 ABC islands (444 km²) and is 59 km long and between 4 and 11km wide. Mount Christoffel, is the highest hill on the island at 378 m. The ABC islands are separated from South American mainland by a deep water trench. Based on the mean annual rainfall (573 mm), the climate on the island qualifies as semi-arid. Annual variations in temperature are small and average around 28°C. Precipitation levels differ throughout the year and in the period between October and January rainfall is higher than during all other months and therefore referred to as the wet season (Meteorological Services of the Netherland Antilles and Aruba 2008).

As of October 10th 2010, Curaçao became an independent country within the Kingdom of the Netherlands similar to St Maarten and Aruba. This island is currently an European Oversea Territory of the Kingdom of the Netherlands.

1.2. Demographic Trends and Socio-economic context

- Area: 444 km²
- EEZ: 30,398 km², total EEZ of the ABC Islands: 68,873 km²
- Population: 156971 inhab., density: 354 inhab./km² (2015)
- GDP (US\$/ inhab.): 18,360 (2012)

Curaçao's economy is mainly based on tourism (18.5% GDP in 2009; Strategic Tourism Master Plan for the Island of Curaçao 2010 – 2014) and associated services, oil trans-shipment, offshore banking and services. The oil refinery accounts for more than 90% of all exports (data: Central Bureau Statistics). With about 150,000 inhabitants, Curaçao has the largest population of the Leeward Islands. Most of the population is centered around Willemstad, the capital city, which surrounds the Schottegat inland bay. About 200 cruise ships and 240,000 tourists visit annually of which 104,497 people visited the Terrestrial Parks in 2013.

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1.3 Protected and/or managed areas

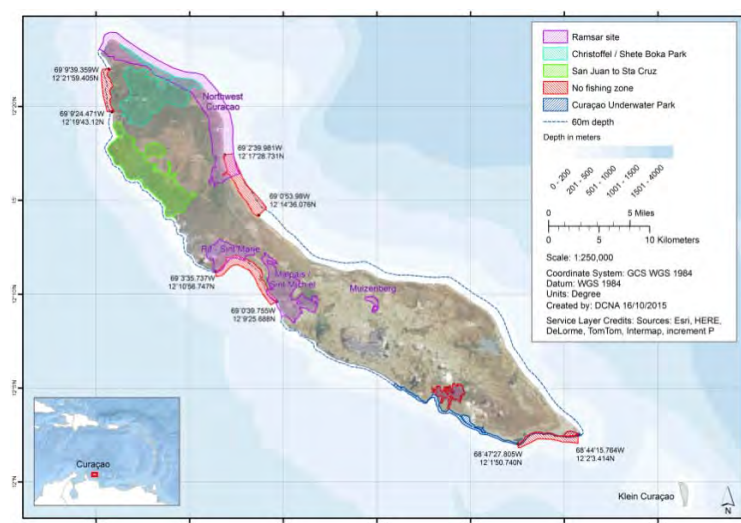
(References: DCNA 2012a; Dilrosun et al. 2012, <http://www.ramsar.org/news/netherlands-names-four-new-caribbean-ramsar-sites>)

Most of the lands belong to the Curaçao island government and are managed by local NGO's such as Uniek Curaçao and CARMABI, which are both foundations. The latter NGO also manages the Marine Park. In 2012, CARMABI merged the management of SheteBoka and Christoffel Parks to increase park efficiency, reduce the costs and to improve income generation.

Christoffel Park (created in 1978 over 2,300 ha) is the largest national park of the island and has the highest diversity of flora and fauna of the ABC islands, with many endemic and rare species including a population of the White-tailed deer, an endemic sub species. Eight hiking trails cross the Park with one of them reaching Christoffel mountain (378 m), the highest peak of Curaçao. The Christoffel Park also harbors unique vegetation types, such as one of the largest contiguous areas of woodland vegetations remaining on the island. See also: Northwest Curaçao.

SheteBoka Park (created in 1994 over 470 ha) is located on the island's rocky north coast and has been designated to protect pocket beaches (also known as "bokas") that constitute important sea turtle nesting sites. See also: Northwest Curaçao.

Curaçao Underwater Park (1983, 600 ha of marine area and 436 ha of inland bay habitats) is located in the southeastern part of the island (from high-water to 60m deep) and extends 21 km from the eastern outskirts of Willemstad. It covers 12 km of coastline (undeveloped and uninhabited, Bruckner 2003) harboring pristine fringing coral reefs, seagrass beds, mangroves and a high diversity of fish species (c. 350 fishes). One of the main issues is the low level of enforcement in the MPA, mainly due to lack of Government funding.



- **4 managed RAMSAR sites:** These RAMSAR sites are managed and considered as protected areas (enforcement of regulations). Management plans are about to be implemented for all the RAMSAR sites (Mark Vermeij, pers. com. 2015).

Map of the protected areas in Curaçao. Note that the No fishing zones on the map are "Proposed No Fishing Zones"

Malpais/SintMichiel (RAMSAR area, 05/02/2013; Curaçao; 1,100 ha; 12°10'N 069°00'W. Important Bird Area). Malpais is a former plantation just to the north of SintMichiel. There are two freshwater lakes and a hyper-saline lagoon connected to a bay in which coral reefs are found. The bay is surrounded by dry deciduous vegetation and a well-developed woodland vegetation. The area provides refuge for many birds, such as the IUCN Red Listed Caribbean coot (*Fulica caribaea*). The lagoon also supports a significant fraction of the global population of the Common tern (*Sterna hirundo*) and is part of a regional network of foraging sites for the Caribbean flamingo (*Phoenicopterus ruber*), protected under the Convention of Migratory Species. Freshwater habitat is scarce in Curaçao and therefore of great ecological, social and economic value. The dam of Malpais is located downstream of a local watershed. Freshwater infiltrates into the soil, recharging groundwater reservoirs which allow woodlands to grow in the area. When freshwater is present,

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the area harbors also *Anatidae* spp. that are protected under the Convention of Migratory Species. One of the current threats that may affect the ecological character of the site is the landfill situated c. 2 km away. Ramsar Site no. 2117. Most recent RIS information: 2013.

Muizenberg (RAMSAR area 05/02/2013; Curaçao; 65 ha; 12°09'29"N 068°55'07"W. Important Bird Area; Natural Park). Muizenberg comprises an intermittent shallow lake created by the damming of a stream that drains the surrounding low hills. Periodically inundated grassland and woodland surround the wetland. A separate small pond, in 'Kaya Fortuna', is situated 200 m to the west. The Muizenberg area is internationally significant for its population of the Caribbean coot (*Fulica caribaea*), near-threatened under the IUCN Red List, and the Caribbean flamingo (*Phoenicopterus ruber*) protected under the Convention of Migratory Species, but it also supports many other waterbirds, both residents and migrants that are internationally important such as *Anatidae* spp. that are protected under the Convention of Migratory Species. The Muizenberg dam was built by Shell Curaçao in 1915 to collect freshwater for industrial cooling. With a capacity of 650,000 m³, it is the largest freshwater reservoir on the island. The area was designated as a (Eilandelijk Ontwikkelingsplan (EOP) 1996) for the improvement of urban living conditions of the nearby population and is mainly used by hikers for recreational purposes. Illegal dumping of garbage, pollution, drainage of surrounding wetlands, and recreational disturbance are regarded as the main potential threats. A general environmental education program is being implemented. Ramsar Site no. 2118. Most recent RIS information: 2013.

Northwest Curaçao (RAMSAR area 05/02/2013; Curaçao; 2,441 ha; 12°21'11"N 069°05'00"W. Important Bird Area, Conservation Areas in the EOP 1996). The area comprises a great variety of ecosystems such as coral reefs, coastal lagoons with sea grass beds and mangroves, coastal limestone terraces, inland hills supporting evergreen woodland, freshwater dams, natural springs and dry deciduous shrublands. The Ramsar site includes parts of SheteBoka and Christoffel National Parks ('Conservation areas' in the EOP 1996). The wetland covers approximately 20 km of the rocky, wave-exposed north coast of Curaçao, including 10 pocket beaches ("bokas") and at least 3 inland bays that are used as nesting and foraging sites for threatened sea turtle species as *Dermochelys coriacea* and *Eretmochely imbricata*. There is also a breeding colony of more than 500 individuals of Least Tern. Moreover, the northwestern coast of Curaçao locally harbors fringing coral reefs, characterized by more than 80% coral cover and the presence of such critically endangered coral species as *Acropora palmata* and *Acropora cervicornis* as well as endangered fish species like *Epinephelus itajara*. Some of the caves in the area are important as nesting and roosting sites for rare and endemic bat species and Indian drawings can be found estimated to be more than 5,000 years old. Numerous manmade dams in the area retain freshwater for several months after the wet season has passed. Subterranean groundwater reservoirs in turn sustain local vegetation types year-round which are used by several bird species, pollinating bats and mammals to survive Curaçao's dry season. Ramsar Site no. 2119. Most Recent RIS information: 2013.

Rif-Sint Marie (RAMSAR area 05/02/2013. Curaçao; 667 ha; 12°12'16"N 069°03'16"W. Conservation Area, Important Bird Area). The area of Rif-Sint Marie is relatively undisturbed and undeveloped and comprises a salt marsh surrounded by mud flats, shrub land, and woodlands (including relatively undisturbed limestone woodland vegetation). The marsh is a strategic feeding habitat for flamingos and several waterbirds. The coral reef of Rif-Sint Marie is well developed and shelters several threatened coral species such as *Acropora palmata* and *Acropora cervicornis*, as well as endangered turtle species as *Dermochelys coriacea* and *Eretmochely imbricata* and threatened fishes like the Goliath grouper *Epinephelus itajara*. Dense thickets of Elkhorn coral sustain major ecological processes such as gross community calcification and nitrogen fixation; dense populations of this branching species dissipate wave energy and thus protect the coast. The area is currently used for recreational purposes like hiking, biking and guided eco-tours. The major threats to the site are uncontrolled access of visitors with dogs disturbing flamingos, unwise development of touristic infrastructures in the surrounding area and oil spills from a nearby transshipment facility. Ramsar Site no. 2120. Most recent RIS information: 2013.

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- Establishment in 2015 of "Yarari" marine mammal and shark sanctuary that encompasses all the EEZ of Saba and Bonaire (Dutch Caribbean Nature Policy Plan 2013-2017, Project "Save our sharks", Debrot et al. 2011). Yarari Sanctuary will form part of the network of marine mammal sanctuaries in the region, with Agoa Sanctuary in the French EEZ, Silver Banks Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the northern USA.

1.4 On-going projects & Projects under study

No fishing zones. 5 areas will be designated as no-fishing zones (from shore to 150 m off coast) and will encompass about 30% of the island's coastline: Oostpunt, Spanish Water Bay, St Marie, Lagun and North East.

New UNESCO WHS. West's Curaçao Plantation Area is on the provisional list to be recognized as an UNESCO World Heritage site

Oostpunt reef conservation. Proposal for an alternative development scenario for Oostpunt (CARMABI) including the proposal to designate part of the Oostpunt area as a National Park (Parke Nashonal Oostpunt).

AICOM bat reservation (number A-ABC-003.) As of November 25th, 2014 the caves along the limestone terraces of Curaçao's North coast have been recognized as an Area of Importance for the Conservations of Bats (AICOM).

1.5 International recognition of natural habitats and wildlife

Four areas are since 2013 listed as RAMSAR sites (4274 ha total; see above) and five Important Bird Areas (IBAs) are present on the island, together covering 16,281 ha.

1.6 Action, management plans

- Curaçao Underwater Management Plan (Van't Hof 1985)
- Management Plan for the natural resources of the EEZ of the Dutch Caribbean (Meesters et al. 2010)
- Fishing legislation (gill nets and harpoons etc)
- Nature plan (Curaçao Government last revision: 2008; currently not effective)
- Spatial planning laws (LGRO, EOP, EROC)
- RAMSAR management plans (nearly finished, 2015)
- Bat research and Conservation Plan for ABC islands (Simal et al. 2011. Bat research and conservation plan Aruba, Curaçao and Bonaire).

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2. Biological importance of the ecosystems

2.1 Species outcomes

Table 1 - List of Taxa assessed as **globally threatened** (IUCN Red List). List of species are indicated in Appendix 1. (References: IUCN RedList, Beek et al. 2012, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, Debrot and de Freitas 1991, Debrot et al. 2005, 2011b, Dilrosun et al. 2012, Petit et al. 2006, van Beek et al. 2014, Vermeij et al. 2012)

Taxonomic group	Threatened species
Plants	
EN	<i>Guaiacum officinale</i> , <i>G.sanctum</i>
VU	<i>Zanthoxylum flavum</i>
Molluscs	
VU	<i>Conus hieroglyphus</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i>
Fish	
CR	<i>Epinephelus itajara</i> , <i>Hyporthodus nigritus</i>
EN	<i>Epinephelus striatus</i> , <i>Pagrus pagrus</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Hyporthodus niveatus</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Mycteroperca interstitialis</i> , <i>Thunnus obesus</i> , Observed occasional species: <i>Hippocampus erectus</i> , <i>Hyporthodus flavolimbatus</i> , <i>Makaira nigricans</i> , <i>Hypoplectrus providencianus</i> , <i>Kajikia albida</i> , <i>Megalops atlanticus</i>
Sharks and rays	
CR	<i>Pristis pectinata</i> (occ.)
EN	<i>Sphyrna lewini</i>
VU	<i>Carcharhinus longimanus</i> , <i>Rhincodon typus</i> (occ.), <i>Cetorhinus maximus</i> (occ.)
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Chelonia mydas</i> , <i>Caretta caretta</i> (occ.)
VU	<i>Dermochelys coriacea</i> (occ.), <i>Lepidochelys olivacea</i> (occ.)
Birds	
VU	<i>Amazona barbadensis</i> (occ.)
Mammals	
VU	<i>Leptonycteris curasoae</i> , <i>Physeter macrocephalus</i> (occ.)

* Occ., occasional species are not considered for the identification of KBAs.

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Table 2 - List of species that are geographically restricted

(References: Debrot and de Freitas 1991, Dilrosun et al. 2012, DCNA 2012b, Database "Flora of Curaçao": <http://www.severens.net/>, Hulsman et al. 2008, Petit et al. 2006, van Buurt 2006, Vermeij Mark pers. comm. 2015)

Taxonomic group	Number of endemic species	
Plants	<ul style="list-style-type: none"> - 5 plant species endemic to Bonaire and Curaçao (<i>Agave boldinghiana</i>, <i>Chloris suringari</i>, <i>Maytenus versluysii</i>, <i>Myrcia curassavica</i>, <i>Paspalum bonairensis</i>) - 5 plant species endemic to ABC islands (<i>Agave vivipara</i>, <i>Aristida arubensis</i>, <i>Cynanchum boldinghii</i>, <i>Paspalum curassavicum</i>, <i>Melocactus macracanthos</i>) - at least 9 plant species endemic of ABC islands and the northern Venezuela and Colombia region (including 5 cacti): <i>Agave cocui</i>, <i>Mammillaria mammillaris</i>, <i>Peltophorum acutifolium</i>, <i>Cereus repandus</i>, <i>Opuntia wentiana</i>, <i>Opuntia curassavica</i>, <i>Pilosocereus lanuginosus</i>, <i>Stenocereus griseus</i>, <i>Schomburgkia humboldtii</i>, <i>Ruprechtia coriacea</i> 	
Invertebrates	<ul style="list-style-type: none"> - Annelids - Mollusks - Arachnids - Insects - Crustacea - Echinoderms 	<ul style="list-style-type: none"> - 4 worms endemic of Curaçao (<i>Bothrosostoma pieti</i>, <i>Euschoengastria antillarum</i>, <i>Microphthalmus stocki</i>, <i>Wagenaarina similis</i>) - 22 mollusk species restricted to ABC islands, including the vulnerable Hieroglyphic Cone (<i>Conus hieroglyphus</i>) and 8 species (6 terrestrial and 2 marine) strictly endemic of Curaçao (Debrot 2006). - 13 mollusk species restricted to ABC islands and Venezuela-Colombia region - 4 arachnids endemic of Curaçao (<i>Agaue arubaensis</i>, <i>Camillina jeris</i>, <i>Pachychitra curazavia</i>, <i>Apocheiridium caribicum</i>) - 3 arachnids endemic of ABC islands - 3 butterflies (<i>Strymon basilides</i>, <i>Cyclargus huntingtoni</i>, <i>Hesperia curassavica</i>) and 5 beetles endemic to Curaçao - 5 and 8 insects endemic of BC and ABC islands; 5 insect species endemic to ABC islands-northern Venezuela area - 8 isopods endemic of Curaçao and 4 isopods endemic of BC islands - 1 crinoid endemic of ABC islands and northern Venezuela and Colombia region (<i>Nemaster grandis</i>)
Freshwater fishes	<ul style="list-style-type: none"> - 2 Molly fishes endemic of ABC islands and the northern Venezuela and Colombia region (<i>Cyprinodon dearborni</i>, <i>Poecilia vandepolli</i>) 	
Marine fishes	<ul style="list-style-type: none"> - 1 blenny endemic to Curaçao <i>Starksia springeri</i> 	
Reptiles	<ul style="list-style-type: none"> - 1 snake endemic of Curaçao: Three scales ground snake (<i>Liophis triscalis</i>) - 2 lizard species endemic of BC islands: Whiptail lizard species (<i>Cnemidophorus murinus</i>), Gecko (<i>Phyllodactylus martini</i>) - 1 lizard endemic of AC islands (<i>Anolis lineatus</i>) and 1 lizard endemic of BC and Venezuelan islands: Gecko (<i>Gonatodes antillensis</i>) 	
Birds	<p><i>Species taxonomic level*:</i></p> <ul style="list-style-type: none"> - 2 bird species restricted to BC islands-northern Venezuela region and the Caribbean islands: Yellow-shouldered Amazon (<i>Amazona barbadensis</i>), Caribbean Elaenia (<i>Elaenia martinica</i>) <p><i>Subspecies taxonomic level:</i></p> <ul style="list-style-type: none"> - 3 endemic bird subspecies restricted to Curaçao: including the Curaçao barn owl (<i>Tyto alba bargei</i>), Yellow Oriole (<i>Icterus nigrogularis curacoensis</i>) - 1 BC (Grasshopper Sparrow, <i>Ammodramus savannarum caribaeus</i>) & 3 CA endemic subspecies; - 9 ABC islands only or in combination with the Venezuelan islands endemic subspecies (including Caribbean Elaenia (<i>Elaenia martinica</i>)) 	
Mammals	<ul style="list-style-type: none"> - 2 bat species restricted to ABC islands and northern Venezuela-Colombia region: Curaçaoan Long-nosed Bat (<i>Leptonycteris curasoae</i>), Curaçao Myotis 	

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	<p>(<i>Myotis nesopolus</i>)</p> <ul style="list-style-type: none"> - 1 mouse species restricted to ABC islands and northern Venezuela-Colombia region: Hummelinck's Vesper Mouse (<i>Calomys hummelincki</i>) - 1 deer sub-species endemic of Curaçao: White Tailed Deer (<i>Odocoileus virginianus curassavicus</i>). Curacao is the only Caribbean island that had a white-tailed deer population in pre-Columbian times. - 1 hare sub-species endemic of ABC islands: Cottontail hare (<i>Silvilagus floridensis nigronuchalis</i>)
Total	<ul style="list-style-type: none"> - 35 species strictly endemic of Curaçao - 38 species endemic of ABC islands and 16 CA & CB endemics - 36 species endemic of Leeward islands, northern Venezuela-Colombia region

* For the identification of KBAs *per se* the taxonomic level considered is the species level. Subspecies are considered as adding criteria for the KBAs.

2.3 Species aggregations / List of species occurring at key stages of their life-cycles

- The largest herbivorous fish in the Atlantic, the Rainbow parrotfish (*Scarus guacamaia*) has an obligate dependence on mangroves that represent a critical habitat for this species during its juvenile life stage. This species occurs in relatively high density in Spanish Water Bay and St Jorisbaai, inland bays bordered by dense mangroves (Dilrosun et al. 2012). Nursery habitats, enhance reef populations of multiple herbivorous species, such as the Blue parrotfish (*Scarus coeruleus*), the Redtail parrotfish (*Sparisoma chrysopterum*), the Striped parrotfish (*Scarus iserti*) and the Doctorfish (*Acanthurus chirurgus*) (Nagelkerken & van der Velde 2002). Herbivores are strong determinants of benthic community structure on coral reefs. When grazing by herbivorous fish is reduced, algal proliferation is no longer controlled so corals become overgrown, particularly juvenile corals, so that the replenishment of coral populations becomes compromised. Many other economically and ecologically valuable Curaçaoan fish species depend on nursery habitats (i.e., mangroves and seagrass beds) located inside inland bays across the island (e.g., Awa Blancu, St. JorisBaai, Spanish Water). Inland bays support high densities of piscivorous fish juveniles that spent their earliest life stages inside mangroves and seagrass beds (Nagelkerken & van der Velde 2002). These species, such as barracudas and snappers are particularly susceptible to overfishing because of their slow growth rates, late age of maturity, protogynous hermaphroditism and predictable adult movement patterns, such as spawning aggregations (Bohnsack 1994, Mumby et al. 2006). Global overfishing of coral reefs has significantly diminished herbivorous fish populations of and in many locations throughout the Caribbean; parrotfish are a major component of reef fisheries, especially when slower-growing predators are overharvested (Mumby et al. 2006). Therefore, preserving herbivore fish populations is of crucial importance to ensure overall ecosystem functioning.

- (Sea)bird species congregate in 4 IBAs on the island: North-east Park and Coast IBA, Jan Thiel Bay IBA, Malpais-St Michiel IBA, Klein Curaçao IBA.

3. Habitat outcomes

3.1 Terrestrial areas

Vegetation types

- Christoffel National Park supports one of largest contiguous areas of woodland vegetations remaining on the island, encompassing 21 of the 22 vegetation types (including unique primary vegetation types) found on the island and harbors approximately 50 locally rare plant species and a number of restricted and/or threatened plant species (Beers et al. 1997, Dilrosun et al. 2012).

- A number of areas have been identified for their exceptional biodiversity conservation value (Debrot and de Freitas 1991), including the areas of Knip, Jeremi and St. Hironymus due to the presence of endemic species (*Myrcia curassavica*) and locally rare plant species (*Acanthocereus tetragonus*, *Ananas* sp., *Anthurium hookeri*, *Byrsonima crassifolia*, *Capparis tenuisiliqua*, *Centaurium quitense*, *Chiococca macrantha*, *Clusia* sp., *Guettarda caracasana*, *Helicteres carthaginensis*, *Nephrolepis biserrata*, *Polypodium aureum*, *Anemia hirsute*, *Lygodium venustum*, *Peperomia blanda*, *Phoradendron trinervium*, *Polystachya cerea*, *Psidium sartorianum*, *Tillandsia fasciculata*, *Vitex compressa*, *V. cymosa*, *Soroceas prucei*, *Sabal* sp.). The Malpais area includes patches of vegetation with the endangered species *Guaicum sanctum*.

- Recent inventories have documented no less than 211 exotic alien species in the wild for the Dutch Caribbean. These amount to no less than 65 introduced terrestrial plants, 72 introduced terrestrial and freshwater animals and 47 introduced agricultural pests and diseases. A list of these species, pests and diseases are found in resp. Debrot et al. (2011), Van der Burg et al. 2012, and Van Buurt and Debrot (2012, 2011).

The coastal limestone hills and cliffs which stretch from Caracasbaai eastward to Oostpunt are a striking feature of the relatively flat eastern side of the island. This area begins at the bay of Caracasbaai which is a deep water harbour created by an earthquake that resulted in a massive submarine land-slide (De Buissonjé & Zonneveld 1976). The limestone hills and cliffs in these area harbor a number of rare plant species, amongst which the cacti *Mammillaria mammillaris* and *Opuntia curassavica*. These areas are also home to endangered bird species like *Buteo albicaudatus* (white tailed hawk), the Curaçao barn owl *Tyto alba bargei* (an endemic subspecies for Curaçao) and the rare scaly-naped pigeon (*Patagioenas squamosa*). The shores between Spaanse Water and Oostpunt directly border the Curaçao Underwater Park. While not designated as part of the Underwater Park, the shore zone and adjacent lands are an integral part of the marine ecosystem and should be managed together with it (Salm & Clark 1984). The terrestrial constitute important habitat for shore birds. A marine park with altered and polluted shores greatly loses its natural and recreational value and as such the shore in this area was accredited a high conservation priority. The area also harbors numerous lagoons of local importance to flamingos, migratory waterbirds, seabirds and reef organisms (e.g. Awa Blanku, Lagun Blanku, Saliña di Patu, Awa di Oostpunt). The coastal vegetation near Fuikbaai comprises the rare *Coccoloba uvifera-Crossope talum rhacoma* type, of which a small fragment is also found at Bullenbaai (Stoffers 1980). This vegetation may have been more common in the past. The saliña at Oostpunt contains the largest (c. 2 ha) and least disturbed saline meadows of the rare *Salicornia perennis-Batis maritima* vegetation type (Stoffers 1980).

Inland bays, wetlands and springs—Curaçao has a large number of inland bays, some of them recognized as RAMSAR sites: Rif Sint Marie, Malpais/SintMichiel, Northwest Curaçao (Dilrosun et al. 2012). The freshwater catchment basin at Muizenberg is the fourth RAMSAR site on the island. Other inland bays were proposed to be listed as RAMSAR areas as they constitute important habitats for bird species and some other threatened taxa (sea turtles corals, fishes etc.): St Jorisbaai, Spanish Water Bay, Klein Curaçao, Jan Thiel, South-Eastern coast of Curaçao (Dilrosun et al. 2012).

The area of San Juan and Sta Cruz encompasses mangrove habitats (Debrot and Freitas 1991; John de Freitas, pers. com. 2015).

Habitats for reptiles - Important populations of the Whiptail lizard species (*Cnemidophorus murinus*), a lizard endemic to Curaçao and Bonaire, occur on Klein Curaçao (van Buurt 2006). The endemic Three scales ground snake (*Liophis triscalis*) occurs within the Terrestrial Parks and around Jan Thiel Lagoon. Four endemic lizards are present around Jan Thiel lagoon (van Buurt 2006, Dilsorun et al. 2012): Anoli (*Anolis lineatus*), Antilles Gecko (*Gonatodes antillensis*), Gecko (*Phyllodactylus martini*), Whiptail lizard species (*Cnemidophorus murinus*).

Coastal areas: sea turtle nesting areas—Three sea turtle species regularly nest on Curaçao's and Klein Curaçao's beaches: Green turtles, hawksbills and occasionally loggerheads. The Olive Ridley and Leatherback are rare visitors. Beaches on Klein Curaçao (longest stretch of sandy beach of the island) and on the Curaçao's Northeast coast (Shete National Park, including Boka Mansaliña and Boka Braun) are the most important sea turtle nesting areas of the island (Sybesma 1992, Debrot et al. 1995, 2005, Carmabi unpubl. data 2016). While nests have not been confirmed, Olive Ridley and leatherback turtles are frequently observed around Klein Curaçao (Dilrosun et al. 2012). Main foraging areas are located around Klein Curaçao for hawksbill turtles, whereas green turtles predominantly feed in the seagrass beds in the island's inland bays (Oostpunt, Ascension Bay, BokaBartol, St. Jorisbaai, Awa di Oostpunt, Fuik, Spanish Water Bay) (Sybesma 1992, Hoetjes 2006, Dilrosun et al. 2012). One of the most important sea turtle nesting areas (SheteBoka Park) is legally designated as conservation area by means of the land-use zoning ordinance (EOP "Island Development Plan" (A. B. 1995, no.36)) and all sea turtles became legally protected by an island ordinance in 1996 (A.B.1996 no.8).

Coastal and Marine areas

- Curaçao is surrounded by 15.7 km² of fringing reefs (van Duyl 1985) situated at a distance from the coast ranging from 5 m to 250 m. These reefs occur foremost along the leeward coast and harbor about 68 coral species and high coral coverage compared to other sites in the Caribbean (up to 70-80% of coverage in some sites) (Bruckner and Bruckner 2003, Vermeij et al. 2012, Jackson et al. 2013). Curaçao is not only part of one of the five richest hotspots for biodiversity and endemism on Earth (i.e. the Caribbean), but it represents a hotspot center by itself within its wider ecoregion together with the Cayman Islands, Aruba and Bonaire (Miloslavich et al. 2010).

- Despite the fact that Curaçao's coral reefs are affected by a number of natural and anthropogenic stressors, reefs locally exist that among the healthiest coral ecosystems remaining in the Caribbean region (Jackson et al. 2013). The healthiest coral communities are located along island's undeveloped north shores and eastern and western sides (Bruckner and Bruckner 2003, Vermeij 2012). In developed areas, a significant decline has been observed (up to > 80% in less than 3 decades) in coral cover (Bak and Nieuwland 1995). Curaçao's fringing reefs are (historically) dominated by the three members of the *Montastraea* (*Orbicella*) species complex (all endangered species). Below 30 m depth, plating corals such as *Agaricia lamarcki* (vulnerable on IUCN Red List) are abundant (Bongaerts et al. 2013). Branching acroporids (*A. palmata*, *A. cervicornis*) that were historically very abundant in shallow reef areas, virtually disappeared in the early 1980s during a Caribbean-wide mass mortality caused by white-band disease. Patches of both acroporid species do still occur, sometimes very abundantly, especially along the south-western side of the island (including sites located within the Marine Park, such as Oostpunt and Jan Thiel) (Bruckner and Bruckner 2003).

- Relatively healthy reefs remain along the northwestern coast of the island, at the entrance of Spanish Water Bay, on the north-eastern side of Klein Curaçao and along the southern coast (from Fuik to Punt Kanon). These are often characterized by more than 50% coral cover and the presence of Acroporid and other endangered coral species (Dilrosun et al. 2012). Reefs of Oostpunt are currently increasing in coral cover and are ranked among the best three reef systems left in the Caribbean (Jackson et al. 2013). This coral reef area is known to act as a source for coral larvae, and other reef organisms, for the entire south coast of Curaçao and harbors numerous threatened marine species (CARMABI 2013, CARMABI response to Oostpunt Development Plan, Mark Vermeij pers. comm. 2015).

- **Critically endangered marine species:** Goliath Grouper (*Epinephelus itajara*), Elkhorn coral (*Acropora palmata*), Staghorn coral (*Acropora cervicornis*), Hawksbill turtle (*Eretmochelys imbricata*), Warsaw Grouper (*Hyporhamphus nigritus*), Smalltooth Sawfish (*Pristis pectinata* - occ.)

- **Endangered marine species:** Boulder Star coral (*Montastraea annularis*), Mountainous Star coral (*Montastraea faveolata*), Green turtle (*Chelonia mydas*), Loggerhead sea turtle (*Caretta caretta*-occ), Nassau grouper (*Epinephelus striatus*), Red Porgy (*Pagrus pagrus*), Atlantic Bluefin Tuna (*Thunnus thynnus*), Scalloped Hammerhead (*Sphyrna lewini*), Oceanic Whitetip Shark (*Carcharhinus longimanus* - occ.), Whale Shark (*Rhincodon typus* -occ.), Basking shark (*Cetorhinus maximus* - occ.)

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- **Vulnerable marine species:** Lamarck's Sheet coral (*Agaricia lamarcki*), Pillar coral (*Dendrogyra cylindrus*), Elliptical Star coral (*Dichocoenina stokesii*), *Montastraea franksi*, Queen Triggerfish (*Balistes vetula*), Snowy grouper (*Hyporthodus niveatus*), Yellowmouth grouper (*Mycteroperca interstitialis*), Hogfish (*Lachnolaimus maximus*), Mutton snapper (*Lutjanus analis*), Cubera snapper (*Lutjanus cyanopterus*), Rainbow Parrotfish (*Scarus guacamaia*), , Bigeye Tuna (*Thunnus obesus*), Lined Seahorse (*Hippocampus erectus-occ*), Poey's Grouper (*Hyporthodus flavolimbatus-occ*), Blue Marlin (*Makaira nigricans-occ*), Masked Hamlet (*Hypoplectrus providencianus-occ*), White Marlin (*Kajikia albida-occ*), Tarpon (*Megalops atlanticus-occ*), Oceanic Whitetip Shark (*Carcharhinus longimanus*), Whale shark (*Rhincodon typus-occ.*), Basking Shark (*Cetorhinus maximus-occ.*), Leatherback sea turtle (*Dermochelys coriacea-occ*), Olive Ridley sea turtle (*Lepidochelys olivacea-occ*).

Despite all the ecological interest and importance of the Oostpunt natural area, this area is threatened following a proposal by the Government of Curaçao to rezone the area and allow commercial development in sensitive and valuable coastal and terrestrial areas (DCNA 2012a, CARMABI 2013, CARMABI response to Oostpunt Development Plan).

- The endemic Blenny *Starksia springeri* occurs in coastal marine areas (Baldwin et al. 2011).

- Finally, Curaçao possesses several semi-enclosed inland bays with seagrass beds and mangroves connected to adjacent coral reef communities. These bays serve as important nurseries for reef fishes, such as the vulnerable Rainbow parrotfish (*Scarus guacamaia*) (Dorenbosch et al. 2004, Dilrosun et al. 2012, Huijbers et al. 2013): Spanish Water Bay, St Anna Bay, Piscadera Bay, Fuik Bay.

- Curaçao has about 55 ha of mangroves (0.12% of island's area) a significant portion of it is threatened by coastal development. Main mangrove areas are located at Caracasbaai peninsula, Spanish Water Bay (15.5 ha), St. Jorisbaai (12 ha), Rif-Otrabanda (12 ha) and Schottegat (4.5 ha) (Debrot and de Freitas 1991, Dilrosun et al. 2012).

Important Bird Areas (IBAs)

- Of the 215 bird species recorded on the island, only 57 species are breeding residents and the remaining are Neotropical migrants or occasional migrants.

- **5 IBAs** have been established on Curaçao, totaling 16,281 ha (including their marine extensions) and represent 24% of the island's land area. The northern IBA encompasses the 2 terrestrial parks (ChristoffelPark and SheteBokaPark). The remaining area of this IBA, as well as Malpais-SintMichiel and Jan Thiel Lagoon IBAs, are designated as Protected Conservation Areas (EOP, Island Development Plan) but are currently (2015) without any active management. The Muizenberg IBA is designated as protected parkland, but also suffers from a lack of active management. The Klein Curaçao IBA has no form of protection whatsoever (Debrot and Wells 2009).

- The Caribbean Elaenia (*Elaenia martinica*) is the only restricted-range bird species observed in Curaçao and the Bare-eyed Pigeon (*Patagioenas corensis*) is considered a biome-restricted species.

- The north-east parks and coastal IBAs also comprise 10 of the 11 bird endemic subspecies of the Leeward Islands.

- St Michiel lagoon, Muizenberg wetland and Jan Thiel Lagoon (IBA) support globally important congregatory bird populations (e.g. Common tern, Least tern, Caribbean coot, Anatidae), including the Caribbean Flamingo *Phoenicopterus ruber* (up to 300 individuals present seasonally).

- Jan Thiel Lagoon is a part state- and part privately-owned conservation area. A management plan developed by the CARMABI Foundation has been approved by the government, but implementation has not yet occurred (References: Brown et al. 2009, Debrot and Wells 2009).

Important areas for mammals

- Of the 9 bat species found on Curaçao (one species might have gone extinct), 2 species are restricted to the Leeward islands and the northern South American region: the vulnerable (IUCN Red List) nectarivorous Curaçaoan Long-nosed Bat (*Leptonycteris curasoae*) and the insectivorous Curaçao Myotis (*Myotis nesopolus*).

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- These 2 species are mainly observed within the cave systems of Kueba di Jetchi, KuebaBosà, Kueba di Ratonand Kueba di Noordkant (Petit et al. 2006).

- Christoffel National Park is home to the endemic Hummelinck's Vesper Mouse (*Calomys hummelincki*), the endemic subspecies of the Curaçao White-tailed deer (*Odocoileus virginianus curassavica*) and the Cottontail hare subspecies (*Silvilagus floridensis nigronuchalis*) (Dilrosun et al. 2012, Paul Stokkermans, Frensel Mercelina, personal communication 2015). The total population of this deer on the island has been estimated at 250 animals that's also found in the undeveloped former plantation areas along the leeward coast of Curaçao.

- The endemic Curaçao White-tailed deer (*Odocoileus virginianus curassavica*) is a keystone species for the island and occurs in Christoffel National Park (about 170 individuals) and in San Juan - Santa Cruz area (an important part of the population occurs in this area). This is the largest mammal on the island and occurs only on Curaçao and not on any of the other Dutch Caribbean islands. Curaçao, with Isla Margarita (Ven.), are the only Caribbean islands where the white-tailed deer was present at the time of the arrival of Columbus in the Caribbean region. There is an urgent need to conduct surveys and study the ecology on this endemic subspecies in order to ensure its survival. Previous research conducted by Wageningen University provided estimates of the population of WTD and identified some preferred plant species based on direct observations of foraging deers.

- The WTD population of the island is highly impacted by urbanization and habitat fragmentation.

- Klein Curaçao was historically important for the now extinct Caribbean monk seal (*Monachus tropicalis*) (References: Debrot 2000)

Ecological corridors

- Inland bays, such as Spanish Water Bay (located within the Curaçao Underwater Park) contribute to local reef fish populations by supporting large standing stocks of juvenile fishes, including those of threatened species and herbivorous fish species that are determinants for the health of coral reefs (Dilrosun et al. 2012, Vermeij 2012, Huijbers et al. 2013, Jackson et al. 2013).

- In addition to Spanish Water Bay, St Jorisbaai and Oostpunt have extensive seagrass and mangrove areas (Dilrosun et al. 2012, CARMABI 2013).

- The ABC Islands are important resting areas for migratory birds harbor a diverse bird community depending on the seasonal abundance of Neotropical migrants and the occasional presence of South American species.

- Bat species occur in a network of caves overall Curacao island. Studies on migration of bat species reveal connectivity between bat populations across ABC islands and Venezuela (Petit et al. 2006).

- Lastly, the sighting frequency of humpback whales is lower in the Leeward islands (5% of all marine mammal observations) compared to the Windward islands (45%) and the occurrence of endangered Sperm Whales remains low (Debrot et al. 2011b).

4. International Treaties and Conventions - Kingdom of the Netherlands

- The Convention on Biological Diversity (CBD)
- RAMSAR Convention on Wetlands of International Importance
- the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife)
- the Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)

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- Convention for Migratory Species (CMS 1985), Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks, 2011)
- International Convention for the prevention of pollution from ships (MarPol)
- International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC, 1990)

5. Curaçao Policy Plans and Regulations

- National Nature Conservation Ordinance Curaçao “Landsverordening grondslagen natuurbeheer en bescherming” (PB 1998, 49; modified PB 2001, 41)
- EOP “Island Development Plan” (Eilandelijk Ontwikkelingsplan “EOP”) (A. B. 1995,no.36): the only legal basis for designation of conservation areas
- Integrated Coastal Zone Management (ICZM) Plan (never implemented)
- National Nature Conservation Ordinance (PB1998, n°49 : legal base for the nature policy plan, implements several biodiversity treaties
- Agriculture Policy Plan (2013-2017): the government supports and facilitates processes and activities required to get a well-organized and efficient agriculture sector
- Phytosanitary policy plan (2013-2017)
- Strategic Tourism Master Plan for the Island of Curaçao (2010 – 2014) (a new plan is being developed by the CTB)
- Key Elements Towards a Joint Invasive Alien Species Strategy for the Dutch Caribbean (2014) S.R. Smith, W.J. van der Burg, A.O. Debrot, G. van Buurt, J.A. de Freitas. Report number C020/14 PRI report number 550
- Visserijeilandsbesluit (Island Fishing Decree) Published on May 27th 2009, as: Fishing decree (2009, no. 48), implementing articles 13, 14, 15 and 20 of Fishing Ordinance (Visserijverordening Curaçao, 2004; A.B. 2007, no. 117)
- Visserijverordening Curaçao 2004 (Fishing Ordinance Curaçao 2004) Published December 3th 2007, as: Fishing Ordinance Curaçao 2004 (2007, no. 117) implementing articles 2.3 and 4 of the National Fishing Decree (Visserijlandsverordening; P.B. 1991, no. 74) in order to further regulate the economic exploitation of fish in Curaçao’s territorial waters and to protect the marine environment and preserve fish species therein
- Visserijlandsverordening (National Fisheries Decree) Published July 11th 1991, as: National Fisheries Decree (1991, no. 74) to provide fishing rules and regulations in the territorial waters of Curaçao and its fishing zone as defined by Stb. 1977, no. 345. Made effective on November 22nd 1993 (1993, no. 110)
- Rifbeheersverordening Curaçao (Reef ordinance Curaçao)Published August 19th 1976, as: Reef ordinance Curaçao(aka ROC; 1976, no. 48) to further protect corals, certain marine species and to maintain the natural balance within Curaçao’s territorial waters. This ordinance later slightly modified to allow the collection of corals for education, scientific purposes or for the general benefits of society as a whole (A.B. 1989, no. 21)
- Eilandsbesluitbeschermingzeeschildpadden (Island decree for the protection of sea turtles) Published June 9th, 1996, as: Island decree for the protection of sea turtles; (A.B. 1996, no.8) to specifically protect and prevent the disappearance of sea turtles from Curaçaoan waters. This decree was later amended to also include the nesting grounds and eggs of sea turtles (A.B. 1996, no. 13. These were mostly located on land, i.e., outside the scope of the original Reef Ordinance Curaçao.
- Landsverordening Maritiem Beheer aka, LvMB, (Maritime Ordinance) Published March 2nd 2007, as: Maritime Ordinance (A.B. 2007, no. 18) to ensure safe ship traffic, to protect the marine environment and maritime archaeological resources of Curaçao.
- Proyecto de Ley Marco para la protección del medio ambiente marino costero, en especial los sistemas ecológicos de arrecifes de coral, manglares y algas marinas. PARLATINO, to be ratified in 2015.

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6. KBAs for Curaçao

Table 3 - KBAs identified on the territory and justification.

N. KBA	KBAs names	Justification
KBA 1- Christoffel-Shete Boka Terrestrial Parks & North-east coast	Christoffel-Shete Boka Terrestrial Parks	<p>Plants</p> <ul style="list-style-type: none"> - Supports one of the largest contiguous areas of woodland vegetations remaining on the island. These include primary vegetation types that do not occur elsewhere on the island (or the ABC islands) - Presence of restricted-range plant species: <i>Agave vivipara</i>, <i>Chloris suringari</i>, <i>Maytenus versluysii</i>, <i>Myrcia curassavica</i>, <i>Paspalum bonairensis</i> - Three species of columnar cacti: datu (<i>Stenocereus griseus</i>), kadushi (<i>Cereus repandus</i>) and kadushi di pushi (<i>Pilosocereus lanuginosus</i>). - Presence of plant species that are very rare on the island: <i>Acanthocereus tetragonus</i>, <i>Ananas sp.</i>, <i>Anthurium hookeri</i>, <i>Byrsonima crassifolia</i>, <i>Capparis tenuisiliqua</i>, <i>Centaurium quitense</i>, <i>Chiococca paryifolia</i>, <i>Clusia sp.</i>, <i>Guettarda raupalifolia</i>, <i>Helicteris carthaginensis</i>, <i>Nephrolepis biserrata</i>, <i>Polystachya cerea</i>, <i>Psidium sartorianum</i>, <i>Tillandsia asciculata</i>, <i>Vitex compressa</i>, <i>V. cymosa</i>, <i>Soroceas prucei</i>, <i>Sabal sp.</i> - Presence of land snails endemic to Curacao: (<i>Guppya molengraaffi</i>, <i>Tudora rupis</i>) and to ABC islands (<i>Brachypodella raveni</i>, <i>Cistolops raveni</i>, <i>Tudora megachelios</i> and <i>Cerion uva</i>) (Debrot 2006). <p>Vertebrates</p> <ul style="list-style-type: none"> - Presence of the endemic Three-scaled ground snake (<i>Liophis triscalis</i>) and 1 lizard species endemic to Curacao: <i>Gecko (Phyllodactylus martini)</i> - Presence of 3 lizard species endemic to ABC islands: Whiptail lizard species (<i>Cnemidophorus murinus</i>), <i>Anolis lineatus</i>, <i>Gonatodes antillensis</i> - Presence of endemic mammals: Hummelinck's Vesper Mouse (<i>Calomys hummelincki</i>), the White tailed deer subspecies (<i>Odocoileus virginianus curassavicus</i>), the Cottontail hare subspecies (<i>Silvilagus floridensis nigronuchalis</i>) - Shete National Park is an important nesting area for Green, Hawksbill and Loggerhead sea turtles. <ul style="list-style-type: none"> - Area included in the NE Parks and Coastal IBA - A part of these terrestrial Parks is included in a RAMSAR site
	North-east Park and coastal IBA & Knip-Jeremi-St-Hironymus (includes fringing reefs of the North-West Coast)	<ul style="list-style-type: none"> - RAMSAR site - IBA: <ul style="list-style-type: none"> - presence of congregatory bird species: over 10% of the regional population of Least Terns (<i>Sternula antillarum</i>) (Caribbean region) - presence of restricted-range species: Caribbean Elaenia (<i>Elaenia martinica</i>) and biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>) - Presence of endemic plant species (<i>Myrcia curassavica</i>) and very rare plant species for Curaçao and other ABC islands. - Presence of threatened marine species (<i>Acropora palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Lutjanus cyanopterus</i>) - Presence of the endemic blenny <i>Starksia springeri</i> - Presence of nesting sites (Boka Mansalina, Boka Braun) and main

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		<p>foraging areas for the Green and Hawksbill sea turtles.</p> <ul style="list-style-type: none"> - Cave KuebaBosa, Kueba Raton and Kueba di Jetchi are home to the vulnerable (IUCN Red List) and restricted-range species Curaçaoan Long-nosed Bat (<i>Leptonycteris curasoae</i>) and rare Curaçao Myotis (<i>Myotis nesopolus</i>). - Presence of a proposed no-fishing zone within this area.
KBA 2 - Malpais-St Michiel- Rif-Marie	Malpais-St Michiel	<ul style="list-style-type: none"> - RAMSAR site - IBA: <ul style="list-style-type: none"> - congregatory bird species of international importance: Common Tern (<i>Sterna hirundo</i>) - Caribbean Elaenia (<i>Elaenia martinica</i>) and biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>). - Endemic Curaçao barn owl (<i>Tyto alba bargei</i>) and the rare and threatened white-tailed hawk (<i>Geranoaetus albic audatus</i>). <p>Plants</p> <ul style="list-style-type: none"> - Presence of threatened and CITES App. 2 spp. (<i>Guaiacum sanctum</i> and <i>G. officinale</i>) and restricted-range (<i>Chloris suringari</i>) plant species and also other rare plant species for Curaçao. <i>G. sanctum</i> is characteristic for better developed limestone vegetation on Curaçao. - Presence of 6 endemic terrestrial snails. - Presence of restricted-range freshwater Molly fish (<i>Poecilia vandepolli</i>)
	Rif-Marie and adjacent fringing reefs	<ul style="list-style-type: none"> - RAMSAR site - Presence of restricted-range plant species (<i>Agave boldinghiana</i>, <i>Stenocereus griseus</i>). Also other (very) rare plant species: <i>Mammillaria mammillaris</i> and <i>Maytenus versluysii</i> e.g.. Relatively undisturbed limestone vegetation and rare coastal vegetation ('littoral woodland'). - Presence of threatened marine species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Dendrogyra cylindrus</i>, <i>Montastraea annularis</i>, <i>M.faveolata</i>) - Presence of the endemic blenny <i>Starksia springeri</i> - Presence of restricted-range freshwater Molly fish (<i>Cyprinodon dearborni</i>) - Presence of a proposed no-fishing zone within this area.
KBA 3 - Curaçao Underwater Park to Eastpoint	Curaçao Underwater Park (including Oostpunt terrestrial area)	<ul style="list-style-type: none"> - Presence of healthiest coral reefs of the island and threatened marine species: Elkhorn coral (<i>Acropora palmata</i>), Staghorn coral (<i>Acropora cervicornis</i>), Boulder Star coral (<i>Montastraea annularis</i>), Mountainous Star coral (<i>Montastraea faveolata</i>), Lamarck's Sheet coral (<i>Agaricia lamarcki</i>), Pillar coral (<i>Dendrogyra cylindrus</i>), Elliptical Star coral (<i>Dichocoenina stokesii</i>), Boulder Star Coral (<i>Montastraea franksi</i>), Goliath Grouper (<i>Epinephelus itajara</i>), Nassau grouper (<i>Epinephelus striatus</i>), Queen Triggerfish (<i>Balistes vetula</i>), Snowy grouper (<i>Hyporthodus niveatus</i>), Yellowmouth grouper (<i>Mycteroperca interstitialis</i>), Hogfish (<i>Lachnolaimus maximus</i>), Mutton snapper (<i>Lutjanus analis</i>), Cubera snapper (<i>Lutjanus cyanopterus</i>), Rainbow Parrotfish (<i>Scarus guacamaia</i>), Hieroglyphic Cone (<i>Conus hieroglyphus</i>) - Presence of the endemic blenny <i>Starksia springeri</i> - Foraging area for threatened sea turtles (Oostpunt): Hawksbill turtle

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		<p>(<i>Eretmochelys imbricata</i>), Green turtle (<i>Chelonia mydas</i>), Loggerhead sea turtle (<i>Caretta caretta-occasional species</i>), Leatherback sea turtle (<i>Dermochelys coriacea-occasional species</i>)</p> <p>- <u>Oostpunt</u>: - This areas shows positive development of coral coverage and is known to act as a source for coral larvae and other reef organisms for the rest of the island. - Presence of threatened marine species: 4 CR species - 5 EN species - 12 VU species - Inter-connected mangroves-seagrass beds-coral reefs ecosystems - Area proposed as a no-fishing zone (Oostpunt site).</p>
	<p>Specific areas of the KBA3:South-Eastern coast (Fuikbaai - Punt Kanon) (terrestrial area)</p>	<p>- Presence of threatened and internationally important plant species: West Indian Satinwood (<i>Zanthoxylum flavum</i>), <i>Lignum-vitae</i> (<i>Guaiaacum officinale</i>). - (Very) rare plant species: e.g. <i>Mosiera longipes</i>, <i>Erythroxyllum havanense</i>, <i>Mammillaria mammilaris</i> (restricted to the LA, Leeward islands and northern Venezuela) - Endemic subspecies of barn owl (<i>Tyto alba bargei</i>)</p> <p>- Proposed as a RAMSAR site (Dilrosun et al. 2012)</p>
	<p>Jan Thiel Bay and adjacent fringing reefs (the Bay is part of the Marine Park)</p>	<p>- IBA: - presence of congregatory bird species: Least Terns (<i>Sternula antillarum</i>), Common Tern (<i>Sterna hirundo</i>) - important foraging area for the Caribbean flamingo (<i>Phoenicopterus ruber</i>)</p> <p>- Presence of endemic reptiles: Three-scaled ground snake (<i>Liophis triscalis</i>), Anolis (<i>Anolis ineatus</i>), Whiptail lizard species (<i>Cnemidophorus murinus</i>), Gecko (<i>Gonatodes antillensis</i>), Gecko (<i>Phyllodactylus martini</i>) and land snails (<i>Tudora rupis</i>)</p> <p>- Presence of threatened marine species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M.faveolata</i>, <i>Scarus guacamaia</i>) - Presence of restricted-range freshwater Molly fish (<i>Cyprinodon dearborni</i>) - Presence of the endemic blenny <i>Starksia springeri</i></p> <p>- Proposed as a RAMSAR site (Jan Thiel) (Dilrosun et al. 2012)</p>
	<p>Spanish Water Bay and adjacent fringing reefs</p>	<p>- Presence of threatened marine species : <i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea annularis</i>, <i>M.faveolata</i>, <i>Scarus guacamaia</i>, <i>Lutjanus analis</i></p> <p>- Presence of restricted-range freshwater Molly fish (<i>Poecilia vandepolli</i>) - Important nursery area for threatened fish species (<i>Scarus guacamaia</i>) - Presence of the endemic blenny <i>Starksia springeri</i></p> <p>- Main foraging areas for the Green turtle</p> <p>- Inter-connected marine ecosystems of mangroves-seagrass beds-coral reefs - Bay bordered by mangroves (15.5 ha)</p> <p>- Proposed as a RAMSAR site (SWB) (Dilrosun et al. 2012) - Proposed no-fishing zone (SWB)</p>

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<p>KBA 4 - Klein Curaçao</p>	<p>Klein Curaçao</p>	<p>IBA:</p> <ul style="list-style-type: none"> - presence of congregatory seabird species: Least Tern (<i>Sternula antillarum</i>), 1% of the regional population - presence of the biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>) - Important population of the endemic Whiptail lizard species (<i>Cnemidophorus murinus</i>) - Presence of threatened marine species: Elkhorn coral (<i>Acropora palmata</i>), Staghorn coral (<i>Acropora cervicornis</i>), Boulder Star coral (<i>Montastraea annularis</i>), Mountainous Star coral (<i>Montastraea faveolata</i>), Lamarck's Sheet coral (<i>Agaricia lamarcki</i>), Pillar coral (<i>Dendrogyra cylindrus</i>), Elliptical Star coral (<i>Dichocoenina stokesii</i>), Boulder Star Coral (<i>Montastraea franksi</i>), Goliath Grouper (<i>Epinephelus itajara</i>), Nassau grouper (<i>Epinephelus striatus</i>), Queen Triggerfish (<i>Balistes vetula</i>), Snowy grouper (<i>Hyporhodus niveatus</i>), Yellowmouth grouper (<i>Mycteroperca interstitialis</i>), Hogfish (<i>Lachnolaimus maximus</i>), <i>Thunnus obesus</i>, Mutton snapper (<i>Lutjanus analis</i>), Cubera snapper (<i>Lutjanus cyanopterus</i>), Rainbow Parrotfish (<i>Scarus guacamaia</i>), Hieroglyphic Cone (<i>Conus hieroglyphus</i>) - Presence of the endemic blenny <i>Starksia springeri</i> - Nesting and foraging areas for the threatened sea turtles (<i>Chelonia mydas</i>, <i>Eretmochelys imbricata</i>). Olive Ridley and Leatherback frequently occur around the islet. - Proposed as a RAMSAR site (Dilrosun et al. 2012) - Necessity to protect and manage this islet.
<p>KBA 5 - St Jorisbaai & Muizenberg and Kueba di Noordkant</p>	<p>St Jorisbaai and adjacent fringing reefs & Muizenberg and Kueba di Noordkant</p>	<ul style="list-style-type: none"> - Presence of threatened marine species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea annularis</i>, <i>M.faveolata</i>, <i>Lutjanus analis</i>.) - Presence of the endemic blenny <i>Starksia springeri</i> - Main foraging areas for the Green turtle (inside and outside the bay) - Inter-connected marine ecosystems of mangroves-seagrass beds-coral reefs - Bay bordered by dense mangroves (12 ha) - Important nursery area for threatened fish species (<i>Scarus guacamaia</i>). - Breeding of common tern (<i>Sterna hirundo</i>) on isla Makuaku (formerly also a roosting site for all frigate birds of the island) (Debrot et al 2009). - Proposed as a RAMSAR site (St Jorisbaai) (Dilrosun et al. 2012) - Muizenberg: important freshwater resources - Kueba di Noordkant: home to the vulnerable (IUCN Red List) and restricted-range species Curaçaoan Long-nosed Bat (<i>Leptonycteris curasoae</i>) and rare Curaçao Myotis (<i>Myotis nesopolus</i>).
<p>KBA 6 - San Juan - Santa Cruz & Pos Spaño</p>	<p>San Juan - Santa Cruz & Pos Spaño (including Seru Largu and Seru Kuater Kana, Kunuku Largu/Klein Sta. Martha)</p>	<p>Vegetation</p> <ul style="list-style-type: none"> - Areas of relatively undisturbed and rare Curacao Lava Formation vegetation. - Three species of columnar cacti: datu (<i>Stenocereus griseus</i>), kadushi (<i>Cereus repandus</i>) and kadushi di pushi (<i>Pilosocereus lanuginosus</i>) restricted to ABC islands and northern Venezuela and Colombia region

		<p>- Plant species restricted to BC (<i>Chloris suringari</i>, <i>Myrcia curassavica</i>) and ABC islands (<i>Melocactus macrocanthos</i> <i>Cynanchum boldinghii</i>).</p> <p>- Plant species restricted to AC islands and Venezuela islands (<i>Ruprechtia coriacea</i>, <i>Peltophorum acutifolium</i> and <i>Schomburgkia humboldtii</i>)</p> <p>- Occurrence of rare plants: <i>Croton niveus</i>, <i>Celtis iguanaea</i>, <i>Crateva tapia</i>, <i>Doyerea emethocathartica</i>, <i>Erythroxylum havanense</i>. <i>Galacta striata</i>. Very rare <i>Paullinia pinnata</i> and <i>Caesalpinia ciliata</i> are found in the Sta Cruz area.</p> <p>-Mangroves are also present in these areas and represent the few mangrove areas occurring on the island.</p> <p>Vertebrates</p> <p>Mammals</p> <p>- Presence of the White Tailed Deer (<i>Odocoileus virginianus curassavicus</i>), a subspecies strictly endemic to Curacao. Genetic studies are needed to study the relation between this island population and populations of WTD on the mainland (the last one is much bigger in size).</p> <p>- Important habitat for the endangered Curaçao white-tailed deer (<i>Odocoileus virginianus curassavicus</i>). This is the largest mammal on the island and occurs only on Curaçao and not on any of the other Dutch Caribbean islands. Curaçao, with Isla Margarita (Ven.), are the only Caribbean islands where the white-tailed deer was present at the time of the arrival of Columbus in the Caribbean region.</p> <p>-Caves (with archaeological outcomes) with columnar cacti pollinating bats and the very rare fish eating Greater Bulldog Bat (<i>Noctilio leporinus</i>) (San Juan and Sta.Cruz areas).</p> <p>- Presence of the endemic subspecies: Cottontail hare (<i>Silvilagus floridensis nigronuchalis</i>).</p> <p>Birds</p> <p>-These areas on the eastern side are important for the survival of birds of prey: especially the white-tailed hawk (<i>Buteo albicaudatus</i>, LC), and the endemic subsp. of Curaçao barn owl (<i>Tyto alba bargei</i>).</p> <p>- Presence of restricted-range species: Caribbean Elaenia (<i>Elaenia martinica</i>) and biome-restricted Bare-eyed Pigeon (<i>Patagioenas corensis</i>). The San Juan area is one of the two most important areas on Curacao for the rare red-necked pigeon (<i>Patagioenas squamosa</i>). This bird is dependent upon large continuous areas and well developed vegetations.</p> <p>-The San Juan area is very important for migratory and terrestrial birds which is result of the relatively large variety of habitats in the area (including beach, salina and inner bay habitats).</p> <p>- Important ecological corridors for bird populations between San Juan and Sta. Cruz areas and other IBAs on Curaçao.</p> <p>Fishes</p> <p>-The innerbay of San Juan has the highest number and density of fish species that are typical for inert bays on the island.</p> <p>- Presence of the restricted-range freshwater fishes: endemic of ABC</p>
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		<p>islands and the northern Venezuela and Colombia region (<i>Poecilia vandepolli</i>, <i>Cyprinodon dearborni</i>)</p> <p>Invertebrates</p> <ul style="list-style-type: none"> - Endemic species to Curaçao (<i>Tudora rupis</i>) and ABC islands (<i>Tudora megacheilos</i>, <i>Cerion uva</i>). - High diversity of land snails. <p>Other criteria</p> <ul style="list-style-type: none"> - San Juan and Sta. Cruz areas contain potential nesting beaches for sea turtles. - These areas also have important water catchment functions for more northerly lying hills.
Candidate KBA 1	Grassland habitats	<ul style="list-style-type: none"> - Important habitat for bird species. Bird populations are inter connected through ecological corridors between these sites over the island. - Habitat for the Cottontail hare subspecies (<i>Silvilagus floridensis nigronuchalis</i>).
Corridor 1	Marine areas along the mid-eastern coast	<ul style="list-style-type: none"> - Presence of fringing reefs with threatened coral species - Occurrence of Humpback whales (<i>Megaptera novaeangliae</i>) and other cetacean species over a deep area that is located relatively close to the shore.
Corridor 2	Corridor between IBAs and grassland habitats	- Bird populations: ecological corridors for bird populations between IBAs and grassland habitats.
Corridor 3	Bat populations	- corridor for bat species between the cave network.



Maps of KBAs in Curaçao

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6. Socio-economic context, government and civil society with a role in biodiversity

Government, local institutions and organizations, private sector

Important roles are played by NGO's and other Community Based Organizations in the management of natural resources; public education; and implementation of commitments under the several Multilateral Environmental Agreements (MEAs).

CURACAO	
Government of the Netherlands	Ministry of Infrastructure and the Environment
	Directorate-General for the Environment and International Affairs (DGMI)
	Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
	Directorate General for Nature and Regional Policy
	Ministry of Public Health and Social Development
	Department of Environment and Nature (MINA)
Island Government of Curacao	Independant country of the Knigdom of the Netherlands
Government of Curacao	Ministry of Public Health, Environment and Nature
	Department Environmental Service
	Department of Agriculture, Animal Husbandry and Fisheries
	Ministry of Economic Development (MEO)
	Ministry of Social Development, Labor and Welfare
	Ministry of Traffic, Transport and urban planning
	Department Urban Planning and Public Housing Service
NGOs	
Dutch Caribbean Nature Alliance (DCNA)	DCNA supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
CARMABI The Institute for Caribbean Research and Management of Biodiversity	The Caribbean Marine Biological Institute has been created in 1955 to manage the protected areas and to provide facilities and logistical support to researchers and students. The Caribbean Marine Biological Institute has been created in 1955 to manage the protected areas and to provide facilities and logistical support to researchers and students. CARMABI works in collaboration with Universities in USA, Australia and the Netherlands. The institute is involved in education programmes for schools and manages several nature parks on Curaçao such as the Christoffel and SheteBoka Parks.
Foundation Uniek Curaçao	Local NGO that aims to maintain and improve the physical and social environment of the island. Its mission is to promote the island in the most ecological and sustainable way. The foundation manages several areas by maintaining hiking trails and organize educational and public awareness programs (Malpais-St Michiel, Jan Thiel RAMSAR site, Ascension, San Nicolaas Abou, Sorsaka, Roi Rincon and Plantage Hato Ecotourism).
Amigu di Tera Curacao (Friends of the Earth)	Amigu di Tera was founded in 1989 to transform society based on principles of sustainable development in a small island environment, principles of biodiversity, its intrinsic values and social justice. The NGO focusses on zoning plans, pollution from oil refinery, loss of terrestrial and marine biodiversity, wastes.
Defensa Ambiental Foundation	Local environmental NGO that aims to preserve Curacao's nature and environment.
Foundation Reef Care Curacao	Local NGOs created in 1992 contributing to the protection and preservation of coral reefs.
Foundations Korsou Limpí i Bunita, Green Force Curacao	Local NGO that bring together local community and schools in volunteer efforts to restore and clean natural environments.
PPRABC	PPRABC promotes and stimulates the generation of scientific information, implementation of specific management actions and legislation for the protection of bat populations and spreads knowledge about bats in civil society and involve people and institutions in conservation.
Association of Marine Laboratories in the Caribbean (AMLC)	This NGO is a confederation of 27 marine research, education, and resource management institutions that aims to encourage the production and exchange of research and resource management information, advance the cause of marine and environmental education in the region, and facilitate cooperation and mutual assistance among its membership.
Research institutions	
IMARES UR	Institute for Marine Resources and Ecosystem Studies based in Wageningen. Institute involved in scientific surveys and environmental monitoring in the Netherlands and Caribbean region.
NIOZ Royal Netherlands Institute of Sea research	NIOZ is the national oceanographic institution for the Netherlands, it facilitates and supports fundamental as well as applied marine research and education in the Netherlands and Europe.
Zoological Museum of the University of Amsterdam	Inventories of waterbirds, terrestrial birds and fishes.

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- **Funding resources dedicated to biodiversity and conservation**
(References: CARMABI 2013, DCNA 2013 Annual report, Government).

Source of funding	Amount (US\$) (year)	Beneficiaries
Admission Fees/Service	474,165 (2013)	CARMABI
Curaçao Government's subsidies	120,000 (2014)	CARMABI
Other income (donations, grants etc.)	76,376 (2013)	CARMABI
Government's subsidies /Donations	5,600 (NAF10,000 /year) (2014)	Uniek Curaçao

- No line in budget from the Government of Curaçao dedicated to biodiversity and nature management.

➤ **Priorities for action**

Very high priority:

- Design and improve existing actions against alien invasive species (including ballast water policies) and negative impacts of climate change, with a management focus on protected and important natural areas.

- Set-up local programmes and projects dedicated to the study of threatened, endemic and characteristic species (level of biodiversity), ecosystem functioning, reforestation as an ecosystem development strategy and for erosion control use of research data in order to improve public awareness and attractiveness of protected areas (designation of eco-trails, signage and educational materials). All these will serve as sustainable development strategies/tactics.

- Generate an island wide plan indicating integrated and cumulative threats for the entire island.

-develop an ICZM policy.

- the regional, national or international recognition of the sites (including the protected areas).

-Improve management within marine protected areas: increase local capacity in terms of enforcement, fundings dedicated to marine conservation management.

- Designation of a protected area within the Oostpunt area.

- Mitigating negative impacts of pollution (domestic sewage, water, marine pollution from land based sources, etc...), e.g. by bringing the sewage treatment facilities back on-line.

- Reduction of the negative impacts of habitat degradation and fragmentation by designing and implementing corridor areas based on research aimed at the study of the best design for corridor areas

- Research of the ecology of the endangered largest mammal species of Curacao (WTD) that can be used as a keystone species. for implementing adequate conservation and management plans based on the results of this research. By adequately protecting this species protection of the important ecosystems (including relatively undisturbed vegetation types and rare (plant) species) and rare or threatened animal species in these areas will also be ensured. This is very important in order to lay a solid foundation in working on sustainable development strategies for the island. Once collected and analysed, these data will be provided to the Planning Department of the Curaçao government in order to be used in the existing zoning plan (Eilandelijk Ontwikkelingsplan, E.O.P. Curaçao).

- High priority:

- Strengthen regulations both in terrestrial and marine areas.

- Management of the no-fishing zones.

- Implement ecosystems services valuation and ecological accounting.

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Validation from local actors:

- CARMABI: Paul Stokkermans, Mark Vermeij, John de Freitas, Clifford de Lannoy
- UNIEK Curacao: Frensel Marcelina



This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Environmental profile Factsheet - SABA

Policy and Socioeconomic context

➤ Political Status



- Saba is located in the northern Lesser Antilles (17°38'N, 63°13'W) about 45km south-west of St Maarten and 25km north-west of St-Eustatius. Saba, with the islands of Sint-Maarten and Sint-Eustatius, formed the Windward Islands of the Kingdom of the Netherlands. Saba is an extinct volcanic peak rising steeply to 887m at the top of Mount Scenery, the highest peak of the Kingdom of the Netherlands.

- Since October 10th 2010, Saba (St-Eustatius and Bonaire) became a special municipality of the Kingdom of the Netherlands. Saba is an European Oversea Territory of the Kingdom of the Netherlands.

➤ Demographic Trends and Socio-economic context (Central Bureau Statistics - Caribbean Netherlands 2012)

- Area: 13 km²
- EEZ: 9 644 km² (including the territorial sea: 1611 km²), with 2680 km² over the Saba Bank
- Population: 1 991 inhab., density: 153 inhab./km²
- GDP (\$/ inhab.): 16 000
- Main economic activities: tourism, with associated service and construction industries. Ecotourism is a significant part of Saba's economy (scuba-diving, hiking)

Protected and/or managed areas

➤ List of protected areas

- **Saba Terrestrial Park** (created in 1999) is managed by Saba Conservation Foundation (SCF). The Terrestrial Park consists of 35 ha of land located on the north-eastern side of the island. The area was donated by the Sulphur Mining Company to a US NGO called "Friends of Saba Conservation Foundation" that supports conservation project on Saba. In 1999, the property was officially turned over to the Saba Conservation Foundation. Other terrestrial protected area includes a 6 ha-area around Mt Scenery above 550m where no dwellings can be constructed. This area is the property of the local government of Saba. Mt Scenery is the highest point of the Kingdom (887m). Saba Terrestrial Park has not been formally designated as a "National" Park (Paul Hoetjes, pers. com. 2015).

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- **Saba Trail System:** Saba has an extensive nature trail system covering the whole island including many nature areas in addition to the top of mount scenery and the terrestrial park area. Management of the trails has been given by the island government to the Saba Conservation Foundation.
- **Saba National Marine Park** (created in 1987 over 1300 ha) is managed by Saba Conservation Foundation, a non-profit and non-governmental organization. The Marine Park surrounds the island (from high tide mark to 60m deep) and protects seagrass beds and spectacular coral pinnacles. This MPA includes several marine no-take zones.
- **Saba Bank National Park** (created in 2010 over 268 000 ha) Management has been mandated by the Dutch Ministry of Economic Affairs to Saba Conservation Foundation through the Saba Bank Management Unit. Saba Bank is located 4 km offshore from Saba island and measures 40 by 60 km. It is considered a coral atoll, though wholly submerged, and it is the 3rd largest atoll in the world. The Saba Bank is spectacularly rich in biodiversity, including extensive coral reefs, covering an estimated 150 km² area. It forms a flat-topped seamount rising 1,800 meters from the sea floor, crowned by a ring of growing coral reef on its fringes. The summit never reaches the water's surface. Most of the bank lies at depths of 20 to 50 meters, but a large area to the east lies between 10 and 20 meters. About one-third of the Saba Bank lies within Saba territorial waters with the rest in the Exclusive Economic Zone waters. The Saba Bank has been noted as the area with the highest marine algae diversity in the Caribbean.
- Establishment in 2015 of "Yarari" marine mammal and shark sanctuary that encompasses the EEZ of Saba and Bonaire (Dutch Caribbean Nature Policy Plan 2013-2017, Project "Save our sharks", Debrot et al. 2011). Yarari Sanctuary will form part of the network of marine mammal sanctuaries in the region, with Agoa Sanctuary in the French EEZ, Silver Banks Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the northern USA.

On-going projects - Projects under study

- Goat reduction program, this program with Dutch funding started at the end of 2014 and aims to reduce the free roaming goat population to manageable numbers.
- North Coast National Park. The island government is considering the possibilities of establishing the entire northern quarter of the island, from the coast to the top of Mt. Scenery, as a National Park. This would greatly increase the currently protected terrestrial area.
- Productivity, population status and threats to red-billed tropicbirds (*Phaethon aethereus*). Funding from DCNA, Vogelbescherming, and other groups. With participation from IMARES, AES Inc., SCF, and collaboration with similar study on St. Eustatius.
- Status and distribution of the Audubon shearwater (*Puffinus l. Lherminieri*), collaborative project between University of Kansas, DCNA, AES Inc, with participation by EPIC, and other groups.
- Biodiversity measures and indicators within tropical dry forest using automated audio recordings and non-linear statistical analysis.

Action and management plans

- Saba Bank - Special Marine Area Management Plan (Lundvall, 2008)
- Management Plan - Saba Marine Park (Schults and Kooistra 1999, Saba Conservation Foundation)
- Saba National Marine Park - Lionfish response plan (Wulf 2010)
- Management Plan for the natural resources of the EEZ of the Dutch Caribbean (Meesters et al. 2010)

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Biological importance of the ecosystems

Species outcomes

- **Table 1-** List of **globally threatened species** (IUCN Red List) (threatened). References: UICN RedList, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, Lundvall 2008, New York Botanical Garden database, Rojer 1997, van Beek et al. 2014

Taxonomic group	Threatened species
Plants	
EN	<i>Nectandra krugii</i> , <i>Swietenia mahagoni</i> , <i>Guaiacum officinale</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i>
Fish	
CR	<i>Epinephelus itajara</i> (rare), <i>Hyporthodus nigritus</i> (rare)
EN	<i>Starksia williamsi</i> , <i>Epinephelus striatus</i>
VU	<i>Balistes vetula</i> , <i>Hippocampus erectus</i> , <i>Hyporthodus flavolimbatus</i> (occ), <i>Hyporthodus niveatus</i> (occ), <i>Kajikia albida</i> (occ), <i>Makaira nigricans</i> (occ), <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> (occ), <i>Megalops atlanticus</i> (common), <i>Mycteroperca interstitialis</i> , <i>Scarus guacamaia</i> (occ)
Sharks and rays	
VU	<i>Manta birostris</i> (occ), <i>Rhincodon typus</i> (occ), <i>Sphyrna zygaena</i> (occ)
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Alsophis rufiventris</i> , <i>Chelonia mydas</i> , <i>Caretta caretta</i> (occ)
VU	<i>Dermochelys coriacea</i> (occ)
Mammals	
VU	<i>Physeter macrocephalus</i>

* Occ., Occasional species are not considered for the identification of KBAs.

- **Table 2 - List of endemic species** (References: Rojer 1997, DCNA 2012b, Sastre et Breuil 2007, New York Botanical Garden database, Paul Hoetjes personal communication 2015)

Taxonomic group	Number of endemic species
Plants	- 24 plant species restricted to the Lesser Antilles, the Virgin Islands and Puerto Rico, including 4 species limited to only few islands (<i>Chromolaena macrantha</i> , <i>Begonia retusa</i> , <i>Agave karatto</i> , <i>Mitracarpus polycladus</i>)
Invertebrates - Insects	- 2 butterfly species endemic of the Lesser Antilles (<i>Electrostrymon angerona</i> , <i>Urbanus obscurus</i>)
Fishes	- 1 species endemic of Saba Bank (Labrisomidae fish species: <i>Starksia williamsi</i>)
Amphibians	- 1 species endemic of the Lesser Antilles (Caribbean tree frog <i>Eleutherodactylus johnstonei</i>) considered as non native in the northern LA
Reptiles	- 1 anole endemic of Saba (Saban anole <i>Anolis sabanus</i>) - 1 gecko endemic of Saba and St Kitts Bank islands (Saba dwarf gecko <i>Sphaerodactylus sabanus</i>) - 1 snake endemic of Saba and St-Eustatius (Red-bellied racer <i>Alsophis rufiventris</i>)

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	- the Saba Black iguana (<i>Iguana iguana</i>) is suspected of being an endemic subspecies (Paul Hoetjes, Kai Wulf, personal communication 2015)
Birds	- 9 bird species restricted to the Lesser Antilles and Puerto Rico (with <i>Euphonia musica</i> not observed on Saba since 1952)
Mammals	- 1 bat species restricted to the Lesser Antilles and Puerto Rico (Antillean Fruit-eating Bat <i>Brachyphylla cavernarum</i>)
Total	- 2 species endemic strict of Saba island and Saba Bank - 2 species restricted to islands of St. Kitts Bank - 37 species restricted to the Lesser Antilles, Virgin Islands and Puerto-Rico

➤ **Species aggregations / List of species occurring at key stages of their life-cycles**

- The Saba Bank includes important fish spawning aggregation areas for 3 species (red hind, queen triggerfish (locally called moonfish) and squirrelfish) (Lundvall 2008). A small area (2 km²) on the northeast edge of the Bank, called Moonfish Bank, has been identified as a spawning area for red hinds (*Epinephelus guttatus*) and the vulnerable queen triggerfish (*Balistes vetula*) (Lundvall 2008, Kadison et al. 2009). Since 2013 this areas has been closed to fishing during the spawning months. Other spawning aggregation areas, such as for squirrelfish but also for red hinds, are suspected on the Bank but still need to be identified and located (Paul Hoetjes, Kai Wulf, personal communication 2015).

- **2 breeding seabird species congregate** in important numbers on the island and nest on steep cliffs and rocky hills around the island: the Red-billed Tropicbird (*Phaethon aethereus*, 2250-3000 breeding individuals, Delnevo, 2012, Adrian J. Delnevo personal communication 2016) and the national bird of Saba, the Audubon's Shearwater (*Puffinus lherminieri*, of unknown status). The Audubon shearwater is known locally as the 'wedrego' and is suspected of nesting in small isolated groups along cliff and slope edges, and possibly at inland sites within the higher ravines, and slopes around Mount Scenery (Adrian J. Delnevo personal communication 2016).

- Together Saba and St. Eustatius are home to the Caribbean's largest nesting population of Red-billed Tropicbirds and may host the most significant breeding colony in the world (DCNA 2012). About 3000 individuals are recorded on Saba coastlines, representing approx. 15% of the global population (20,000 ind. in total, BirdLife International dataset, Rojer 1997, Brown et al. 2009). The white-tailed tropicbird has not been seen nesting or around Saba since at least 2006. White-tailed tropicbirds are thought to be extirpated from Saba, possibly due to competition from the larger and more aggressive red-billed tropicbird, and the widespread presence of ground predators such as cats and rats (Adrian J. Delnevo personal communication 2016).

Habitat outcomes

➤ **Terrestrial areas** (References: Rojer 1997)

- **Coastal cliffs** of 100 m high or more characterize the entire perimeter of the island and constitute important habitat for breeding seabirds

- The **area of the mountain above 450 m** including secondary rainforest, ravine forest, tree-fern brake and mountain formations:

- **Secondary rainforests** are observed between 420 and 650 m, this formation includes the endangered Black Sweet Wood (*Nectandra krugii*). **Secondary ravine rainforests** are found on Saba in deep ravines (this plant community is not the true rainforest that defines a climax formation in the Caribbean). Secondary forest formations are important in the control of erosion.

- **Tree-fern brake** formations (secondary vegetation) develop at mid elevations under conditions of high humidity.

- **Mountain formations** (above 750 m) are located at the top of Mount Scenery and consist of Palm brake and Elfin woodlands communities. **Elfin woodlands** are composed mainly of Mountain Mahogany (*Freziera undulata*), a plant species restricted to the Lesser Antilles, covered

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by epiphytic plants and mosses. The mountain mahoganies of Saba grow higher than on any of the other islands resulting in a unique type of elfin woodland.

- Rainforest and elfin forest have a high water retention potential and includes plant species endemic of the Lesser Antilles, as well as bird species restricted to the region of the Lesser Antilles and Puerto Rico (*Eulampis jugularis*, *Cinlocerthia ruficauda*, ...)
- These forests are home to amphibian, reptile and bird species restricted to the Lesser Antilles.
- There are no terrestrial wetlands on the island.

➤ Coastal areas

- The shoreline is dominated by xeric rocky hills and coastal cliffs all around Saba island. Coastal cliffs are important breeding sites for seabird species and are identified as IBA.
- Islets of Green Island and Diamond Rock are small cays located off the north coast and constitute birds roosting and breeding areas.

➤ Marine areas

- 2 sea turtle species occur in the waters around Saba, *Chelonia mydas* and *Eretmochelys imbricata*. Two more species are seen occasionally (*Caretta caretta*, *Dermochelys coriacea*). Sea turtles used to nest on 2 seasonal beaches, Well's Bay and Cave of Rum Bay (Rojer 1997). Presently, there is no key nesting area on Saba (with more than 10 nesting tracks / species / year) due to the presence of only small rubble-beaches and the lack of permanent sand-beaches.
- Most individuals of hawksbill sea turtles are juveniles or sub-adults, suggesting that they forage around Saba. Foraging areas are located along the south coast of Saba, around Green island, Core Gut Bay and Corner Point (Swinkels 2004). Adult hawksbills have been seen foraging on the Saba Bank.
- Coral reefs surround Saba island with dense patches of coral formations observed in the no-take zones within the Marine Park.
- Unique diversity and structure of Saba's coral reefs composed by 5 types of reefs: 1) seamounts or pinnacles, 2) deep patch reefs, 3) encrusted boulders, 4) walls, 5) true reefs (built by living organisms such as corals) (Schults and Kooistra 1999)
- The **Saba Bank** is located 4 km southwest from Saba (17°25'N, 63°30'W), separated by a channel of more than 500 m deep, and forms a submerged seamount with a ring of actively growing coral reefs. It covers an area of 185 000ha (above the 50m isobath) and rises to an average depth of 24m below the sea surface. It is considered as the largest submerged atoll in the Atlantic Ocean and the 3rd largest atoll in the world (Lundvall 2008). About 10 globally threatened species (CR, EN, VU) are observed on the Saba Bank (Lundvall 2008).
On the eastern edge of the Bank coral reefs grow over a 55 km long fringe. The coral reefs of the Saba Bank are relatively remote from intense human impact and may provide a reserve of biodiversity (through larval dispersal) for the region. Two marine habitat are represented within the Saba Bank: the pelagic habitat (with fish, sharks and rays, sea turtles, cetaceans), the benthic habitat (with coral reefs, sponges and algae and their associated fauna) (Lundvall 2008).
- The Saba Bank is an important spawning area for fish species such as red hind, queen triggerfish (locally called moonfish) and squirrelfish. One of the spawning site is called "Moonfish Bank". On the Bank, fish assemblages show a relatively high abundance of large predators (i.e. groupers, sharks) that are generally considered as an indicator of good ecosystem health (Toller et al. 2010).
- Seabird densities on Saba Bank averaged two times higher than off the Bank (Postma and Nijkamp (1996).

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➤ **Important Bird Areas (IBAs)** (References: Collier and Brown 2009)

- The Eastern Caribbean Islands are important resting areas for migratory birds (winter or summer transient species) that can rest and forage before travelling on to their northern or southern migrations.

- Of the 87 bird species recorded on the island, 26 species breed and 36 are regular Neotropical migratory birds. Large movements of neotropical migrants have been observed on Saba, most notably several hundreds of yellow-billed cuckoo, and multiple warbler species. In some instances (e.g., yellow-billed cuckoo) this has led to large numbers of birds being present for several weeks (Adrian J. Delnevo personal communication 2016).

- 1 IBA is identified from the coast to 400m inland around the perimeter of Saba and up to 1km over the sea. The IBA covers 2145 ha of terrestrial and marine habitats, including Green Island and Diamond Rock. Besides the coastal area of Saba Terrestrial National Park, there is no legal protection over the remaining terrestrial part of the IBA.

- 8 (out of 38) bird species have a range restricted to the Lesser Antilles and Puerto-Rico, none of these is strictly endemic to Saba. A ninth restricted-range bird species, the Antillean Euphonia (*Euphonia musica*) has not been observed on the island since 1952. However, *Euphonia* species are rarely seen and more often heard and thus the apparent extirpation may be biased by relatively low observer/hearing effort. A limited number of mistletoe and similar fruiting plants on Saba may suggest that only relatively small numbers (if any) *Euphonia* may be present (Adrian J. Delnevo personal communication 2016). Numbers of the Bridled Quail-dove (*Geotrygon mystacea*) have declined dramatically over the last 10 years and may also be heading for extirpation on the island, as a result of ground predators and hurricane impacts.

➤ **Areas for mammals**

- Cave Great Hill, cave Tentpoint, cave Fort Bay: Caves located in the southwestern part of the island harbor the Antillean Fruit-eating Bat (*Brachyphylla cavernarum*), a species restricted to the Lesser Antilles and Puerto-Rico (Rojer 1997).

- These species also occur in the Sulfur mine, a cave network that constitutes an important habitat for bat populations (Kai Wulf, pers. comm. 2015).

➤ **Corridors**

- Saba Bank houses an expansive coral reef ecosystem with a rich diversity of species and large numbers of reef fish species (van Beek and Meesters 2014).

- Saba Bank may be considered as an important Caribbean reef habitat due to its large extent and its upstream position relative to the northern Antilles and Meso-American Barrier Reef (Hoetjes and Wulf 2012). Saba Bank is affected by the Antilles Current that flows northward east of the Antilles. Sea-current patterns occurring on Saba Bank suggest that these coral reefs are potentially important source of fish and invertebrate larval dispersal to neighboring islands (Saba, St-Maarten, Virgin islands) and to islands in the eastern Greater Antilles (Lundvall 2008).

- A recent research expedition investigating the ecological functioning of the Saba Bank highlights geneflow of great star coral *Orbicularis cavernosa* (i.e. formerly *Montastrea cavernosa*) and the barrel sponge *Xestospongia muta* within populations on the Saba Bank and between populations on the Saba Bank and nearby islands (St. Eustatius, St. Maarten, Saba island) as well as the Western Atlantic (USA Caribbean coast, Jamaica) (Becking and de Bakker, 2015). This study reveals that there is no significant population differentiation between populations of these 2 species on the Saba Bank and in the majority of sampled sites in the Western Atlantic and underlines that Saba Bank's

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populations have genetic connectivity with populations reaching as far as 3000 km (Flower Garden Banks, Jamaica) (Becking and de Bakker, 2015). The Saba Bank can therefore function as either a source or sink of diversity and act as a buffer for benthic diversity (Becking and de Bakker, 2015).

- Saba Bank is an important area for cetaceans (including Spermwhales and Humpback whales) and is linked to other breeding sites of humpback whales in the Caribbean (i.e. Silver Bank) (Hoetjes and Wulf 2012). The vulnerable Spermwhale, *Physeter macrocephalus*, occurs on the Saba Bank (Debrot et al. 2013).

International recognition of natural habitats and wildlife

- SPAW has recognized the Saba Bank National Park (268 000 ha) and the Saba National Marine Park (1300 ha), as protected areas with particular importance for the Wider Caribbean Region
- The Saba Bank is recognized as a Particularly Sensitive Sea Area (PSSA) by the International Maritime Organization (IMO) (no-anchoring zone, avoidance of the area by vessels over 300 gross tonnage)
- The Saba Bank has also been acknowledged by the CBD (the Convention of Biological Diversity) as an Ecologically and Biologically Significant Area (EBSA)
- 1 Important Bird Areas (IBA) is located all around Saba island (2000 ha).

International Treaties and Conventions

- The Convention on Biological Diversity (CBD)
- RAMSAR Convention on Wetlands of International Importance
- the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife)
- the Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)
- Convention for Migratory Species (CMS 1985), Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks, 2011)
- International Convention for the prevention of pollution from ships (MarPol)

National Legislation

- Nature Policy Plan, Caribbean Netherlands (2013-2017)
- Nature Conservation Framework Act BES (Bonaire-St. Eustatius-Saba) (Stb. 2010, 565)
- Fisheries Act BES (Stb. 2010, 566) and Fisheries Decree BES (Stb. 2010, 572): regulations regarding fishing in the territorial sea and the EEZ of the Kingdom of the Netherlands.- National Maritime Management Act BES (Stb. 2010, 626, amended Stb. 2011, 33)
- Regulation designating Saba Bank as Nature Park (Nat. Gaz. 2010-20424)
- Regulation prohibiting ship traffic over the Saba Bank (Nat. Gaz. 2013-14291)
- National Ordinance for the Prevention of Pollution from Ships (PB 1993, no. 108)
- National Ordinance on Civil Liability Oil Tankers (PB 1998, no. 169)
- National Oil Pollution Compensation Ordinance (PB 1998, no. 170)

Saba legislation

- Marine Environment Ordinance (1987), designated the Saba Marine Park, its zoning and regulations.
- Exotic Species Ordinance and Ordinance on the Identification and Registration of Livestock and Domestic Animals: legislative efforts to recognize and control threats from non-native and alien exotic species.
- Saba Marine Environment Ordinance of (1987): establishment of Saba Marine Park

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Table 3 - KBAs identified on the territory and justification following selected criteria.

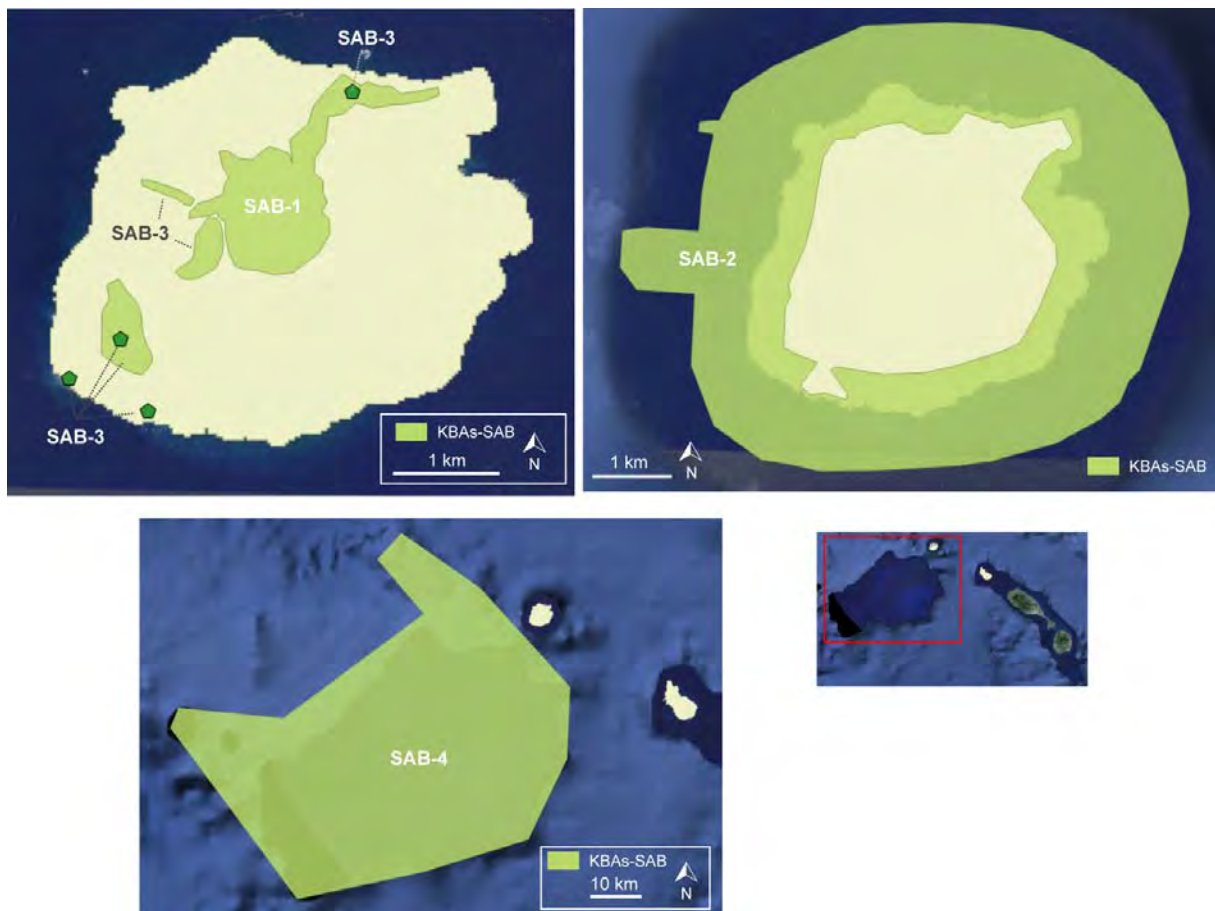
N. KBA	KBAs	Justification
KBA1	Saba National Terrestrial Park and Mount Scenery Reserve	<p>Plants</p> <ul style="list-style-type: none"> - Presence of threatened: Black Sweet Wood (<i>Nectandra krugii</i>), Pockwood (<i>Guaiaacum officinale</i>) - Presence of restricted-range plant species, including species endemic to few islands of the Lesser Antilles and Puerto Rico: <i>Clidemia umbrosa</i>, <i>Cordia nesophila</i>, <i>Tabebuia pallida</i>, <i>Chromolaena macrantha</i>, <i>Begonia retusa</i>, <i>Charianthus purpureus</i>, <i>Freziera undulata</i>, <i>Marila racemosa</i>, <i>Sloanea truncata</i>, <i>Marcgravia umbellata</i>, <i>Cyathea muricata</i>, <i>Agave karatto</i>, <i>Monstera adansonii</i>, <i>Vriesea antillana</i>, <i>Justicia eustachiana</i>, <i>Clusia major</i>, <i>Galactia rubra</i>, <i>Gesneria ventricosa</i>, <i>Isachne disperma</i>, <i>Mitracarpus polycladus</i> - Elfin forests are mainly composed by Mountain Mahogany (<i>Freziera undulata</i>), a plant species restricted to the Lesser Antilles <p>Invertebrates</p> <ul style="list-style-type: none"> - Presence of butterfly species endemic of the Lesser Antilles (<i>Electrostrymon angerona</i>, <i>Urbanus obscurus</i>, <i>Wallengrenia ophites</i>) - Presence of Orthoptera endemic of the Lesser Antilles (<i>Amphiacusta saba</i>, <i>Nesonotus tricornis</i>, <i>Orophus decoratus</i>, <i>Orocharis fulvescens</i>) <p>Reptiles</p> <ul style="list-style-type: none"> - These forests are home to reptile species endemic of Saba (Saban anole <i>Anolis sabanus</i>) and of St Kitts bank (Saba dwarf gecko <i>Sphaerodactylus sabanus</i>), and to the endangered Red-bellied racer (<i>Alsophis rufiventris</i>) <p>Birds- Presence of bird species restricted to the region of the Lesser Antilles and Puerto Rico: Brown Trembler (<i>Cinlocerthia ruficauda</i>), Purple-throated Carib (<i>Eulampis jugularis</i>), Green-throated Carib (<i>Eulampis holosericeus</i>)</p> <ul style="list-style-type: none"> - Presence of important population of Audubon's Shearwater (<i>Puffinus lherminieri</i>)
KBA 2 - Saba Marine Park & coastal IBA	Saba's IBA	<ul style="list-style-type: none"> - Presence of 8 bird species endemic of the Lesser Antilles and Puerto Rico: Brown Trembler (<i>Cinlocerthia ruficauda</i>), Scaly-breasted Trasher (<i>Margarops fuscus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>), Purple-throated Carib (<i>Eulampis jugularis</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>). - Important congregation of breeding seabird populations: Red-billed Tropicbirds (<i>Phaethon aethereus</i>), Audubon's Shearwater (<i>Puffinus lherminieri</i>)

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	Saba National Marine Park	<p>- Presence of coral reefs with high coral coverage and the presence of threatened species: <i>Acropora palmata</i>, <i>Acropora cervicornis</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea annularis</i>, <i>Montastraea faveolata</i>, <i>Montastraea franksi</i></p> <p>- 7 threatened fishes (and 6 occasional species): <i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Hyporthodus flavolimbatus</i> (occ), <i>Hyporthodus niveatus</i> (occ), <i>Kajikia albida</i> (occ), <i>Makaira nigricans</i> (occ), <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i> (occ), <i>Megalops atlanticus</i> (common), <i>Mycteroperca interstitialis</i>, <i>Scarus guacamaia</i> (occ)</p> <p>- Presence of threatened sea turtles: <i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i></p>
KBA 3 - Caves and inland bird areas	Caves	<p>- The network of caves constitutes an important habitat for bat populations: Caves of the Sulfur Mine, Great Hill cave, Tentpoint and Fort Bay caves.</p> <p>- Presence of bat species endemic of the Lesser Antilles and Puerto Rico: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>)</p>
	Parish Hill, Great Hill	- Important habitat for bird and bat populations.
	Bottom - Bud mountain - Middle island areas	- Important site for Audubon's Shearwater (<i>Puffinus lherminieri</i>) (300-400 specimens in Bottom-Bud mountains, Adam Brown, Kai Wulf pers. comm. 2015)
KBA 4	Saba Bank National Park	<p>- Presence of coral reefs with high coral coverage and the presence of threatened species: <i>Acropora cervicornis</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea annularis</i>, <i>Montastraea faveolata</i>, <i>Montastraea franksi</i></p> <p>- Presence of the endemic and threatened fish species (<i>Labrisomidae Starksia williamsi</i>)</p> <p>- Presence of threatened fish species: Nassau Grouper (<i>Epinephelus striatus</i>), Yellowedge Grouper (<i>Hyporthodus flavolimbatus</i>), Yellowmouth grouper (<i>Mycteroperca interstitialis</i>), Snowy grouper (<i>Hyporthodus niveatus</i>), Hogfish (<i>Lachnolaimus maximus</i>), Mutton Snapper (<i>Lutjanus analis</i>), Cubera Snapper (<i>Lutjanus cyanopterus</i>), Rainbow Parrotfish (<i>Scarus guacamaia</i> occ.*), Atlantic Goliath Grouper (<i>Epinephelus itajara</i> occ.*)</p> <p>- Moonfish Bank: Fish spawning area for red hinds (<i>Epinephelus guttatus</i>) and queen triggerfish (<i>Balistes vetula</i>)</p> <p>- Presence of threatened shark species: Whale Shark (<i>Rhincodon typus</i>, occ.*), great hammerhead (<i>Sphyrna zygaena</i>, occ)</p> <p>- Important source of invertebrate (corals, sponges)</p>

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		<p>and fishes larval dispersal to coral reefs and of the Western Atlantic region (St. Eustatius, St. Maarten, Saba island, USA Caribbean coast, Jamaica)</p> <ul style="list-style-type: none"> - Important ecological function either as a source or a sink for benthic diversity and act as a buffer for biodiversity. - Presence of threatened sea turtles: <i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i> - Presence of threatened marine mammal species (<i>Physeter macrocephalus</i>) and important breeding site for humpback whales (<i>Megaptera novaeangliae</i>)
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Maps of KBAs in Saba

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Socio-economic and civil society context

➤ **Table 4** - List of local institutions and organizations

SABA	
Special municipality of the Kingdom of the Netherlands	
Government of the Netherlands	Government of the Netherlands
	Ministry of Infrastructure and the Environment
	Directorate-General for the Environment and International Affairs (DGMI)
	Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
Island Government of Saba	
NGOs	
Dutch Caribbean Nature Alliance (DCNA)	DCNA is a regional network of nature conservation organisations. This NGO supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
Saba Conservation Foundation (SCF)	NGO managing Saba National Marine Park, Saba Bank National Park and Saba National Terrestrial Park. This local NGO is also in charge of managing the Saba Trails and the Trail information center. The Saba Bank Management Unit (SBMU) is a separate unit within the Saba National Marine Park. Management falls under the responsibility of the Ministry of Economic Affairs, Agriculture and Innovation (EL&I) and has been mandated by the Ministry to the Saba Conservation Foundation (SCF) , which has formed the Saba Bank Management Unit for this task. A steering group consisting of SCF manager, EL&I and the island government is responsible for the overall management and planning.
Sea and Learn Foundation	Non-profit foundation involves in educational programmes that brings together the local community, nature experts, scientists and visitors to understand the value of nature and biodiversity, both worldwide and locally on Saba.
Saba Archaeological Center (Sabarc)	NGO that strives for the preservation of Saba's cultural heritage. Involvement of youth and local community in archaeology and heritage programs and surveys.
NGOs and research institutions not based in Saba	
Environmental Protection in the Caribbean (EPIC)	Foundation for environmental education and awareness. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects on Saba focus on bird research and environmental outreach and education.
AES inc. (USA)	Applied Ecological Solutions Inc. (USA) is conducting and coordinating studies on tropicbirds, Audubon shearwater, terrestrial bird surveys and biodiversity on Saba since 2005.
Vogelbescherming Nederland - BirdLife International	Nongovernmental conservation organization associated to the International Organization BirdLife. The NGO has a special focus on bird conservation and conduct surveys in the Dutch Caribbean.
WWF Netherlands (WWF-NL)	WWF Netherlands is an office of the organisation WWF that is an independent foundation registered under Swiss law, governed by a Board of Trustees under an International President. Gland, Switzerland is the home of WWF International, the secretariat for WWF's global organization.
Research institutions	IMARES UR, NIOZ Royal Netherlands Institute of Sea research, Amherst College (USA), American Bird Society, National Museum of Natural History- Netherlands, University of Kansas (research on the Audubon shearwater)

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➤ **Table 5 - Funding resources** dedicated to biodiversity and conservation

Source of funding	Amount (US\$) (year)	Beneficiaries
Admission Fees/Service	84,007 (2012)	Saba Conservation Foundation
- DCNA-Trust fund for the Dutch Antilles: funds from Dutch Ministry of the Interior, Dutch Postcode Lottery	166,750 (2012)	Saba Conservation Foundation
Government's subsidies	52,226 (2012)	Saba Conservation Foundation
Donations and souvenir sales	17,669 (2012)	Saba Conservation Foundation
Grants	157,820 (2012)	Saba Conservation Foundation
Other incomes	9,659 (2012)	Saba Conservation Foundation
Emergency Funding (DCNA Trust Fund): Installation of the island's hyperbaric chamber facility (DCNA Trust fund)	33,000 (2012)	Saba Conservation Foundation
Ministry of Economic Affairs of the Netherlands	\$135.000/year	Saba Conservation Foundation for Saba Bank Management Unit
WNL (WWF-NL)		
Dutch Postcode Lottery		
US Fish and Wildlife Service		
NOAA		
William Froelich Foundation		
<i>Vogelbescherming</i>		<i>status and threats to red-billed tropicbirds</i>

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Information on Audubon's Shearwater

Audubon's Shearwater surveyed on Saba



The Audubon's Shearwater, also known locally as the Wedrego, is Saba's national bird and it's displayed prominently on the island's coat of arms. It is notoriously difficult to survey the Wedrego due to its secretive behavior and the steep and dangerous terrain it favours. This seabird spends much of its time out at sea, feeding out in the ocean during the day, and only returning at night to its breeding grounds on Saba and other islands, where it is believed to nest in underground burrows or similarly concealed locations.

Historically, surveys on Saba for the Audubon's Shearwater have only been successful at determining the continuing presence of Wedregos on island, but it has been difficult to locate nest areas, flight paths, and populations.

Funded by Vogelbescherming Nederland (BirdLife Holland), through the Dutch Caribbean Nature Alliance (DCNA), an expedition led by EPIC (Environmental Protection in the Caribbean) in conjunction with Saba Conservation Foundation (SCF), used RADAR to monitor the status and distribution of Audubon's Shearwaters (Wedrego) on and around Saba. Biologists spent seven days in mid-December searching for and monitoring shearwaters.

The team surveyed most of the island including Wells Bay, The Bottom, Windwardside, Hell's Gate, and Sulphur Mine. Shearwaters were detected at all surveyed locations and over 450 birds were recorded. Shearwaters were found to fly up numerous valleys on the island towards prominent cliffs.

Kai Wulf, SCF's Parks Manager, said regarding the work, "Locals are very concerned about the status of their national bird and relieved to hear that there still is a lot of activity. However, we are wary about the impacts of invasive predators, specifically feral cats; and it is important to continue monitoring developments and keep up efforts to reduce threats to the vulnerable local seabird nesting colonies."

"This is an excellent example of the kind of partnership between conservation organizations, which DCNA is proud to support," said DCNA's Executive Director, Kalli De Meyer. "It uses emerging science to give us new insights into these elusive and iconic birds, addressing a need identified in our Biodiversity and filling another gap in our knowledge about the birds on our islands."





This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet -St. EUSTATIUS

Policy and Socioeconomic context

➤ Political Status



- St. Eustatius (also called "Statia") is located in the northern Lesser Antilles (17°30'N, 62°56'W), situated 25 km south-east from Saba and 13 km north-west of St. Kitts and Nevis islands. St. Eustatius, with the islands of St. Maarten and Saba, formed the Windward Islands of the Kingdom of the Netherlands. Together with the islands of St. Kitts and Nevis, St. Eustatius lies on a sub-marine bank with a maximum of 180 m that constitute the St. Kitts Bank.

- Since October 10th 2010, St. Eustatius (together with Saba and Bonaire) became a special municipality of the Kingdom of the Netherlands. St-Eustatius is a European Oversea Territory of the Kingdom of the Netherlands.

➤ Demographic Trends and Socio-economic context (Central Bureau Statistics - Caribbean Netherlands 2012):

- Area: 21 km²
- EEZ: 2,281 km², EEZ of the Dutch Windward Islands: 12414 km²
- Population: 3,897 inhab., density: 186 inhab./km²
- GDP (\$/ inhab.): 24,800
- Main economic activities: oil storage and trans-shipment facilities; tourism, with associated services and construction industries.

Protected and/or managed areas (References: DCNA 2012a, MacRae and Esteban 2007, 2009)

➤ List of protected areas

- **Quill/Boven National Park** (created in 1997 over 540 ha) consists of 2 sub-sectors: the Quill mountain (220 ha, everything above 205 m is protected), a dormant volcano of 602 m located in the southern part of the island; Boven sector (320 ha) located on the northern tip of the island (also called the Northern Hills). Across Boven sector, 4 hills are on government lands (Boven, Bergje, Venus and Gilboa) and Signal Hill is within private property of Statia Oil Terminal. These National Parks cover about 25% of the island's land surface area.

- **St. Eustatius National Marine Park** (created in 1996 over 2750 ha) comprises a marine park around the entire island (from high-tidemark to 30m deep) and 2 managed marine reserves (no-take zones where fishing and anchoring are prohibited). These 2 no-take zones were established to promote dive tourism and sustainable fisheries. Scuba-diving and mooring fees support the administration and management of the Marine Park.

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The marine park falls entirely within the territorial waters and jurisdiction of St. Eustatius and is protected by the Marine Environment Ordinance (1996).

The National Parks are actively managed by a local Non Governmental Organization (NGO) called St. Eustatius National Parks Foundation (STENAPA).

STENAPA also manages the Miriam C. Schmidt Botanical Garden (5.3 ha) that is adjacent to the southern slopes of the Quill National Park. The land is leased by the Island Government to STENAPA and is not subject to any regulations. A fence prevents entry by roaming goats and cows (MacRae and Esteban 2009).

- Establishment in 2015 of "Yarari" marine mammal and shark sanctuary that encompasses EEZ of Saba and Bonaire (Dutch Caribbean Nature Policy Plan 2013-2017, Project "Save our sharks", Debrot et al. 2011). Yarari Sanctuary will form part of the network of marine mammal sanctuaries in the region, with Agoa Sanctuary in the French EEZ, Silver Banks Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the northern USA.

On-going projects - Projects under study

- Tropicbird monitoring (2012 to present) and the impact of introduced species on breeding success (Madden and Ellis 2013, Madden 2014, Robertson and Madden 2015, ongoing)
- *Iguana delicatissima* conservation (awareness, genetic diversity and small-scale local projects, ongoing) (Docherty 2014, Brouwers 2015, van den Burg 2015)
- Bridled Quail-dove population assessment (ongoing, McLaughlin 2013, Madden 2015)
- Impact of roaming animals within the Quill National Park (Madden 2013, 2014, ongoing)
- Checklist of the Flora of St. Eustatius (Axelrod, not yet published)
- Terrestrial bird monitoring (2009-present, ongoing)
- Butterfly monitoring (2009-present, ongoing, Madden, Debrot et al., paper submitted)
- Removal of free roaming cattle program started in 2013 with funding from the Dutch government. The objective is to reduce the number of free roaming cattle to a manageable number over a three year period (2014's survey estimated about 500 heads for goats. Sheep are far more numerous).

Action, management plans & Programs

- St. Eustatius Marine Park Management Plan 2007 (MacRae and Esteban 2007)
- The Quill/Boven National Park and Miriam C. Schmidt Botanical Garden Management Plan 2009 (MacRae and Esteban 2009)
- St. Eustatius National Marine Park Lionfish Response Plan (Bervoets 2009)
- Management Plan for the natural resources of the EEZ of the Dutch Caribbean (Meesters et al. 2010)
- St. Eustatius Sea Turtle Conservation Program coordinated by STENAPA and affiliated with WIDECAST (Wider Caribbean Sea Turtle Conservation Network) (Berkel 2013)
- STENAPA International Programs: the Intern Program (since 2001, interns help accomplish projects at the Botanical Garden and the 2 National Parks); Working Abroad Program (international networking service based in the UK that has established volunteer projects in Statia since 2003).
- STENAPA educational programs: Snorkel Club, Junior Ranger Club

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Biological importance of the ecosystems Species outcomes

- **Table 1. List of globally threatened species.** References: UICN RedList, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, MacRae and Esteban 2007, 2009, McClellan 2009, Powell et al. 2005; Hannah Madden, Jessica Berkel, Steve Piontek personal communication 2015)

Taxonomic group	Threatened species
Plants	
EN	<i>Nectandra krugii</i> , <i>Swietenia mahagoni</i> , <i>Guaiaacum officinale</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i> , <i>Mycetophyllia ferox</i>
Fish	
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Mycteroperca interstitialis</i> , <i>Thunnus obesus</i>
Sharks and rays	
EN	<i>Sphyrna mokarran</i> (occ.), <i>Sphyrna lewini</i> (occ)
VU	<i>Manta birostris</i> (occ.), <i>Rhincodon typus</i> (occ.)
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Iguana delicatissima</i> , <i>Alsophis rufiventris</i> , <i>Chelonia mydas</i> , <i>Caretta caretta</i> (occ.), <i>Lepidochelys olivacea</i> (occ.)
VU	<i>Dermochelys coriacea</i> (occ.)
Mammals	
VU	<i>Physeter macrocephalus</i> (occ.)

* occ., occasional species by themselves are not considered for the identification of KBAs.

- **Table 2 - List of species geographically restricted** (References: Collier and Brown 2009, DCNA 2012b, Bland and Desutter-Grandcolas 2003, Kringsand Axelrod 2013, Morpeth 2011, New York Botanical Garden database, Rojer 1997, Sastre et Breuil 2007, Sipman 2009, Powell et al. 2005, Terueland Madden 2012)

Taxonomic group	Number of endemic species
Plants	- 2 plant species endemic to St. Eustatius: <i>Statia</i> Morning Glory (<i>Ipomoea sphenophylla</i>), <i>Gonolobus aloiensis</i> - 1 lichen endemic to St. Eustatius (<i>Eremothecella microcephalica</i>) - 18 plant species restricted to the Lesser Antilles and the Virgin Islands, including 5 plant species limited only to few islands
Invertebrates - Arachnids - Insects	- 1 pseudoscorpion endemic to St Eustatius (<i>Pachyolpium confusum</i>) - 3 arachnids endemic to the Lesser Antilles (2 scorpions: <i>Centruroides barbudensis</i> , <i>Oiclus purvesii</i> , 1 amblypygid species: <i>Phrynus goesii</i>) - 1 butterfly species endemic to the Lesser Antilles: <i>Urbanus obscurus</i> - 9 Orthoptera endemic to the Lesser Antilles, including 1 endemic to <i>Statia</i> (<i>Lactista eustatia</i>) and 5 that may be endemic to <i>Statia</i> (<i>Orocharis minutus</i> , <i>O.</i>

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	<i>proalbifrons</i> , <i>Orochirus maculatus</i> , <i>Cycloptilum eustatiensis</i> , <i>Cyrtoxipha orientalis</i>) - 2 bees restricted to the Lesser Antilles, with one species endemic to Statia and St. Kitts & Nevis islands (<i>Anthophora eustatiensis</i>)
Amphibians	- 1 species endemic to few islands of the Lesser Antilles, but exotic in Statia (Johnstone's whistling frog <i>Eleutherodactylus johnstonei</i>)
Reptiles	- 6 species restricted to a few islands in the Lesser Antilles: Lesser Antillean Iguana (<i>Iguana delicatissima</i>), Green Tree Lizard (<i>Anolis bimaculatus</i>), Red-faced ground lizard (<i>Ameiva erythrocephala</i>), Least Island Gecko (<i>Sphaerodactylus sputator</i>), Saba dwarf gecko (<i>S. sabanus</i>), Red-bellied Racer Snake (<i>Alsophis rufiventris</i>)
Birds	- 9 bird species restricted to the Lesser Antilles and Puerto Rico (<i>Elaenia martinica</i> , <i>Cinclocerthia ruficauda</i> , <i>Margarops fuscus</i> , <i>Margarops fuscatus</i> , <i>Geotrygon mystacea</i> , <i>Orthorhynchus cristatus</i> , <i>Eulampis jugularis</i> , <i>E. holosericeus</i> , <i>Loxigilla noctis</i>)
Mammals	- 2 bat species restricted to the Lesser Antilles and Puerto Rico: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Tree Bat (<i>Ardops nichollsi</i>)
Total	- 5 sp. endemic to St Eustatius - 50 sp. endemic to the Lesser Antilles

➤ **Species aggregations / List of species occurring at key stages of their life-cycles**

- The Red-billed Tropicbird (*Phaethon aethereus*) constitutes the island's only known breeding seabird population and can be observed flying around the cliffs of Boven IBA. This population ranges between 600-1000 individuals (Hannah Madden, pers. comm. 2015).
- The previously nesting white-tailed tropicbird (*Phaethon lepturus*) has not been seen within recent years, and may have been extirpated due to competition from the larger and more aggressive red-billed tropicbird and/or predation by introduced mammals (cats and rats) (A. Delnevo, pers. com. 2016).

Habitat outcomes

➤ **Terrestrial areas**

- 3 types of landscapes: northern hills, the flat center called "The Kultuurvlakte", the southern part with the volcano.
- The Quill/Boven National Park encompasses a high biodiversity of plant species (the inventory of Rojer (1997) recorded about 482 wild plant species). About 18 plant species (3.7%) are endemic to the Lesser Antilles and Virgin Islands, 5 plant species have a distribution limited to only few islands and 3 plant species are endemic to Statia (*Ipomoea sphenophylla*, *Gonolobus aloiensis*, *Eremothecella microcephalica*) (Krings and Axelrod 2013, Rojer 1997, Sipman 2009). Of the 141 orchid species known in the Lesser Antilles and eastern Caribbean region, 16 can be found on Statia (Rojer 1997, Axelrod's checklist under review).
- The 2 national parks protect biologically diverse semi-tropical rainforests, pioneer forests, montane thickets and evergreen seasonal forests and include about 67% of the island's remaining dry forests (de Freitas et al. 2012).
- The terrestrial National Parks are home to and migratory breeding sites for numerous species that are either globally threatened and/or restricted to the Lesser Antilles region, such as: bird species restricted to the Lesser Antilles and Puerto Rico area, the endangered Lesser Antillean Iguana (endemic to a few LA islands) and the Red-bellied Racer snake (endemic to Statia and Saba islands). Both terrestrial parks are internationally recognized as IBAs and SPAW areas.

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- One of Statia's endemic species, *Ipomoea sphenophylla*, occurs in the northern hills (Signal Hill, Gilboa Hill, Bergje), in a dry deciduous seasonal forest that de Freitas et al. (2012) called "*Pisonia-Justicia*" vegetation type. Over 50 specimens have been recorded on the northwest side of Mary's Glory and on the property of the oil Terminal (north-west part of the island) (Rojer 1997, Bush and Madden 2012). Most of the plants occur in the National Park or outside the property of the oil facility (Bush and Madden 2012).
- Statia's second endemic plant, *Gonolobus aloiensis*, occurs in the inner slopes of the Quill National Park (from 200 to 400 m high). This species has been collected only three times and it is therefore difficult to estimate the extent of this population. Main threats are goats and potential activity of the volcano that is presently in a state of dormancy (Krings and Axelrod 2013).
- The endangered plant species, *Guaiacum officinale*, occurs along Oranje Bay, in Oranjestad and few specimens in Old Church graveyard and within the Botanical Garden (Madden Hannah, personal communication 2015).
- **Cliffs, beaches and rocky shores:** Almost the entire island is surrounded by sheer cliff coast. "White-Wall" is a limestone formation on the southern slope of the Quill that drops down to the sea.
- There are no ponds, wetlands or mangroves on the island.

➤ Habitats for reptiles

- Of the 6 Dutch Caribbean islands, the endangered *Iguana delicatissima* is found only on Statia (Debrot et al. 2013).
- A recent assessment of population status and density of the endangered *I. delicatissima* tagged 22 specimens for an overall density of 0.35 iguana/ha that represents 0.5-1% of densities documented for healthy populations. This species seems to be widely distributed on the island but its **favorite habitat consists of 2 areas:** the vegetated and boulder-strewn slopes between Northern hills and Central plains (from Signal Hills to Gilboa, av. densities of 1.38 iguanas/ha); and the area along North-Western lower flanks of the Quill and the escarpment and cliffs between Oranjestad harbor and the town above the cliffs (av. 2 ig/ha) (Debrot et al. 2013, Debrot and Boman 2013). A recent survey of *I. delicatissima* performed by STENAPA highlighted widespread populations with particular high densities in the Signal Hills/Boven and northern Quill areas, numerous specimens were also observed along the eastward coast and between the 2 areas of the National Park (STENAPA 2015, Hannah Madden pers. com. 2015).
- Population densities have declined across all habitats since the 2004 assessment during which about 425 animals were recorded (Fogarty et al. 2004). Main threats are the lack of nesting habitats and high mortalities of iguanas due to anthropogenic impacts (entanglement in fencing, non-native and invasive species) (Debrot et al. 2013). The loss of suitable nesting habitats may also partly be due to the expansion of the invasive plant (*Antigonon leptopus*), also known as "Corallita" (Debrot et al. 2013).
- Presently there are no Green iguanas nor Mongooses nor Green monkeys on Statia, but these invasive species occur on neighboring islands (i.e. Saba, St. Kitts, St. Maarten). The regular inter-island traffic between islands represents a major risk for the introduction of these exotic species. Legislation is thus urgently needed to prevent the importation of these 2 invasive species that are known to be responsible of the decline of *I. delicatissima* populations on other islands (Debrot et al. 2013).

➤ Coastal areas: sea turtle nesting areas

- Green (149 tracks in 2012) and hawksbill (49 tracks) sea turtles regularly nest on Statia's beaches, whereas the leatherback sea turtle is more occasional (4 nests recorded in 2012) (Berkel 2013).
- Among the 8 beaches surveyed in 2012 for sea turtle nesting activities, Zeelandia and Turtle beaches encompassed 123 and 27 tracks, respectively (Berkel 2013).
- **Zeelandia beach** is the primary turtle nesting beach hosting the 4 species of sea turtles (Berkel 2013), with the leatherback and loggerhead being occasional species. This nesting site is particularly important for green (45 nests) and hawksbill (16 nests) sea turtles (Berkel 2013).

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- Few nesting activities occurred on Oranjebaai beach due to passing traffic, street lights and near shore restaurants and terraces (Berkel 2013).
- Monitoring of sea turtle foraging areas indicate that green (mostly juveniles) and hawksbill turtles were often observed on the wrecks in the Marine Park and secondly on reefs (Berkel 2013). Green turtles are particularly abundant over seagrass beds of the site called "general used area" that is the most developed area on the island (with the harbor, city pier, Blue jetty, Terminal jetty, Tumble Down Dick Bay harbor) (Maitz 2011, Smith 2008). Hawksbill turtles seem to be more common around southern Caribbean and northern Atlantic coral reefs (Smith 2008).
- A wreck called "Chien Tong", located in the general use area, constitutes an important sleeping site for marine sea turtles. During 2 night dives, 40 different sea turtles occurred on this site (Jessica Berkel, pers. comm. 2015).

➤ **Marine areas**

- Coral reefs and seagrass beds surround much of the island (MacRae and Esteban 2007, 2009). The Caribbean side of the Marine Park has a higher percentage of continuous reefs as well as artificial wrecks.
- The Southern marine reserve has "lava fingers" formations that are ancient lava flows from Quill volcano. These coral finger formations form divided spur and groove systems that are separated by sandy channels. Patch reefs settled on volcanic boulders mainly occur in the Marine Park (MacRae and Esteban 2007). The 2 Marine Reserves have 43% of hard coral cover and constitute a habitat for several IUCN RedList species: 9 coral species, 13 fish species, 4 shark and ray species, 2 sea turtle species (and 3 sea turtle species more occasional), 1 marine mammal (occasional species). The 2 MR contain the main concentrations of coral reef and seagrass habitats: coral reefs are essentially distributed to the southern and south-western island shelf areas, whereas seagrass beds are confined to the northern island shelf area (Debrot et al. 2014).
- The economic valuation of St. Eustatius' coral reefs outlines that this ecosystem provides important goods and services for the economy of the island. The revenue generated by this natural resource through coral reef associated tourism and fishery was evaluated in 2009 at about 11,200,545 \$ USD (Bervoets 2010).
- Seagrass beds and coral reefs occur all around the island. The deep distribution of seagrass beds and their quite sparse biotic coverage may have an impact on the relative importance of this habitat as a nursery area (Debrot et al. 2014). Dense patch reefs occur in the north-western and south-western areas. Seagrass beds and coral reefs are inter connected.
- Hurricane Lenny in 1999 and the major bleaching event of 2005 significantly impacted the coral reefs with a loss up to 22% hard coral in the southern marine reserve (Mushroom Garden) (MacRae and Esteban 2007).
- A significant decline in seagrass bed cover has been observed since the mid 1990s due to hurricane impacts and anthropogenic activities (anchor damages, extension of the oil Terminal and city pier induce a change of in-shore currents affecting erosion and sand deposit (MacRae and Esteban 2007).
- Fish surveys indicated an increase of fish abundance, biomass and diversity within the marine reserves, with the presence of globally threatened species (such as Serranidae species and *Lutjanus cyanopterus*) (White et al. 2006). The southern marine reserve has the most abundant fish population and a diversity of up to 75 fish species (White et al. 2006, McClellan 2009).
- Queen conch stock (*Lobatus gigas* listed on A. III of SPAW Protocol) was estimated to be 184,100 in the 2,700 ha of the Marine Park, with higher abundance on relative deep rubble habitats (17-31m) (Meijer 2014).

➤ **Important Bird Areas (IBAs)** (References: Brown et al. 2009, Collier and Brown 2009)

- Of the 54 bird species recorded on the island, 26 species breed and 28 are Neotropical migratory birds. A variety of neo-tropical migrants pass through the island and/or spend a few weeks. These migrants birds include a wide variety of warbler and other passerine species.

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- 2 IBAs are identified (1486 ha): the Quill IBA is terrestrial and includes the highest peak of the island, and Boven area comprises a terrestrial part (525 ha: forest, cliffs and rocky shores) and a marine zone (491 ha) extending 1 km out to sea. Both IBAs enjoy almost full legal designation as protected National Park areas as most of the terrestrial parts are located within the boundaries of the 2 Terrestrial National Parks and the marine part of Boven IBA is included within St. Eustatius Marine Park.
- 9 (out of 38) bird species have a range restricted to the Lesser Antilles and Puerto Rico, including the Scaly-breasted Thrasher (*Margarops fuscus*) that was observed on the Quill in 2003 having gone unrecorded for 76 years (Collier and Brown 2009). The Scaly-breasted Thrasher is regularly observed since then.
- Quill IBA encompasses all the island's forest-dependent and restricted-range bird species (9 bird species). Seabirds breed on the coast of White-Wall (southern slope of the Quill) but their numbers are not significant internationally. Boven IBA gathers some of the restricted-range species (4 out of the 9 identified) and supports nesting habitat for the Red-billed Tropicbird (up to 300-500 pairs of *P. aethereus*) (Hannah Madden, personal communication 2015).
- The extension of the Boven IBA over the northern-western shoreline area is under study to encompass the main Red-billed Tropicbirds (*Phaethon aethereus*) nesting site located in a site that is privately owned by the oil terminal (Hannah Madden, personal communication 2015).

➤ **Areas for mammals** (References: Rojer 1997, MacRae and Esteban 2009)

- Bats are the only terrestrial mammals native to St. Eustatius and the Lesser Antilles. Among the 5 species observed on the islands, 2 are restricted to the Lesser Antilles and Puerto Rico (*Brachyphylla cavernarum*, *Ardops nicholls*).
- There are no caves on the island, therefore potential roosts for bats can consist of hollow trees, empty buildings or water reservoirs (Rojer 1997).

➤ **Corridors**

- The Eastern Caribbean Islands are important resting areas for migratory birds (winter or summer transient species) that can rest and forage before travelling on to their northern or southern migrations.
- Terrestrial corridor highlighted for *I. delicatissima* populations. An important population of this threatened and endemic species occur outside the National Parks.
- Satellite tracking of sea turtles reveals a strong connectivity between the northern Lesser Antilles (Harrison 2006). A female hawksbill tagged on St-Eustatius, swam over 700 km in 40 days and migrate towards St-Barthélemy, St-Maarten/St-Martin, Anguilla and the US Virgin Islands (Harrison 2006). A female green turtle tagged after nesting on St-Eustatius swam south over 60 km and remain between the islands of St-Kitts and Nevis (Harrison 2006).

International recognition of natural habitats and wildlife

- SPAW label for the St. Eustatius National Marine Park and the Quill/Boven National Park.
- 2 Important Bird Areas (IBA)

International Treaties and Conventions - Kingdom of the Netherlands

- The Convention on Biological Diversity (CBD)
- RAMSAR Convention on Wetlands of International Importance
- the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife)
- the Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)
- Convention for Migratory Species (CMS 1985), Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks, 2011)
- International Convention for the prevention of pollution from ships (MarPol)

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National Legislation (Reference: DCNA 2008)

- National Nature Policy Plan, Caribbean Netherlands (2013-2017)
- National Nature Conservation Framework Act BES (Bonaire-St. Eustatius-Saba)
- National Maritime Management Act BES (Stb. 2010, 626, amended Stb. 2011, 33)
- National Fisheries Act BES(Stb. 2010, 566) and Resolution (Stb. 2010, 572): regulations regarding fishing in the territorial sea and the EEZ of the Kingdom of the Netherlands.
- National Ordinance for the Prevention of Pollution from Ships (PB 1993, no. 108)
- National Ordinance on Civil Liability Oil Tankers (PB 1998, no. 169)
- National Oil Pollution Compensation Ordinance (PB 1998, no. 170)

St. Eustatius Legislation (Reference: DCNA 2008)

- St. Eustatius Lobster Ordinance - AB1966, No. 01
- St. Eustatius Hindrance Ordinance - AB1993, No. 09
- St. Eustatius Marine Environment Ordinance (AB1996, No. 03) and Resolution (AB1996, No. 04)
- St. Eustatius Flora and Fauna Ordinance (AB1997, No. 06) and St. Eustatius Flora and Fauna Resolution (AB1997, No. 07)
- St. Eustatius Marine Environment Ordinance (AB1996, No. 06) and Governor's Resolution (No. 2544)
- 5-year Island Nature Plan (approved by the Island Council)

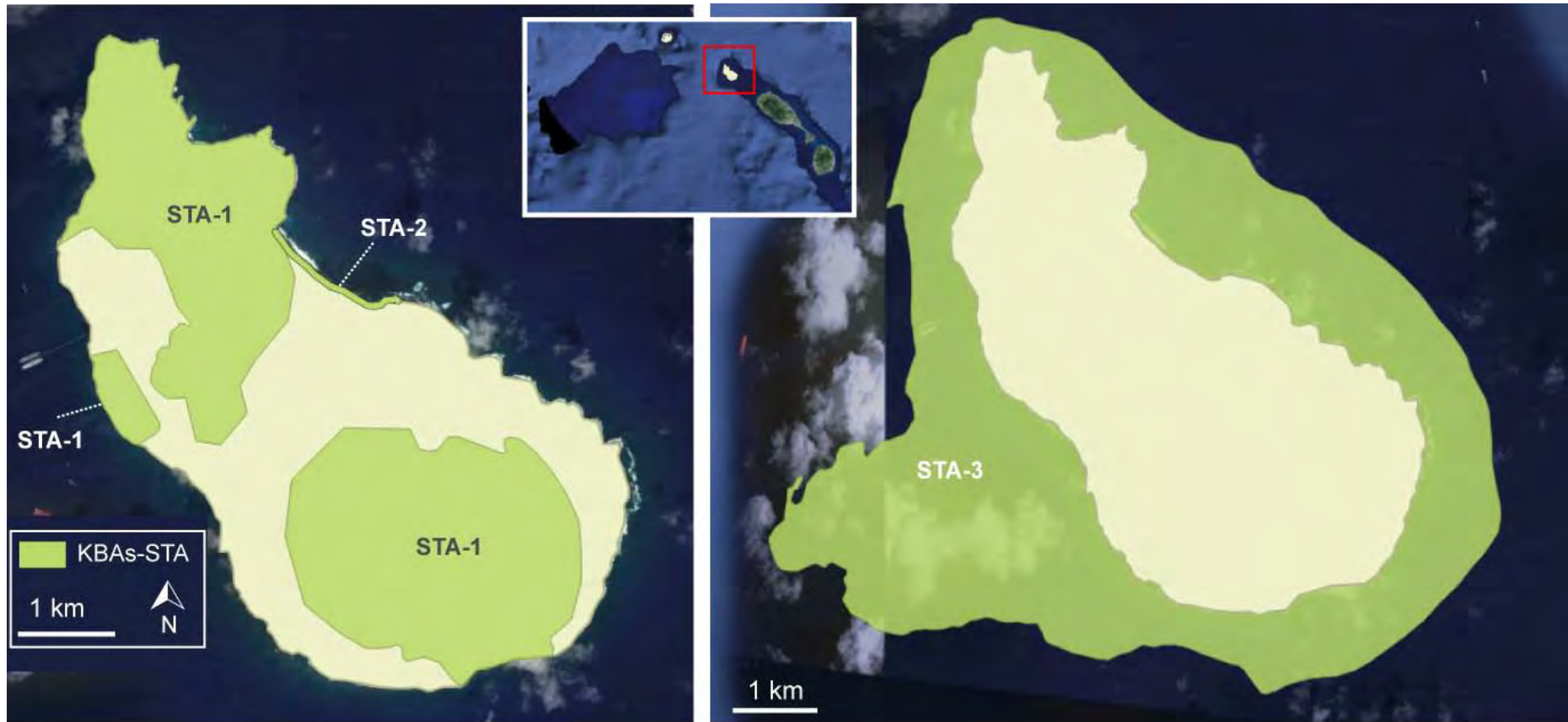
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Table 3 - KBAs identified on the territory and justification following selected criteria.

N. KBA	KBAs	Justification
KBA 1 - Quill- Boven & Signal - Gilboa Hills	Quill / Boven Terrestrial National Park	<p>Plants:</p> <ul style="list-style-type: none"> - Presence of 2 plant species and one lichen endemic to Statia: Statia Morning Glory (<i>Ipomoea sphenophylla</i>), <i>Gonolobus aloiensis</i>, a lichen (<i>Eremothecella microcephalica</i>) - Presence of 18 plant species endemic to the Lesser Antilles and Virgin Islands (with some species endemic to few islands): <i>Cordia nesophila</i>, <i>Chromolaena macrantha</i>, <i>Begonia retusa</i>, <i>Agave karatto</i>, <i>Aristida suringari</i>, <i>Justicia eustachiana</i>, <i>Clusia major</i>, <i>Galactia rubra</i>, <i>Gesneria ventricosa</i>, <i>Ctenitis meridionalis</i>, Mappo (<i>Pisonia subcordata</i>), Orchids <i>Psychilis correllii</i>, <i>Tetramicra elegans</i>, <i>Tolumnia urophylla</i>. - The 2 National Parks contain about 67% of the island's remaining forests including biologically diverse semi-tropical rainforests, pioneer forests, montane thickets and evergreen seasonal forests. <p>Invertebrates:</p> <ul style="list-style-type: none"> - Presence of arachnid species endemic to the Lesser Antilles: the 2 scorpions <i>Centruroides barbudensis</i> (Quill/Boven), <i>Oiclus purvesii</i> (Quill); and one amblypygid (<i>Phrynus goesii</i>) (Quill) - Presence of the pseudo-scorpion endemic to Statia <i>Pachyolpium confusum</i> - Presence of one butterfly species endemic to the Lesser Antilles (<i>Urbanus obscurus</i>) - Presence of Orthoptera endemic to the Lesser Antilles: <i>Amphiacusta saba</i>, <i>Microcentrum triangulatum</i>, <i>Orocharis angustus</i>, <i>Amphiacusta sanctaecrucis</i>, <i>Orocharis fulvescens</i>, <i>Orocharis proalbifrons</i>, <i>Orochirus maculatus</i>, <i>Cycloptilum eustatiensis</i>, <i>Cyrtoxipha orientalis</i>, <i>Lactista eustatia</i> (endemic to Statia) - Presence of 2 bee species endemic to the Lesser Antilles: <i>Anthophora (Mystacanthophora) eustatiensis</i>, <i>Xylocopa (Neoxylocopa) mordax</i> <p>Reptiles and mammals:</p> <ul style="list-style-type: none"> - Presence of endangered and/or restricted-range reptiles: Lesser Antillean iguana (<i>Iguana delicatissima</i>), Green Tree Lizard (<i>Anolis bimaculatus</i>), Red-faced ground lizard (<i>Ameiva erythrocephala</i>-Boven), Least Island Gecko (<i>Sphaerodactylus sputator</i>-Boven), Saba dwarf gecko (<i>S. sabanus</i>-Boven) and Red-bellied Racer snake (<i>Alsophis rufiventris</i>) - Potential roosts for 2 bat species endemic to the Lesser Antilles and Puerto-Rico: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Tree Bat (<i>Ardops nichollsi</i>)
	Boven IBA	<ul style="list-style-type: none"> - Boven cliffs: Congregation of breeding Red-billed Tropicbirds (<i>Phaethon aethereus</i>) - Presence of bird species restricted to the region of the Lesser Antilles and Puerto Rico: Green-throated Carib (<i>Eulampis holosericeus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Trasher (<i>Margarops fuscatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>)

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	North-western shoreline area (close to Signal Hill)	<ul style="list-style-type: none"> - This site is an important nesting site for Red-billed Tropicbirds (<i>Phaethon aethereus</i>). - It is located outside the Boven IBA and the limits of the terrestrial park and is privately owned by the oil terminal company. - The inclusion of this site within the IBA is in project.
	Quill IBA	<ul style="list-style-type: none"> - Presence of bird species restricted to the region of the Lesser Antilles and Puerto Rico: Bridled Quail-dove (<i>Geotrygon mystacea</i>), Purple-throated Carib (<i>Eulampis jugularis</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>), Brown Trembler (<i>Cinclocerthia ruficauda-extremely rare</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>).
	Miriam C. Schmidt Botanical Garden	<ul style="list-style-type: none"> - Presence of plant species endemic to the Lesser Antilles and Virgin Islands - Presence of the threatened <i>Guaiaicum officinale</i> - There is a project to plant the endemic Statia Morning Glory (<i>Ipomoea sphenophylla</i>) in this site.
	Area along the North-Western lower flanks of the Quill	<ul style="list-style-type: none"> - Presence of the endangered and restricted-range Lesser Antillean Iguana (<i>Iguana delicatissima</i>)
	Signal Hill to Gilboa Hill (Northern hills and Central plains)	<ul style="list-style-type: none"> - Presence of the endangered and restricted-range Lesser Antillean Iguana (<i>Iguana delicatissima</i>) - Presence of the plant species endemic to Statia: Statia Morning Glory (<i>Ipomoea sphenophylla</i>) - Important site for bird populations characterized by high diversity and abundance of bird species.
KBA 2	Zeelandia beach and Turtle beach	<ul style="list-style-type: none"> - Important nesting area for the threatened Hawksbill (<i>Eretmochelys imbricata</i>) and Green turtle (<i>Chelonia mydas</i>).
KBA 3	St. Eustatius National Marine Park (including the 2 no-take zones)	<ul style="list-style-type: none"> - Coral reefs and seagrass beds surround much of the island, with a higher percentage of continuous reefs along the Caribbean side of the Marine Park. - The 2 no-take zones have about 45% of hard coral cover, extensive seagrass beds, gather higher fish abundance, diversity and biomass and are home to at least 19 threatened marine species (including corals, fishes, sea turtles).
	General use area / Northern No-take zone	<ul style="list-style-type: none"> - Extensive seagrass beds are important foraging areas for Green Turtles - "Chien Tong" wreck in the general use area constitutes an important sleeping site for threatened sea turtles.
Candidate KBA	Sites with the threatened <i>Guaiaicum officinale</i>	<ul style="list-style-type: none"> - Several scattered sites on the south-western side of the island have some specimens of the threatened <i>Guaiaicum officinale</i>.



Map of KBAs in St. Eustatius

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Socio-economic context , government and civil society with a role in biodiversity

➤ **Table 4 - Government, local institutions and organizations, private sector**

ST-EUSTATIUS	
Special municipality of the Kingdom of the Netherlands	
Government of the Netherlands	Ministry of Infrastructure and the Environment
	Directorate-General for the Environment and International Affairs (DGMI)
	Ministry of Economic Affairs (EZ)
	Directorate General for Nature and Regional Policy
Island Government of Sint-Eustatius	
	Department of Agriculture, Animal Husbandry and Fisheries (LVV)
	St. Eustatius Tourism Development Foundation
NGOs	
Dutch Caribbean Nature Alliance (DCNA)	DCNA supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
St.Eustatius National Parks Foundation (STENAPA)	This local NGO is the only organization on the island with a mandate for environmental protection. STENAPA is legally mandated by the Island Government to manage the Terrestrial and Marine National Parks. Its mission is to: preserve, protect and manage island's protected areas; to make these areas accessible to the public; to coordinate educational programs; and scientific research.
Environmental Protection in the Caribbean (EPIC)	Foundation for environmental education and awareness based on St. Maarten. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects on St. Eustatius focus on bird research and environmental outreach and education.
Vogelbescherming Nederland - BirdLife International	Nongovernmental conservation organization associated to the International Organization BirdLife. The NGO has a special focus on bird conservation and conducts surveys in the Dutch Caribbean.
Research institutions	
Caribbean Netherlands Science Institute (CNSI)	CNSI is permanent accommodation, research and education base for scientists, students and lecturers, and for fundamental, strategic, applied and societal and policy relevant research. Its objective is to strengthen the cooperation between Caribbean and European Netherlands, involving local, regional and international partners and knowledge networks focussed on the region. CNSI is part of the NIOZ Royal Netherlands Institute of Sea research.
IMARES UR	Institute for Marine Resources and Ecosystem Studies based in Wageningen. Institute involved in scientific surveys and environmental monitoring in the Netherlands and Caribbean region.
NIOZ Royal Netherlands Institute of Sea research	NIOZ is the national oceanographic institution for the Netherlands, it facilitates and supports fundamental as well as applied marine research and education in the Netherlands and Europe.
CARMABI The Institute for Caribbean Research and Management of Biodiversity	The Caribbean Marine Biological Institute (created in 1955) is based in Curacao and is involved in coral reef and reforestation research in the Dutch Caribbean.
Collaboration with Universities and Research institutes	University of Puerto Rico, New York Botanical Garden, Coastal Carolina University, Naturalis (Netherlands), BirdsCaribbean, Clemson University, University of the West Indies (Trinidad)
Private sector	
EcoVision	Environmental consultancy and management firm based in Curaçao. Conduct environmental studies in the Dutch Caribbean.
Wolfs Company - Nature by numbers	Environmental consultant specializing in TEEB research (The Economics of Ecosystems and Biodiversity) conducting nature valuation studies in the Dutch Caribbean Islands.

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➤ **Table 5 - Sources of fundings dedicated to biodiversity and conservation** on the territory

Source of funding	Amount (US\$) (year)	Beneficiaries
- DCNA-Trust fund for the Dutch Antilles: funds from Dutch Ministry of the Interior, Dutch Postcode Lottery	166,750 (2012)	St Eustatius - STENAPA
Admission Fees/Service	37,629 (2012)	St Eustatius - STENAPA
Government's subsidies	125,698 (2012)	St Eustatius - STENAPA
Donations and souvenir sales	14,532 (2012)	St Eustatius - STENAPA
Grants	95,710 (2012)	St Eustatius - STENAPA
Other incomes	12,052 (2012)	St Eustatius - STENAPA
Essential operational support (Trust fund)	98,520 (2012)	St Eustatius - STENAPA
Prins Bernard funding - Native plant project	12,550 (2010-2013)	St Eustatius - STENAPA
Prins Bernard funding - Education Officer	5,040 (2013-2014)	St Eustatius - STENAPA
Prins Bernard funding - National Park improvement	5,850 (2014-2015)	St Eustatius - STENAPA
Prins Bernard funding - Botanical garden development	11,805 (2015)	St Eustatius - STENAPA

- Lack of funding for specific projects

- Funding is needed to pursue monitoring and research on both terrestrial and marine habitats and species.
- Funding to pursue the development of collaborative projects involving regional and international actors.
- Funding is needed to study the impact of exotic and invasive species (both terrestrial and marine) on native species, the habitats and ecosystems.

- Priorities of action

Terrestrial areas:

- continue long-term data collection on indicator species (terrestrial birds, butterflies)
- continue monitoring of red-billed tropicbirds (at least one more year of baseline data collection)
- continue to facilitate and support researchers/scientists
- investigate conservation actions for *Iguana delicatissima*
- possibly begin an invasive rodent monitoring/control project (tbc)

➤ Economic sectors

- The main **industrial activity** is the oil storage and trans-shipment facility (Statia Terminals Group NV). This terminal has been in operation since 1982 and is a major hub for bulk fuel loading and transshipment. About 1100 tankers stop at the fuel terminal per year. Over 10% of the population work for the Terminal (MacRae and Esteban 2009).
- **Tourism**: About 20,000 visitors per year come to the island. St Eustatius Marine Parks attract about 500 yacht and 2500 diving-snorkeling visitors per year (MacRae and Esteban 2009)
- **Fisheries**: There are about 25 fishermen on Statia, considering the small size of the island's economy this is a significant sector of employment. The Spiny Lobster (*Panulirus argus*) fishery is the most important fishery on the island. Queen conch [*Lobatus (Strombus) gigas*] is being fished, and a recent detailed population study conservatively estimated that a yearly harvest of 7500 conch would be well within sustainable limits (Graaf et al. 2014).
- **Agriculture** is very limited, the lower parts of the island are partly used for animal husbandry (Royer 1997). Free roaming cattle, goats and sheep are herded for personal consumption (MacRae and Esteban 2009).

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- **Population:** In the 18th century, St. Eustatius was the most densely populated of the three Dutch Windward islands with about 20,000 inhabitants. In the 1780s, about 3200 ships arrived around the island making St. Eustatius one of the busiest ports in the world (MacRae and Esteban 2007, 2009). About 2584 inhabitants were present in St. Eustatius in 2005 and the current estimate from 2012 is 3897 inhabitants.

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Information on a new endemic plant species identified on Statia

New Endemic Species on Statia



The flower of Gonolobus aloiensis

Dr. Frank Axelrod from the University of Puerto Rico, has been collecting and documenting Statia's flora since 2009. Recent collections from St. Eustatius, undertaken by the New York Botanical Garden, and by Axelrod and National Park Ranger Hannah Madden, as part of an ongoing study of the vascular plant flora of St. Eustatius, have resulted in the discovery of a new species, herein described as *Gonolobus aloiensis* (Apocynaceae, Asclepiadoideae, Gonolobinae). This species has recently been described and illustrated by Axelrod and Dr. Alexander Krings in the *Journal of Systematic Botany*. *G. aloiensis* is a vine in the milkweed family, named after

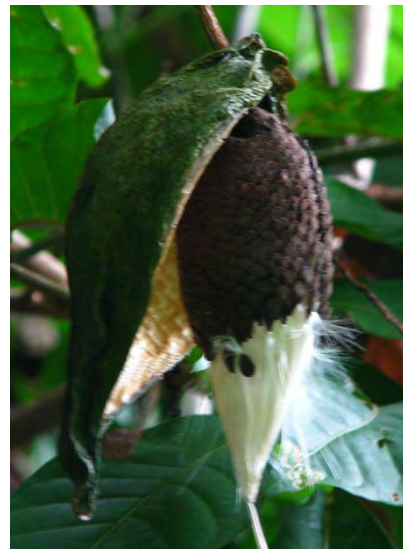
the Arawak name 'Aloi' for Statia meaning cashew tree, and is endemic to St. Eustatius. It represents the first record of the genus for the island, and the second endemic species for the island (Statia Morning Glory being the first).

Gonolobus is a New World genus comprising an estimated 100–150 species. In the West Indies, ten species of *Gonolobus* were recognized by Krings, all endemic to the region. Eight of these species are single is-land endemics, whereas only two species are known from two or more islands. *Gonolobus aloiensis* represents the first record of the genus for St. Eustatius. In the course of revising *Gonolobus* in the West Indies, Kings studied all specimens available through loan requests from, and visits to various, herbaria. However, prior to the collections of Boom, Axelrod, and Madden, no record had yet been found of any collection of *Gonolobus* from St. Eustatius.

Gonolobus aloiensis can be found in humid to wet, evergreen forests from ca. 273–400 metres elevation. The species occurs only on the inner slopes of the Quill volcano. It grows over and among the large boulders formed from the collapse of the walls of the crater. The plant has thus far been found only in the area of a maintained route down from the low point of crater rim to the base of the crater. Since its habitat is difficult to access, it is not at present possible to estimate the extent of the population of a species that has been collected only three times.

The only palpable threats to the plants are: first, the goats that roam about the crater, which, however, may not find the taste of a member of the Gonolobinae to their liking and, second, the eruption of the volcano. The volcano has not erupted since 400 AD and is considered to be in a state of dormancy. If it were to erupt, then the population of *G. aloiensis* would be certainly wiped out. Therefore STENAPA will attempt to grow it in the Botanical Garden to ensure its preservation.

Photos by H. Madden



The fruit and seeds of G. aloiensis



This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - St-MAARTEN

Policy and Socioeconomic context

➤ Political Status



- Sint-Maarten is located in northern Lesser Antilles (63°N, 18°W) close to Anguilla (8 km), St-Barthélemy (20 km) and Saba (48 km). It is the smallest island divided between two nations: France on the north side (Saint-Martin, 54 km²) and a country of the Kingdom of the Netherlands in the south (Sint-Maarten, 39 km²). Sint-Maarten, with the islands of Saba and Sint-Eustatius, formed the Windward Islands of the Kingdom of the Netherlands.

- Since October 10th 2010, Sint Maarten (such as Aruba and Curaçao) became an independent country within the Kingdom of the Netherlands. Sint Maarten is a European Overseas Country of the Kingdom of the Netherlands.

➤ Demographic Trends and Socio-economic context

- Area: 39 km²

- Territorial water: 489 km²

- Population: 37 224 inhab. Density: 1095 inhab./km², the most densely populated island of the Lesser Antilles (2011).

- GDP (\$/ inhab.): 15,400 (2008)

- Main economic activities: tourism, with associated service and construction industries. About 85% of all employment and a significant contribution to GDP are directly or indirectly related to tourism (Nature Foundation 2011).

Protected and/or managed areas

➤ List of protected areas (References: Nature Foundation 2011)

- The **Man of War Shoal Marine Park** (MWSMP) has been officially established on December 30th 2011 and is managed by **St. Maarten Nature Foundation**, a non-profit and non-governmental organization. St. Maarten Nature Foundation is a board member of the **Dutch Caribbean Nature Alliance** (DCNA).

- The boundaries of the Marine Park delimits an area of 3100 ha also known as Proselyte Reef Complex, a marine archeological site. It includes St.Maarten's most ecologically and economic important marine habitats, including extensive coral reefs and seagrass beds. This area has been selected due to its ecological, economic and cultural value. The Marine Park protects high coral reef coverage and is the habitat of a diverse assemblage of fishes, sharks, marine birds, sea turtles and marine mammals.

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- The Marine Park includes 2 zones (Art. 15 of the Island Ordinance Nature Conservation and Protection of Sint-Maarten):

- a **Conservation zone** in which several activities are prohibited such as: the use of water scooters, fishing, sailing with a vessel with a draft of more than 6m, removing live or dead animals or plants, feeding animals.

- a **Traffic zone** that must remain open to shipping at any time.

- Establishment in 2015 of YARARI marine mammal and shark Sanctuary that encompasses the EEZ of Saba and Bonaire (Dutch Caribbean Nature Policy Plan 2013-2017, Project "Save our sharks", Debrot et al. 2011). YARARI Sanctuary will form part of the network of marine mammal sanctuaries in the region, with AGOA Sanctuary in the French EEZ, Silver Banks Sanctuary in the Dominican Republic and Stellwagen Bank National Marine Sanctuary in the northern USA.

➤ **On-going projects - Projects under study**

- Currently, there is no terrestrial area protected on Sint Maarten. A project to form a terrestrial park is under way at Emilio Wilson Estate and Geneve-Back Bay and will form, with the Marine Park, a national park system (St Maarten proposed Land Parks management plan, St Maarten Nature Foundation 2009).

- Extension of the marine protected area on the eastern side of St Maarten (up to Oyster Pond): areas of 100 m around the eastern islets are proposed as conservation zones and the remaining area as a mix-used zone.

- Mullet Pond in the Simpson Bay Lagoon is labelled as Ramsar site (the Ramsar site will be officially designated in 2016).

- 6 sites are proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme (under study): Fort Amsterdam, Mullet Pond, Great Salt Pond, Emilio Wilson Estate, Geneve Bay and Little islands and the MOWSMP.

- The project PEARL (Preparing for Extreme and Rare events in coastal regions) has started in Sint-Maarten and aims to understand processes that create risks of flooding on the Dutch side. Hydrodynamic modelling will enable to investigate surge impacts related to development of infrastructure, future land development scenarios and climate conditions (storms, hurricanes). PEARL aims to develop adaptive, sociotechnical risk management measures and strategies for coastal communities against extreme hydro-meteorological events. This project is funded by European Union's Seventh Framework Programme for Research Technological Development and Demonstration.

Action and management plans

- St Maarten Marine Park management plan (St Maarten Nature Foundation, 2011)

- St Maarten proposed Land Parks management plan (St Maarten Nature Foundation, 2009)

- St Maarten Nature Foundation Lionfish response plan (St Maarten Nature Foundation, 2010)

- St Maarten Nature Foundation coral bleaching response plan (St Maarten Nature Foundation, 2010)

- Response plan for the effects of climate change on the marine and coastal zones of St Maarten (St Maarten Nature Foundation)

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Biological importance of the ecosystems

Species outcomes

- **Table 1** - List of Taxa assessed as **globally threatened** (IUCN Red List, DCNA 2012b - Dutch Caribbean Species of High Conservation Value, van Beek et al. 2014).

Taxonomic group	Threatened species
Plants	
EN	<i>Guaiacum officinale</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i>
Fish	
CR	<i>Epinephelus itajara</i> (occ.), <i>Hyporthodus nigritus</i> (occ.)
EN	<i>Epinephelus striatus</i> , <i>Pagrus pagrus</i> (occ.)
VU	<i>Balistes vetula</i> , <i>Hippocampus erectus</i> , <i>Hyporthodus flavolimbatus</i> (occ.), <i>Hyporthodus niveatus</i> (occ.), <i>Kajikia albida</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Makaira nigricans</i> , <i>Megalops atlanticus</i> , <i>Mycteroperca interstitialis</i> (occ.), <i>Thunnus obesus</i>
Sharks and rays	
EN	<i>Sphyrna mokarran</i>
VU	<i>Rhincodon typus</i> (occ.), <i>Manta birostris</i> (occ.)
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Chelonia mydas</i> , <i>Caretta caretta</i> (occ.) Species possibly EX from the island: <i>Iguana delicatissima</i> , <i>Alsophis rijgersmaei</i>
VU	<i>Anolis pogus</i> , <i>Dermochelys coriacea</i> (occ.)
Mammals	
VU	<i>Physeter macrocephalus</i> (occ.)

(* occasional species are not considered for the identification of KBAs)

- **Table 2** - List of species geographically restricted (References: Rojer 1997, Breuil 2002, DCNA 2012b, Sastre et Breuil 2007, Collier and Brown 2009, UICN 2013)

Taxonomic group	Number of endemic species
Plants	- 17 plant species restricted to the Lesser Antilles - 2 plant species endemic to Saint-Martin/Sint-Maarten : <i>Galactia nummularia</i> , <i>Calyptanthes boldinghii</i> . These 2 plant species have not been seen since the 1980s.
Invertebrates - Insects	- 2 beetles endemic to St-Martin/Sint-Maarten - Coleoptera: <i>Solenoptera chalumeaui</i> , <i>Phyllophaga stehlei</i>
Amphibians	- 2 species endemic of the south of the Lesser Antilles (not native to St Maarten): Martinique Robber Frog (<i>Eleutherodactylus martinicensis</i>), Johnstone's whistling frog (<i>E. johnstonei</i>)
Reptiles	- 3 reptile species endemic to St-Martin/Sint-Maarten: Anguilla bank bush anole (<i>Anolis pogus</i>), St-Martin Skink (<i>Spondylurus martinae</i> , last observation on Tintamarre, Saint-Martin), Spotted Woodslave (<i>Thecadactylus oskrobapreinorum</i>) - 5 reptile species endemic of the Anguilla Bank: Anguilla Bank Tree Lizard (<i>Anolis gingivinus</i>), Anguilla Bank ground lizard (<i>Ameiva plei</i>), Little Woodslave (<i>Sphaerodactylus parvus</i>), Leeward Island Racer (<i>Alsophis rijgersmaei</i> *), Anguilla Bank Skink (<i>Spondylurus powelli</i> *)

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	- 2 reptile species endemic of the Lesser Antilles: Least Island Gecko (<i>Sphaerodactylus sputator</i>), Lesser Antillean Iguana (<i>Iguana delicatissima</i> *)
Birds	- 6 bird species restricted to the Lesser Antilles and Puerto-Rico: Green-throated Carib (<i>Eulampis holosericeus</i>), Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Scaly-breasted Thrasher (<i>Margarops fuscus</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Purple-throated Carib (<i>Eulampis jugularis</i>)
Mammals	- 3 species of bats endemic of the Lesser Antilles: Tree Bat (<i>Ardops nicholisi</i>), Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Insular Single-leaf Bat (<i>Monophyllus plethodon</i>)
Total	- 7 species endemic to St-Martin/Sint-Maarten - 5 reptile species endemic to the Anguilla Bank - 32 species endemic of the Lesser Antilles

* Species possibly extirpated from the island.

➤ List of Species at key stages in their life-cycles / aggregations

- Mangroves and seagrass beds constitute important nursery and foraging habitats for a diverse array of marine organisms, including threatened fishes and sea turtles. Mangroves are observed around Mullet Pond (Simpson Bay Lagoon) and important seagrass habitats occur in Simpson Bay Lagoon, along the St Maarten's southern and south-eastern shores.
- Aggregation of seabirds trigger 5 IBAs in St Maarten over ponds and one islet.

Habitat outcomes

➤ Terrestrial and coastal areas

- **St.Maarten Terrestrial Parks project** (MacRae and Nisbeth 2009, St Maarten Nature Foundation 2009, Rueben Thompson personal communication 2014, Tadzio Bervoets pers. communication 2015)
 - Three terrestrial areas have special conservation value and were proposed as terrestrial parks for St-Maarten: Emilio Wilson Estate (Sentry Hill area, 90 ha), Geneve-Back Bay (Eastern coast of St. Maarten from Guana Bay Point to Back Bay, 76ha), Hill tops (hillsides of St Maarten).
 - **Emilio Wilson Estate (EWE)** covers about 90 ha, including 9 ha of historical sites. In 2005 the Government of St.Maarten voted against further building development in this area (Declaration No. 1020). This site is one of the last remaining authentic landscapes of St.Maarten and is home to threatened and restricted range reptile species (*Anolis pogus*, *Anolis gingivinus*, *Sphaerodactylus parvus*, *S. sputator*, *Ameiva plei*).
 - **Geneve-Back Bay** area gathers threatened and restricted range plants (Pockwood or Guaiac Tree *Guaiacum officinale*, Cacti *Melocactus intortus*) and reptile species (*Anolis pogus*, *Anolis gingivinus*, *Sphaerodactylus parvus*, *S. sputator*, *Ameiva plei*).
 - **Sentry Hill to Williams Hill**: the hill tops harbor the last original seasonal evergreen forest remaining on St Maarten. This forest is home to threatened and endemic reptiles (*Anolis pogus*, *Anolis gingivinus*).
- **Lagoon, Ponds and Mangroves** (References: EPIC 2011, Nature Foundation 2011, Bervoets 2011).
 - St. Maarten had about 19 ponds in the 1950s, most of them have been filled in and only **4 ponds** remain today but are still under threat: Little Bay pond, Fresh pond, Great Salt pond, Red pond (EPIC 2011). Juliana pond and Cupecoy ponds have been filled in.
 - Simpson Bay Lagoon constitutes a wide wetland shared between the French and Dutch parts.
 - Ponds provide important nesting and/or foraging areas for bird species (resident, Neotropical migrants) and the brackish and hypersaline waters give rise to fauna community including fishes and invertebrates (Nature Foundation 2011).

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- **Mangroves** grow around the shorelines of several ponds and lagoon: Little Bay pond, Fresh pond, Simpson Bay Lagoon, Red pond, and on few areas around Great Salt Pond. **Simpson Bay lagoon** (one of the largest inland bay in the Antilles) has extensive seagrass beds (particularly on the eastern side) and is bordered by 4 species of mangrove trees, namely *Rhizophora mangle*, *Avicennia germinans*, *Laguncularia racemosa*, *Conocarpus erectus* (EcoVision 2010).

- **Mullet pond** within Simpson Bay Lagoon is bordered by 70% of the remaining mangroves located around the dutch side of the lagoon. This area has the most significant stand of mangroves on St. Maarten, although coastal developments have removed much of this ecosystem (Nature Foundation St Maarten 2013).

- **Caves:** Two active roosts for bats are observed on the island: Grotte du Puits (Terre-Basse, French side) and Billy Folly (eastern edge of Simpson Bay, St Maarten) (Genoways et al 2007). The cave of **Billy Folly** harbors two bat species endemic to the Lesser Antilles and Puerto Rico (*Brachyphylla cavernarum*, *Monophyllus plethodon*) (Genoways et al 2007, Nature Foundation 2011), about 300 specimens of *B. cavernarum* have been previously observed in this cave (Rojer 1997).

- The threatened reptile species *Anolis pogus* also occurs in the forest area around Billy Folly (St Maarten Nature Foundation 2009).

➤ **Coastal areas: sea turtle nesting areas** (References: Sea turtle nesting and hatching data set 2010-2012 - Nature Foundation 2012, Tadzio Bervoets pers. comm. 2015)

- 4 sea turtle species are observed in the waters of St.Maarten, including the Loggerhead (*Caretta caretta*) that is infrequent (Dow et al. 2007). The Hawksbill and Green turtles nest and forage and the Leatherback sea turtle is nesting more occasionally (Dow et al. 2007, St Maarten Nature Foundation nesting records 2010-2012).

- 8 beaches on St Maarten are listed as potential nesting sites with 3 of them presenting more nesting activity (more than 10 tracks recorded per year): Guana Bay, Gibb's Bay and Simpson Bay (Swinkels 2004, Debrot et al 2005, Hoetjes 2006, St Maarten Nature Foundation nesting records 2010-2012). Few nesting tracks (less than 10 tracks per year) of Leatherbacks occurred on Simpson Bay and Guana Bay (St Maarten Nature Foundation nesting records 2010-2012).

- Guana Bay has been proposed as a " WIDECAST-index site monitoring beach"

➤ **Important Bird Areas** (References: Collier and Brown 2009, Rojer 1997)

- The East Caribbean Islands are important resting areas for migratory birds (winter or summer transient species) that can rest and forage before travelling on to their northern or southern migrations (Rojer 1997). These bird species seasonally occur in the great variety of terrestrial and coastal habitats found on St.Maarten, such as secondary forests, thorny scrubs, ponds, mangroves, islets, cliffs... (Rojer 1997).

- 5 Important Bird Areas (IBAs) identified on St. Maarten covering an area of 816 ha (including marine areas). These IBAs are located outside the protected area of the MOWSP and have no protection status, except for Fort Amsterdam that is protected as a historical heritage site. These IBAs gather restricted range bird species or aggregation of nesting seabirds, including the Brown Pelican (Bervoets 2012).

- 6 (out of 38) bird species have a range restricted to the Lesser Antilles and Puerto-Rico (*Eulampis holosericeus*, *Orthorhynchus cristatus*, *Elaenia martinica* (occurring from Puerto Rico, Lesser Antilles and the Leeward islands to Great Antilles and central America), *Loxigilla noctis*, *Margarops fuscus*, *Geotrygon mystacea*, *Eulampis jugularis*).

➤ **Marine areas** (Nature Foundation 2011, Tadzio Bervoets pers. comm. 2015)

- **Man of War Shoal Marine Park (MWSMP)** (Nature Foundation 2011): this protected marine area includes diverse marine communities invertebrates, fishes, turtles and marine mammals. About 15 km² of coral reefs and seagrass beds are present in this area. Most reefs within MWSMP are patch reefs that are

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small isolated reefs developing from the substrate. Upper reef slopes have spurs and grooves formations, with the spurs dominated by massive coral species. Following the designation of the Marine Park, fish abundance increases with particular increase of the threatened Nassau Grouper (*Epinephelus striatus*) (up to 20%) (Nature Foundation St Maarten 2013b)

- **Seagrass beds:** seagrasses are mainly found along St Maarten's southern and south-eastern shores and on the eastern part of Simpson Bay Lagoon. Seagrass beds over Simpson Bay Lagoon have been heavily impacted (due to pollution, anchor damages, nutrient inputs, shoreline development) and it has been estimated that 80% of the original seagrass have been depleted or severely eroded (Nature Foundation St Maarten 2013).

- **Coral reefs:** besides the MWSMP, coral reefs surrounding Pelican Rock and Molly Beday are relatively healthy with about 50% and 40% of substrate covered by hard corals, respectively and the presence of threatened coral and fish species (Nature Foundation 2010)

- **Territorial waters of St.Maarten:** Monitoring of marine mammals in St Maarten showed that Humpback whales are the most abundant marine mammal, with 33 individuals, including calves, recorded in 2011. Several cetaceans are regular visitor of the waters around St Maarten and considering the numbers of records occurring within the boundaries of the MOWSMP (St Maarten Nature Foundation 2011b). The vulnerable Spermwhale (*Physeter macrocephalus*) occurs particularly in deeper waters between St Maarten and Saba.

- The vulnerable Manta ray (*Manta birostris*) is regularly observed along Long Bay reef and at Mullet Bay.

Corridors

- Two access corridors have been identified over the hill tops between St Peters Hill-Marigot Hill and Mildrum Hill- Mount Williams (St Maarten Nature Foundation 2009).

- Predominant currents in the south-eastern part of the island highlight a strong connectivity between Eastern islets and the MWSMP (Proselyte Reef Complex) (Nature Foundation 2010).

- Transboundary connectivity between the MPAs of the French and Dutch sides and within the Simpson Bay Lagoon.

- Satellite tracking of sea turtles reveal a strong connectivity between the northern Lesser Antilles (Harrisson 2005, 2006). A female hawksbill was tagged after nesting on St-Eustatius, swam over 700 km in 40 days and migrated towards St-Barthélemy, St.Maarten/St-Martin, Anguilla and the US Virgin Islands (Harrisson 2006). Another hawksbill turtle was tagged on St. Maarten and swam directly to the British Virgin Islands in about 20 days (Harrisson 2005).

- Satellite tracking of humpback whale showed a strong connectivity between northern islands (Anguilla, St-Martin/St.Maarten, St-Barthélemy, Barbuda) (Fossette et al. 2014; project MEGARA 2014).

- The population of Spermwhales (*Physeter macrocephalus*) observed in the eastern Caribbean Sea seem to be relatively small and isolated from other populations (Gero et al. 2007).

International recognition of natural habitats and wildlife

- SPAW label for the Man of War Shoal Marine Park (3100 ha)

- 5 Important Bird Areas (IBAs) identified on St Maarten (816 ha). These IBAs are located outside the protected area of the MWSMP and have no protection status.

- The Ramsar site of Mullet Pond (pending designation).

International Treaties and Conventions

- The Convention on Biological Diversity (CBD)

- Ramsar Convention on Wetlands of International Importance

- the Cartagena Convention (for the Protection and Development of the Marine Environment of the Wider Caribbean Region with the SPAW Protocol (concerning Specially Protected Areas and Wildlife) - the Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS)

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- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)
- The Kingdom of the Netherlands ratified in November 2011 the Memorandum of Understanding on the conservation of migratory sharks (MoU Sharks) of the Convention on the Conservation of Migratory Species (CMS).

National ordinances

- **National Decree Nature Conservation and Protection** (September 1st, 2003): concerning regulations pertaining to the management and protection of flora and fauna and nature parks on the island.
- **National Ordinance Nature Conservation and Protection** (February 9th, 1998): concerning regulations regarding the Conservation of Nature and the Protection of the Animal and Plant Species that Occur in Nature. This ordinance designates all species listed in the Bonn Convention, SPAW Protocol and CITES Treaty as protected species on St Maarten.
- **St Maarten National Ordinance on Maritime Management and National Fisheries Ordinance**
- **National Ordinance on Spatial Development Planning** (Landsverordening ruimtelijke ontwikkelingsplanning - AB 2013, GT no. 144): the Government of St.Maarten is preparing development plans with zoning regulations to manage spatial development
- **National decree for the creation of the Man of War Shoal Marine Park** (2010)
- **National decree for the conservation of Elasmobranch species** (Sharks, rays) (2011)
- National Policy Plan for St Maarten (in progress): map of the proposed KBAs for St. Maarten will be included in this document.

Institutions and organizations

➤ **Table 3 - List of local institutions and organizations**

ST-MAARTEN	
Government of Sint Maarten	Ministry of Public Housing, Spatial Planning, Environment and Infrastructure (VROMI) (5 executive services and a policy department)
	Ministry of Tourism, Economic Affairs, Transport and Telecommunication
	Ministry of Public Health, Social Development and Labor
	Ministry of General Affairs - Department of the Interior & Kingdom Relations
NGOs	
Dutch Caribbean Nature Alliance (DCNA)	DCNA supports nature conservation activities of national and local institutions which are responsible for the conservation of nature, species and or management of protected areas and other areas of high natural value in the Dutch Caribbean.
Nature Foundation of St Maarten	Management of the MOWS Marine Park. The NGO aims to preserve and enhance the natural environment of our island through proper management, education, public awareness, law enforcement, scientific research and monitoring relating to all aspects of the terrestrial, wetland and marine surroundings.
Environmental Protection in the Caribbean (EPIC)	NGO for environmental education and awareness based both in the USA and on St. Maarten. Coordinator of the Blue Flag labels for beaches and marinas, and Green Key Program awarding tourism facilities. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects have included bird research, wetland restoration and conservation, and environmental outreach and education.
Vogelbescherming Nederland - BirdLife International	Nongovernmental conservation organization associated to the International Organization BirdLife. The NGO has a special focus on bird conservation and conduct surveys in the Dutch Caribbean.
Emilio Wilson Estate Foundation (EWEF)	NGO dedicated to the protection and conservation of Emilio Wilson Estate and all associated man-made as well as natural monuments in order to maintain the integrity of St. Maarten's history, culture and natural environment for the benefit of present and future generations.
Be The Change Foundation	Charity fundraising group that assists St. Maarten NGOs with raising fund needed for a particular cause while also promoting the mission and objectives of that NGO to encourage volunteerism.
St Maarten PRIDE Foundation	St. Maarten PRIDE Foundation is an environmental awareness and anti-littering foundation dedicated to the protection, conservation and proper management of St. Maarten's natural resources, its ecological and environmental functions as well as the safeguarding of man-made monuments in order to retain the integrity of St. Maarten's history, culture and natural environment.
St Maarten National Heritage Foundation	NGO in charge of the maintenance of Sint Maarten Museum, the protection and promotion of nature, natural monuments, culture and environment, the promotion of archaeological and historical research.
Sint Maarten Archaeological Center (SIMARC)	NGO created in 1993 that aims to protect and promote the island heritage. The NGO is involved in the identification and mapping of monument national trees.
Research institutions	
American University of the Caribbean (AUC)	Participation to monthly water quality analysis (Blue Flag eco-labels). This University gathers the center of St Maarten and the one that used to be located in St Eustatius.
IMARES UR	Institute for Marine Resources and Ecosystem Studies based in Wageningen. Institute involved in scientific surveys and environmental monitoring in the Netherlands and Caribbean region.
Caribbean Netherlands Science Institute (CNSI)	CNSI is based in St. Eustatius and is involved in regional cooperation regarding fundamental, strategic, applied and societal and policy relevant research. Its objective is to strengthen the cooperation between Caribbean and European Netherlands, involving local, regional and international partners and knowledge networks in the region. CNSI is part of the NIOZ Royal Netherlands Institute of Sea research.
Naturalis - National Museum of Natural History	The museum is based in the Netherlands and gathers an important collection of species. The institution is involved in research programs in the Netherlands and the OCTs and in an educational program.
Private sector	
EcoVision	Environmental consultancy and management firm based in Curaçao. Conduct environmental studies in the Dutch Caribbean.

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Funding resources (References: DCNA 2012 Annual report, Tadzio Bervoets, Natalia Collier, Claire Hoof Graafland, Loekie Morales, Marc Arnold pers. comm. 2015)

- Ministry of VROMI: subvention for St. Maarten Nature Foundation
 - Ministry of General Affairs: funding for the pilot project concerning the terrestrial biological assessment on St. Maarten (by the end of 2015)
 - DCNA Trust fund for the Dutch Antilles (MOWS Marine Park)
 - Prince Bernhard Culture Fund (Educational programs – NGOs)
 - Private and corporate donations (NGOs)
 - MOW MP entrance fees
 - Donations, Souvenir sales
 - Grants
- **INTERREG Caribbean** 2007-2013 and 2014-2020 (75% of the budget under ERDF)- three projects are under study involving a cooperation between Saint-Martin and Sint-Maarten as the Dutch island of Sint-Maarten does not have access to INTERREG fundings:
- joint sewage treatment for Marigot/Cole bay,
 - sustainable economic development plan for the lagoon,
 - drink water connection/drainage in belle plain.

European fundings:

PEARL project in Sint-Maarten : European Union's Seventh Framework Programme for Research Technological Development and Demonstration.

- Lack of funding identified on the territory:

- Operational projects within the area of the MOWS Marine Park: lack of funding for the day to day operations, operational projects (maintenance, buoys...). These actions are essential for the preservation of the biodiversity and ecosystem services within the protected area.
- Funding regarding the threats from exotic invasive species (both marine and terrestrial species).
- Need for ongoing funding for environmental education, legislative advocacy, tourism eco-label certification, maintenance of sewage pumpout boat
- Needs to allocate funds (from the local government ?) for purchasing park lands, proper sewage systems, environmental legislation and enforcement.

- Major threats affecting biodiversity:

- Urbanization: land reclamation for development and coastal development
- Transport infrastructure: marine transport and road traffic
- Human disturbances: anchoring, disturbances on species (artificial lighting, harassment...)
- Exotic invasive species
- Pollution: domestic and industrial effluents, wastes, pesticides
- Natural events: storms and hurricanes, drought and flooding events, erosion
- Climate change (sea rising temperature,...)

- Local priorities:

- Designation of a terrestrial nature Park
- Expansion of MOWMP
- Reduce pollution, sewage, oilspills, residential and industrial effluents, air pollution
- Set environmental norms and update enviro-legislation
- Enforcement

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Table 4 - KBAs identified on St.Maarten (the list of criteria follows the BEST Methodology).

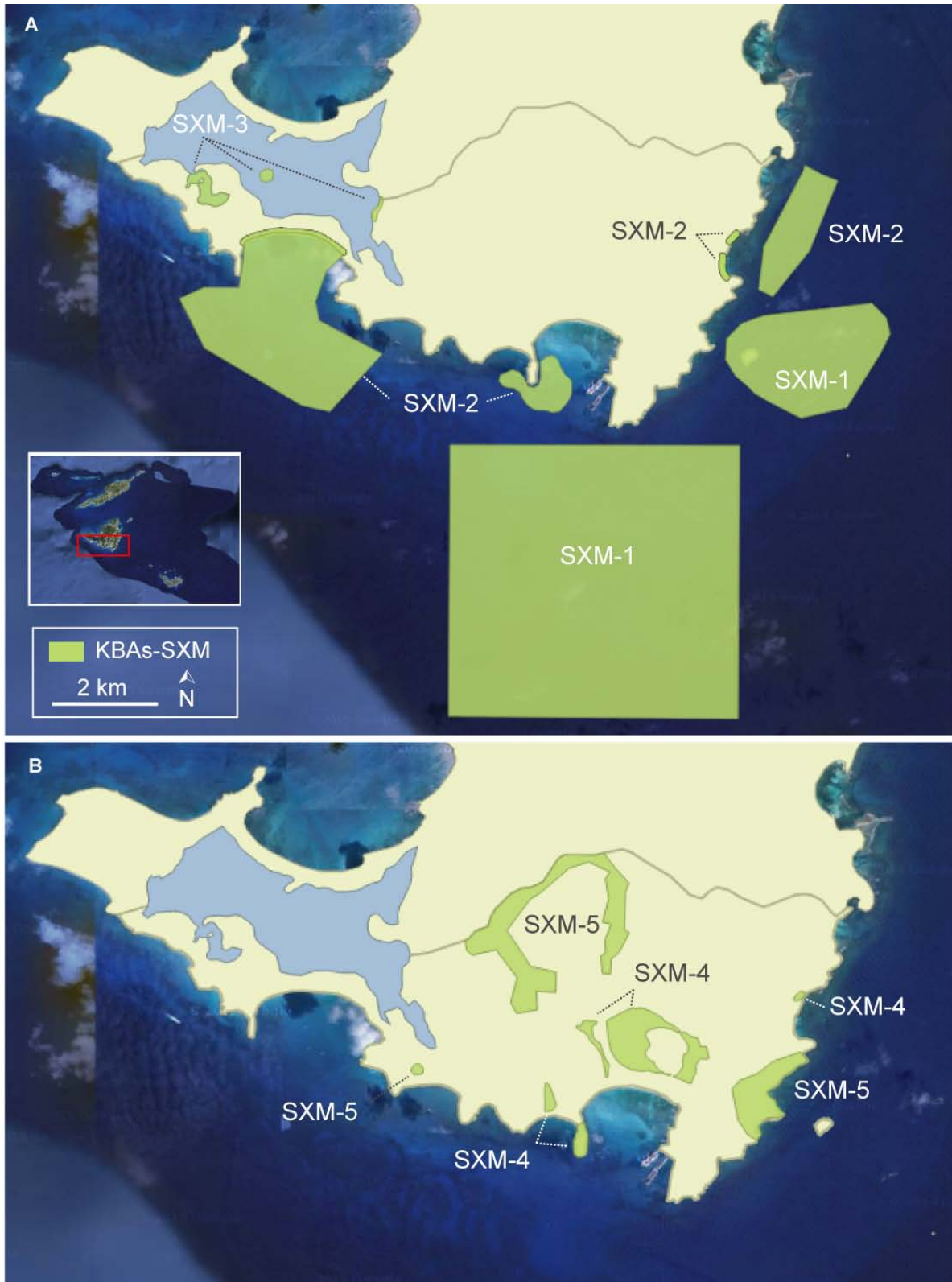
N. KBA	KBAs names	Criteria
KBA 1-Marine Park and Eastern islets	Man of War Shoal Marine Park	<p>Marine environment</p> <ul style="list-style-type: none"> - Presence of threatened coral and fish species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>) - Presence of threatened sea turtles (<i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>) - 3100 ha of the Proselyte Reef Complex including 15 km² of coral reefs and seagrass beds - Seasonal recordings of humpback whales and dolphins within the MPA. - Project of extension of the MPA on the eastern side of St Maarten to include the Eastern islets. - Site proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme
	Pelican Rock / Molly Beday islet / Hen and Chicks / Cow and Calf	<ul style="list-style-type: none"> - IBA on Pelican Rock: aggregation of 5 seabird species: <i>Larus atricilla</i>, <i>Pelecanus occidentalis</i>, <i>Sterna anaethetus</i>, <i>Sterna maxima</i>, <i>Sula leucogaster</i> - These bird species also occur on the other Eastern islets, such as Molly Beday (not included within the IBA). <p>Marine environment around the islets</p> <ul style="list-style-type: none"> - Healthy coral reefs with high coral coverage - Presence of seagrass beds around the islet - Presence of threatened coral and fish species (<i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>) - The islets are proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme. - Islets are included in the project of extension of the MPA with a conservation zone around the islets.
KBA 2 Marine and coastal areas (outside the MPA and Eastern islets)	Simpson Bay Beach and seagrass beds	<ul style="list-style-type: none"> - important sea turtle nesting areas for the threatened species <i>Eretmochelys imbricata</i> - extensive seagrass beds off Simpson Bay (south-west coast of the island)
	Guana-Gibbs Bay and seagrass beds	<ul style="list-style-type: none"> - important sea turtle nesting areas for the threatened species <i>Eretmochelys imbricata</i> and <i>Chelonia mydas</i> - presence of extensive seagrass beds along the eastern coast of the island. Important foraging area for threatened sea turtles.
	Seagrass beds	<ul style="list-style-type: none"> - Seagrass ecosystems located in front of Great Bay/ Front Amsterdam. Important foraging area for threatened sea turtles.

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KBA 3 - Mullet Pond, Little Key and mangroves near the causeway - Simpson Bay Lagoon	Mullet Pond	<ul style="list-style-type: none"> - Important nursery and foraging habitat for marine organisms (invertebrates, fishes, sea turtles), including threatened species: Green turtles (<i>Chelonia mydas</i>), Hawksbill turtles (<i>Eretmochelys imbricata</i>), Snappers (<i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>), <i>Megalops atlanticus</i>. - Bird nesting and foraging area. - About 70% of the mangroves remaining on the Dutch side of Simpson Bay Lagoon occurs in Mullet Pond. - Mangroves inter-connected with seagrass beds. - Simpson Bay Lagoon is one of the largest inland bay in the Antilles that is connected with the Caribbean sea. - Proposed as a RAMSAR site (the designation is pending) - This site is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.
	Little Key	<ul style="list-style-type: none"> - Islet with mangroves and surrounding by seagrass beds- Nursery and foraging area for marine species (fishes, invertebrates, sea turtles), including threatened species. Bird nesting and foraging area.
	Mangroves (near the causeway)	<ul style="list-style-type: none"> - Mangrove ecosystems - Important habitat for threatened species - Connectivity with seagrass beds.
	Corridor: Simpson Bay Lagoon	<ul style="list-style-type: none"> - The whole area of the Simpson Bay Lagoon, shared by France and the Kingdom of the Netherlands, is identified as an ecological corridor for terrestrial and marine species.
KBA 4 - Ponds & IBAs	Fort Amsterdam	<ul style="list-style-type: none"> - IBA: presence of 5 restricted-range bird species (EBA), breeding site for the Brown pelican - This site is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.
	Little Bay Pond	<ul style="list-style-type: none"> - IBA: presence of 5 restricted-range bird species (EBA) - Pond bordered by few mangroves (due to low salinity)
	Fresh Pond	<ul style="list-style-type: none"> - IBA: presence of 5 restricted-range bird species (EBA) - Pond bordered by few mangroves (due to low salinity)
	Great Salt Pond	<ul style="list-style-type: none"> - IBA: aggregation of seabirds - The pond is bordered by few mangroves - This site is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.
	Red Pond	<ul style="list-style-type: none"> - Pond bordered by mangroves - Important habitat for bird populations
KBA 5 Terrestrial areas and caves	Top Hills (from Sentry Hill to Williams Hill)	<ul style="list-style-type: none"> - Last original seasonal evergreen forests remaining on the island Reptiles - Presence of threatened and endemic reptiles (<i>Anolis pogus</i>, <i>Anolis gingivinus</i>)

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	Emilio Wilson Estate	<p>- Presence of threatened and endemic reptiles (<i>Anolis pogus</i>, <i>Anolis gingivinus</i>, <i>Sphaerodactylus parvus</i>, <i>S. sputator</i>, <i>Ameiva plei</i>)</p> <p>- This site is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.</p>
	Geneve Back Bay	<p>Plants</p> <p>- Presence of threatened and restricted-range plant species: Gaiac (<i>Guaiaacum officinale</i>), Turk's head (<i>Melocactus intortus</i>)</p> <p>Reptiles</p> <p>- Presence of threatened and endemic reptiles (<i>Anolis pogus</i>, <i>A. gingivinus</i>, <i>Sphaerodactylus parvus</i>, <i>S. sputator</i>, <i>Ameiva plei</i>)</p> <p>- This site is proposed to be listed under UNESCO's Man and the Biosphere (MAB) Programme.</p>
	Billy Folly Cave	<p>Reptiles</p> <p>- Presence of threatened reptiles (<i>Anolis pogus</i>)</p> <p>Bats</p> <p>- This cave is home to bats endemic of the Lesser Antilles and Puerto-Rico (<i>Brachyphylla cavernarum</i>, <i>Monophyllus plethodon</i>)</p>
Candidate KBA	Mullet Bay and Dawn Bay	- sea turtle nesting areas for the threatened species <i>Eretmochelys imbricata</i> , <i>Chelonia mydas</i> , <i>Dermochelys coriacea</i> (less than 10 nesting tracks per year)



Map of the KBAs identified for St Maarten.

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem Profile Factsheet - ANGUILLA

➤ Location



- Anguilla is located in the northern Lesser Antilles (18°15'N, 63°10'W) between the islands of St-Martin/St-Maarten (8 km), St-Barthélemy in the south and is separated from the British Virgin Islands in the north west by the Anegada Gap (166 km wide, 600 m deep). The islands' shelves of Anguilla, St-Martin/St-Maarten and St-Barthélemy constitute the Anguilla Bank (3400 km²) including Sombrero island located 65 km NW of the main island of Anguilla.

- Anguilla territory consists of one main island (26 km long, 5 km wide) surrounding by 21 islands and cays (among them: Dog Island, Prickly Pear, Seal Island, Scrub Island, Little Scrub Island, Sandy Island, Sombrero located 65 km NW of Anguilla). Most of these uninhabited islets and cays are rocky with limestone, corals and sandstones. Anguilla is a low-lying limestone island with the highest peak (Crocus Hill) at about 65 m above sea level.
- Coastal cliffs are common on the northern side of the island and flatter areas are found on the south and southeast. A variety of habitats can be observed including 30 natural and artificial wetland ponds (Lloyd and Mukhida 2013), mangroves (around ponds) or coral reefs. An extensive barrier reef is located along the north coast of the main island. Islets are mostly rocky, with limestone, corals and sandstone predominating.

➤ Policy and Socioeconomic context

➤ Political Status

- Anguilla is a United Kingdom Overseas Territory, the island is locally governed by the Government of Anguilla with a governor representing the UK Government.

➤ Demographic Trends and Socio-economic context

- Area: 91 km² (102 km² including islets)
- Marine and coastal areas (including the Exclusive Fishery Area): 85 500 km²
- Population (2013): 15,754 inhab. Density: 170 inhab./km²
- GDP/cap (\$/ inhab., 2011): 20 048
- Main economic activities: tourism, with associated services and construction industries, is the main sector of the economy. About 150 000 visitors per year come to Anguilla. Offshore banking, finance and insurance industries are also important for the territory's economy (Hodge et al. 2008).

➤ Protected areas (Hodge 2011, Pelembe and Cooper 2011)

Terrestrial protected areas

- The **East End Pond Conservation Area** (13 acres) is a protected area managed by the Anguilla National Trust (ANT) and has been setting up to protect vegetation or ecosystem.

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- ANT also has two heritage sites that are protected: **Fountain Cavern** (approx. 4.86 ha with approx. 0.5 ha vested to and managed by the ANT) and **Big Spring**. The Fountain Cavern was initially investigated by the Archaeological and Historical Society. The depression and surrounding vegetation at Big Spring are enclosed by a chain-link wire fence and therefore receives adequate protection.
- Private land owners donate a **parcel at Seafathers in the eastern part of the island** to the ANT to be managed for conservation purposes. Additional land along the ironshore in Elsie Bay was also donated to the ANT. These areas don't gather particular biodiversity outcomes that require emphasis (Farah Mukhida, pers. com. 2015).
- The Department of Environment manages 3 ha of land as a scientific and research reserve located in The Valley (Valley Bottom, area bordered by Coronation Av. and Pope Hill Rd.).

In Anguilla, only 3% of the land is owned by the government and most of the natural habitats are privately owned.

Marine protected areas

- **Marine Parks** were created in 1991 and are (informally) managed since 1993 by the Department of Fisheries and Marine Resources (DFMR). The Marine Park network comprises 7 zones (Hodge 2011): Dog Island; Sandy Island; Sombrero Island; Prickly Pear Cays and Seal Island Reefs; Junks Hole; Little Bay; Shoal Bay and Island Harbour Reefs. Little Bay and Sandy Island Marine Parks have extensive seagrass beds. The Marine Parks were mainly designed to protect coral reefs, except the zone of Junks Hole that has more recreational outcomes (Hodge 2011, DFMR pers. comm. 2015).

The Marine Parks cover only marine areas around the islets, except for Sombrero Island that is a land-sea reserve (Wynne 2013).

The islets of Dog Island, Scrub and Prickly Pear East are privately owned, however licenses and permission for construction must be technically granted by the Government of Anguilla (Hodge et al. 2008).

The **Marine Park Act** has been established in 1991 and Marine Parks have been legally demarcated in 2007.

Conservation of specific sites

- 2 wreck sites are protected as "Areas of Historic Interest" under the 1982 Antiquities Ordinance.

➤ On-going projects - Projects under study

- **ACRAMAM** project (Anguilla Coastal Resource Assessment, Monitoring and Management): The coast and nearshore waters of Anguilla are an important livelihood resource for islanders and biodiversity habitat. Quality information is needed about (1) the nature of development pressures on land and from storm surges and overfishing, (2) the extent of the impact and (3) their intensity in order to make sensible management interventions. This project has several outcomes:

- Mapping of coastal resources and quantification of resource changes between 1991 and 2004.
- Development of an integrated GIS combining data from the field with planning, administrative and management information.
- Training provided to key stakeholders.

- Ecosystem assessment of Anguilla's wetlands
- Anguilla coastal assessments
- Anguilla Marine Monitoring Programme (AMMP, since 2007): this programme has been initiated by the Government of Anguilla's Department of Fisheries and Marine Resources, 15 monitoring sites (5 seagrass beds and 10 coral reef sites) are surveyed around Anguilla.
- Seabird assessments
- Sea turtle assessments: foraging and nesting populations
- Using seabirds to inform Caribbean marine planning
- Conservation plan for the Lesser Antilles iguana (*Iguana delicatissima*)
- Proposed RAMSAR sites (Pienkowski 2005, ANT 2015):
 - Sombrero Island,
 - Dog Island and Middle Cay,
 - Prickly Pear Cays (East and West),
 - Scrub and Little Scrub Islands,
 - the Anguilla mainland wetlands of Caul's Pond and Long Salt pond.

The Government of Anguilla has approved the designation of Sombrero Island as a RAMSAR site. The Anguilla National trust is currently updating Ramsar information sheet for submission to the Foreign Commonwealth Office.

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- **Action Plans, Strategic and management plans, Policy** (Hodge 2011, Pelembe and Cooper 2011)
 - **Management Plans**
 - Anguilla National Environmental Management Strategy and Action Plan 2005-2009 (Government of Anguilla, Homer 2005)
 - Management Plan for the Marine Parks of Anguilla (Hoggarth 2001)

- **International recognition of natural habitats and wildlife**
 - Important Bird Areas (IBAs) identified on Anguilla (5 091 ha). 13 out of the 16 IBAs are located outside the limits of the Marine Parks and have no protection status.

- **International Treaties and Conventions**
 - Bonn Convention (or the Convention on Migratory Species of Wild Animals, CMS)
 - RAMSAR Convention on Wetlands of International Importance
 - World Heritage Convention concerning the Protection of the World Cultural and Natural Heritage
 - Convention on International Trade in Endangered Species of Wild Fauna and Flora
 - CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

- **Biological importance of the ecosystems**
 - Species outcomes**
 - **Table 1** - List of threatened species. References: UICN RedList, Department of Environment of Anguilla. 2011, Edgar 2010, Genoways et al. 2007, Godley et al. 2004, Hodge et al. 2008, Hodge 2011, Wynne 2007.

Taxonomic group	Threatened species
Plants	
EN	<i>Guaiacum officinale</i> , <i>Swietenia mahagoni</i>
VU	<i>Zanthoxylum flavum</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Dendrogyra cylindrus</i> , <i>Agaricia lamarcki</i> *, <i>Dichocoenia stokesii</i> , <i>Montastrea</i> complex: <i>Montastraea franksi</i> , <i>Mycetophyllia ferox</i> *
Fish	
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Makaira nigricans</i> , <i>Lachnolaimus maximus</i> * (rare), <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> * (rare), <i>Megalops atlanticus</i>
Sharks and rays	
VU	<i>Rhincodon typus</i> *, <i>Manta birostris</i> *
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Iguana delicatissima</i> , <i>Alsophis rijgersmaei</i> , <i>Chelonia mydas</i> , <i>Caretta caretta</i> *
VU	<i>Ameiva corax</i> , <i>Ameiva corvina</i> , <i>Ctenonotus pogus</i> (possibly extirpated, last observation in 1922), <i>Dermodochelys coriacea</i> *

*Occ.: occasional species by themselves are not considered for the selection of KBAs

- **Table 2** - List of species geographically restricted (References: Department of Environment of Anguilla. 2011, Edgar 2010, Genoways et al. 2007, Godley et al. 2004, Hodge et al. 2008, Hodge 2011)

Taxonomic group	Number of endemic species
Plants	<ul style="list-style-type: none"> - several plant species restricted to the Lesser Antilles - 1 plant species endemic to Anguilla: Anguilla Bush (<i>Rondeletia anguillensis</i>) - Anguilla is also home to two Caribbean endemic genera: <i>Dendropemon</i> (1sp.) and <i>Hypelate</i> (1sp.).

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Reptiles	<ul style="list-style-type: none"> - 2 species endemic to Anguilla: Anguilla Black Ameiva (<i>Ameiva corax</i>, present on Little Scrub), Sombrero ameiva (<i>Ameiva corvina</i>, present on Sombrero Island), <i>Sphaerodactylus</i> sp. nov. potentially endemic to Sombrero - 5 species restricted to the Anguilla Bank: Anguilla Bank ground lizard (<i>Ameiva plei</i>), Anguilla Bank Tree Lizard (<i>Anolis gingivinus</i>), Dwarf Gecko (<i>Sphaerodactylus parvus</i>), Anguilla Bank Skink (<i>S.powellii</i>), Leeward Island Racer (<i>Alsophis rijgersmaei</i>), Anguilla bank bush anole (<i>Anolis pogus</i>-possibly extirpated) - 2 species restricted to the Lesser Antilles: Lesser Antilles Iguana (<i>Iguana delicatissima</i>), Least Island Gecko (<i>Sphaerodactylus sputator</i>)
Birds	<ul style="list-style-type: none"> - 5 bird species restricted to the Lesser Antilles and Puerto-Rico: Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Antillean crested hummingbird (<i>Orthorhynchus cristatus</i>)
Mammals	<ul style="list-style-type: none"> - 2 species of bats endemic of the Lesser Antilles and Puerto-Rico: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Insular Single-leaf Bat (<i>Monophyllus plethodon</i>)
Total	<ul style="list-style-type: none"> - 3 species endemic to Anguilla - 5 species endemic to the Anguilla Bank - 9 species endemic of the Lesser Antilles-Puerto Rico region

Habitat outcomes

➤ Terrestrial and coastal areas (Brown and Collier 2004, Hodge et al. 2008)

- Katouche Valley (IBA) is one of the only remaining forested areas in Anguilla: presence of 5 EBA bird species with high densities of Pearly-eyed thrasher (Brown and Collier 2004)
- The endemic plant, Anguilla Bush *Rondeletia anguillensis* is mainly concentrated on the northern and eastern side of the island (Howard and Kellogg 1987, Samuel 2009): Deep Waters (north of Caul's pond), Little Bay (near Flat Cap Point).
- The islets of Little Scrub and Sombrero gather endemic reptiles, these populations are at risk due to the small areas of their habitats.
- Little Scrub islet has at least 40% of vegetation cover mainly confined in the center of the islet. This islet is the habitat of the endemic and vulnerable Anguilla Black Ameiva (*Ameiva corax*) (Department of Environment 2011).
- Sombrero Island is home to the endemic and vulnerable Sombrero ameiva (*Ameiva corvina*) and to the potential endemic *Sphaerodactylus* sp. nov. Sombrero was the site of extensive phosphate mining and the severe alteration of this habitat has rendered the island's endemic reptiles especially vulnerable to the effect of natural threats (hurricane, storm).
- Mangroves are present around almost all ponds.
- Coastal cliffs are located mostly on the northern part of the island
 - **Pond areas** (References: Hodge et al. 2008).
- 30 ponds occur in Anguilla: 25 on the mainland and 5 ponds located on the islets of Dog Island, Prickly Pear East, and Scrub Island. Most of the ponds are privately owned.
- 12 ponds on the mainland are identified as IBAs.
- Mangroves (mainly buttonwood, *Conocarpus erectus*) are observed around most of the ponds, particularly around Cauls Pond, Cove Pond, Long Salt Pond, Meads Pond, MimiPond, Rendezvous Bay Pond (BirdLife database, Farah Mukhida, pers. comm. 2015).
- The ponds network constitute important habitats for wintering and passage Neotropical migratory shorebirds, waterbirds and resident breeding species.

- **Caves** (References: Genoways et al. 2007)

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- Two of the 6 bat species recorded on Anguilla have a distribution limited to the Lesser Antilles and Puerto Rico (*Brachyphylla cavernarum*, *Monophyllus plethodon*).

- Two caves are particularly important for bat populations, including these two restricted-range bat species: Fountain Cavern and Pitch Apple Hole Cavern. The Insular Single-leaf Bat (*Monophyllus plethodon*) also occurs in a cave near Katouche Bay (Iguana cave).

- Coastal areas: sea turtle nesting areas

- Several beaches, among the 35 sandy beaches occurring on the island, are important nesting areas (with more than 10 tracks per year) for the threatened Hawksbill turtle (*Eretmochelys imbricata*-CR), Green turtles (*Chelonia mydas*-EN), Leatherback turtle (*Dermochelys coriacea*-VU) (Godley et al. 2004, Farah Mukhida, Anguilla National Trust, pers. comm. 2015): Captain's Bay (20 tracks recorded in 2014), Blackgardens Bay (34 tracks in 2014), Mimi's Bay (28 tracks in 2014).

- The ANT monitors Dog Island's beaches at least every 6 weeks (Farah Mukhida, pers. comm. 2015). Other sea turtle nesting areas are monitored by the Department of Fisheries and Marine Resources.

- 2 marine turtles (mainly the green and hawksbill turtles) forage in Anguillian coastal waters. Green turtles are particularly abundant in Island Harbour, Sandy Ground, Little Bay and the Forest, Fish Hole Pond, Scrub Island. Suitable foraging habitats for hawksbill turtles include: the extensive reef to the north of the island, Shoal Bay, Junks Hole and Savannah Bay, off the cliffs near North Hill Village (Katouche Bay), off the cliffs at Lower South Hill, Long Bay, Mead's Bay, between Shoal Bay and Blowing Rock, Sandy Hill Bay, Crocus Bay, Little Bay, Forest Bay, Limestone Bay and Scilly Cay, Sombrero island (Godley et al. 2004, Wynne 2013).

- Rendezvous Bay has extensive seagrass beds and is considered as an important foraging area for sea turtles (Wynne 2013).

- Until 1995, there was a turtle fishery in Anguilla. A 5-year moratorium on turtle fishing has been introduced in 1995 and has been extended to end in 2020 (Dow et al. 2007, Godley et al. 2004).

➤ **Important Bird Areas** (References: BirLife International database, Bright et al. 2014, Collier and Brown 2004, Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013; Louise Soanes, Farah Mukhida, Anguilla National Trust, pers. comm. 2015)

- 16 Important Bird Areas (IBAs) are identified on Anguilla covering an area of 5 091 ha (including islets and marine areas). The marine area of only 3 IBAs are protected within the limits of the Marine Parks (Sombrero, Dog Island and Prickly Pears). The land of Dog Island and Prickly Pear East and West are privately owned (Hodge et al. 2008, Lloyd and Mukhida 2013, BirdLife International).

- 5 (out of 38) bird species have a range restricted to the Lesser Antilles (*Eulampis holosericeus*, *Margarops fuscatus*, *Elaenia martinica*, *Loxigilla noctis*, *Orthorhyncus cristatus*). These species are widely dispersed across Anguilla mainland and are particularly abundant in the vegetation of Katouche Valley (IBA). The Pearly-eyed Thrasher (*Margarops fuscatus*) is present in relatively high densities in Anguilla and is not considered as an outcome in terms of biodiversity and conservation purposes.

- Anguilla's offshore cays constitute important breeding and roosting habitats for about 15 seabird species (Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013, Bright et al. 2014, BirdLife International). A recent survey of offshore cays highlighted 5 globally important populations of Red-billed Tropicbirds, Brown Boobies, Sooty Terns and Bridled Terns; 5 neo-tropical important colonies of Roseate Terns and Laughing Gulls) and a further 10 bird populations of regional importance (Soanes et al. 2013, Bright et al. 2014, Anguilla National Trust seabird monitoring plan).

- **Dog Island** is the second most important seabird island in the Caribbean in terms of number of breeding species, with 10 breeding seabird species, including over 135 000 pairs of Sooty terns (*Onychoprion fuscatus*) (Soanes et al. 2013, Bright et al. 2014, Churchyard et al. 2014). This site is globally important for populations of Brown Boobies (*Sula dactylatra*) and Red-billed Tropicbirds (*Phaethon aethereus*) and regionally important for Magnificent Frigatebirds (*Fregata magnificens*), Masked Boobies (*Sula dactylatra*), Laughing Gulls (*Leucophaeus atricilla*), and Sooty Terns (*Onychoprion fuscatus*) (Churchyard et al. 2014, Bright et al. 2014).

In 2012, Dog Island was subject of a successful rodent eradication operation (RSPB, BEST project). After the eradication of rats from Dog Island, this island became a globally important site for Red-billed Tropicbirds (*Phaethon*

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aethereus) with a numbers exceeding 1% of the global population. About 100 nests of Red-billed Tropicbirds, 1,231 nests of Brown Boobies, 31 nests of Masked Boobies and 418 nests of Magnificent Frigatebirds were recorded during the survey in 2012 (Bright et al. 2014). Moreover, few specimens of the Audubon's Shearwater (*Puffinus lherminieri*) was observed nesting on the island. It is the third breeding site for this species observed in the Lesser Antilles (Bright et al. 2014).

The colony of Masked Booby on Dog island is one of the four recorded in the Lesser Antilles and is a regionally significant population containing more than 1% of the Caribbean population (BirdLife International 2008, Bright et al. 2014).

- The 25 salt ponds on the mainland support large range of waterbirds and particularly breeding colonies of Least Tern (*Sterna antillarum*) (Allcorn et al. 2009). None of the IBA on the mainland are protected.

➤ Marine habitats

- Seagrass beds:

- Seagrass beds are protected within the area of Sandy Island and Little Bay Marine Parks (Wynne 2013).

- The Marine Park of Little Bay has large extent of seagrass beds in relative good health (mainly dominated by turtle grass) (Wynne 2007).

- Coral reefs:

- The majority of coral reefs are fringing, either to mainland Anguilla or to the offshore cays. A bank reef extends east from Prickly Pear Cay and runs almost parallel to the mainland north coast (Wilkinson 2008). In general, coral reefs around Anguilla can be separated into two geographical regions: northern and southern coastal regions (Wynne 2013).

- Southern coastal reefs are characterized by low benthic diversity and low rocky pavement areas with small hard coral colonies (*Montastraea* sp., *Diploria* sp., *Siderastrea* sp., *Agaricia* sp.) (Wynne 2013).

- Northern coastal region is dominated by patch, barrier and fringing reef systems (*Montastraea* sp., *Diploria* sp., *Siderastrea* sp., *Agaricia* sp.) interspersed by sand and/or algal flats with a combined estimated area of 14,600 ha (Wynne 2013). Few patches of *Acropora palmata* occur along Seal Island reef system (Wynne 2013).

- Between 2007 and 2009, coral cover was on average about 5.7% and ranged between 14.5% on Sandy Island and 0.9 % (Site Bay) (Wynne 2013). Only 3 sites have a hard coral coverage higher than 10%: Long Reef (11.1%) and the Marine Parks of Sandy Island (14.5%) and Shoal Bay East (10.3%) (Wynne 2010, 2013). The remaining sites have a coral coverage under 6% (Wynne 2013). Offshore islets had the highest coral coverage with less macroalgae and high fish biomass (Wilkinson 2008, Wynne 2007).

- Prior the 1980s, reefs around Anguilla were largely pristine with high coral cover. Since then, coral reefs and more particularly Acroporid populations suffered from the white band disease and hurricane impacts. Hurricane Luis in 1995 caused almost total loss of mangroves, halved seagrass cover and severely damaged coral reefs (Wilkinson 2008, Wynne 2013).

In less than 20 years, coral reef coverage dropped from 14% (1990s) to 4% (2009) (Wynne 2013).

- Overall fish abundances are highest on the offshore sites of Scrub Island, Long Reef and Sandy Island (Wynne 2010).

- Highest densities of coral reef fishes are observed around the offshore islets of Dog Island, Prickly Pear and Sandy Island, whereas the Marine Park of Shoal Bay-Island Harbour has the lowest densities (Wynne 2007).

➤ Corridors

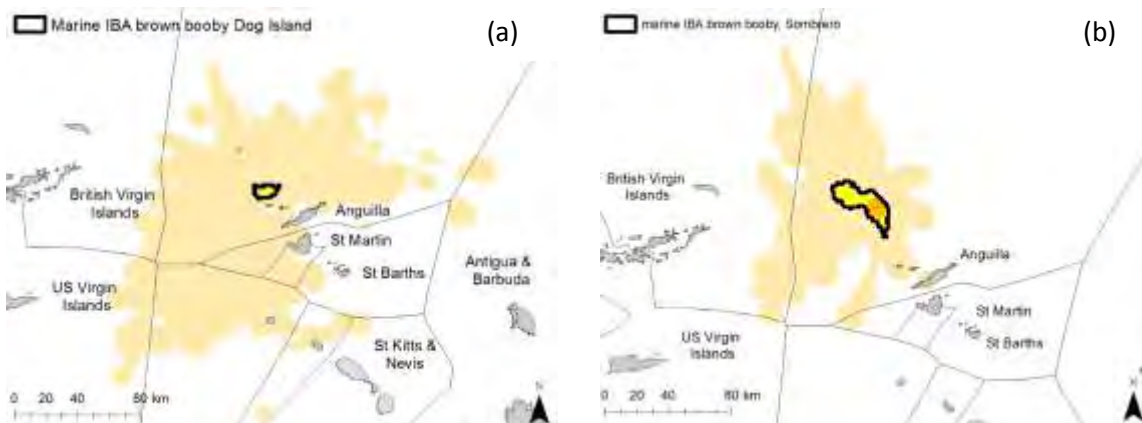
- The East Caribbean Islands are important resting and foraging areas for migratory birds (winter or summer transient species) on to their northern or southern migrations. Anguilla is the most northern island of the Lesser

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Antilles, it is believed to be one of the first resting area for birds during their southern migration and of the last stops on their way back north (Lloyd and Mukhida 2013).

- An on-going research project lead by Louise Soanes (University of Liverpool) and the ANT aims to study seabird populations on offshore cays, to provide baseline data on seabird abundance and to study birds migration among islands using GPS tracking.

- ANT has been working with BirdLife International to identify marine IBAs around Anguilla. These sites constitute important at-sea areas that are used by globally important breeding populations. Tracking information of seabird populations enable to underline foraging areas and marine IBAs for Brown Boobies and Masked Boobies.



Foraging area and marine IBA for Brown Boobies on Dog Island (a) and Sombrero (b). These populations are of globally importance and qualify for marine IBAs (Louise Soanes pers. comm. 2015, ANT, BirdLife International).



Important foraging area for Masked Boobies on Dog Island and Sombrero and Brown Boobies on Prickly Pear. These populations are of regional importance and do not qualify as marine IBAs (Louise Soanes pers. comm. 2015, ANT, BirdLife International).

- All bat species observed in Anguilla occurred on both side of Anegada Passage suggested that this Passage has only a limited impact as a zoogeographic barrier for the chiropteran species (Genoways et al. 2007).

- Satellite tracking of Humpback whales showed a strong connectivity between northern lesser antilles (Anguilla, St-Martin/St-Maartin, St-Barthélemy, Barbuda, Virgin Islands) (Fossette et al. 2014; project MEGARA 2014).

- Satellite tracking of sea turtles reveal a strong connectivity between the northern Lesser Antilles (Harrison 2006). A female hawksbill was tagged after nesting on St-Eustatius, swam over 700 km in 40 days and migrate towards St-Barthélemy, St-Maarten/St-Martin, Anguilla and the US Virgin Islands (Harrison 2006).

➤ List of Species at key stages in their life-cycles /aggregations

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- Anguilla's offshore cays constitute important breeding and roosting habitats for about 15 seabird species with some of them congregating in important numbers and representing more than 1% of the global population.

- Marine mammals, such as the Humpback whales, occur in the water of the Anguilla bank to reproduce between December and June.

Table 3: Trigger criteria for the KBAs identified in Anguilla.

N. KBA	KBAs	Criteria
KBA 1 - Offshore cays and Marine Park system	Sombrero Island	<p>Marine ecosystem</p> <ul style="list-style-type: none"> - Marine Park (islet and marine zone): protection of coral reefs (monitorings on this remote island don't occur on a regular basis) - Presence of threatened marine species: Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>) <p>Birds</p> <ul style="list-style-type: none"> - IBA (Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013, BirdLife International): <ul style="list-style-type: none"> - important breeding site for 6 seabird species, including numerous breeding pairs of Masked Bobby (regionally important population), Brown Booby (regionally important pop.), Brown Noddy (regionally important pop.), Bridled Tern (globally important pop.) (Soanes et al. 2013). - first observation of globally important breeding colonies of Bridled Terns (<i>Onychoprion anaethetus</i>) in Sombrero island (Soanes et al. 2013). <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of the vulnerable and Anguilla's endemic Sombrero ameiva (<i>Ameiva corvina</i>) (Only site where this species occurred) - Presence of reptile species endemic of the Anguilla Bank, Anguilla Bank Tree Lizard (<i>Anolis gingivinus</i>) - Presence of a new reptile species potentially endemic of Sombrero island (undescribed species): Sombrero Dwarf Gecko (<i>Sphaerodactylus</i> sp. nov.) <ul style="list-style-type: none"> - Designation as a RAMSAR site (in project) - A Rapid Assessment of Sombrero Island was done in 1999, in response to a major destructive development proposal.
	Dog island	<p>Marine ecosystem</p> <ul style="list-style-type: none"> - Marine Park (the islet is privately owned): important coral reefs. Protection of coral reefs within the MP system - High densities of coral reef fishes within the Marine Park - Presence of threatened marine species: <i>Acropora palmata</i>, Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>) - Nesting site for Green turtles. <p>Birds- IBA (Bright et al. 2014, Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013, BirdLife International):</p> <ul style="list-style-type: none"> - important breeding site for seabird species, such as Brown Boobies, Red-billed tropicbirds, Magnificent Frigatebirds (regionally important population), Masked Boobies (regionally important pop.), Laughing gulls (neo-tropically important pop.), Brown Noddies (regionally important pop.), Sooty Terns, Bridled Terns, Least Terns (regionally important pop.). - one of the most important breeding colony of Sooty Tern (<i>Onychoprion fuscatus</i>) of the insular Caribbean nests on Dog Island: over 135,000 pairs breeding in 2013 (Soanes et al. 2013) (about 9.5% of the global population). - This islet is globally important for breeding populations of Brown

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		<p>Boobies (<i>Sula dactylatra</i>), Red-billed Tropicbirds (<i>Phaethon aethereus</i>) and Sooty Terns (<i>Onychoprion fuscatus</i>) (Bright et al. 2014) .</p> <p>Reptiles- Presence of reptile species endemic of the Anguilla Bank: Anguilla Bank ground lizard (<i>Ameiva plei</i>), Anguilla Bank Tree Lizard (<i>Anolis gingivinus</i>), Little Woodslave (<i>Sphaerodactylus parvus</i>), Anguilla Bank Skink (<i>S.powellii</i>)</p> <p>- Presence of reptile species endemic of the Lesser Antilles: Least Island Gecko (<i>Sphaerodactylus sputator</i>)</p> <p>Plants</p> <p>- Presence of plant species restricted to the Lesser Antilles and Puerto-Rico: Turks' head (<i>Melocactus intortus</i>)</p>
	Prickly Pear East & West and Seal Island Reef system	<p>Marine ecosystem</p> <p>- Marine Park: important coral reefs. Protection of coral reefs within the MP system (Prickly Pear East islet is privately owned)</p> <p>- Presence of threatened marine species: <i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>)</p> <p>- High densities of coral reef fishes within the Marine Park</p> <p>Birds</p> <p>- IBA (Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013, BirdLife International):</p> <ul style="list-style-type: none"> - Important breeding site for 7 seabird species: Red-billed Tropicbird, Brown Pelican, Brown Booby, Laughing Gull, Least Tern, Bridled Tern, Brown Noddy. - large breeding colonies of Brown Boobys (185 pairs in 2013, regionally important population) and Laughing Gulls (165 pairs in 2013, neo-tropical important population) (Soanes et al. 2013). - first observation of globally important breeding colonies of Red-billed Tropicbirds (<i>Phaethon aethereus</i>) in Prickly Pear West (Soanes et al. 2013).
	Little Bay	<p>Marine ecosystem</p> <p>- Marine Park: protection of coral reefs, presence of extensive seagrass beds</p> <p>- Presence of threatened marine species: Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>)</p> <p>Reptiles</p> <p>- Sea turtles foraging area.</p> <p>- Northern of Little Bay: presence of <i>Iguana delicatissima</i></p>
	Crocus Bay	- Extensive seagrass beds
	Limestone Bay and Blackgardens Bay	<p>Marine ecosystem</p> <p>- Important coral reef sites.</p> <p>- Presence of threatened marine species: <i>Dendrogyra cylindrus</i>, <i>Megalops atlanticus</i> (Limestone Bay)</p> <p>Reptiles</p> <p>- Nesting site for the 3 sea turtle species Hawksbill turtle, Green turtles, Leatherback turtle (Blackgardens Bay)</p>
	Sandy island	<p>Marine ecosystem</p> <p>- Marine Park: important coral reefs. Protection of coral reefs within the MP system, presence of seagrass beds.</p> <p>- Presence of threatened marine species: <i>Acropora cervicornis</i>, <i>Montastraea annularis</i>, Queen Triggerfish (<i>Balistes vetula</i>), Nassau</p>

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		<p>Grouper (<i>Epinephelus striatus</i>)</p> <ul style="list-style-type: none"> - Coral coverage higher than 10 % around the island (14.5%) - High densities of coral reef fishes within the Marine Park <p>Reptiles</p> <ul style="list-style-type: none"> - Sea turtles foraging area.
	Shoal bay and Island Harbour Marine Park	<p>Marine ecosystem</p> <ul style="list-style-type: none"> - Marine Park: important coral reefs. Protection of coral reefs within the MP system - Coral coverage higher than 10 % at Shoal Bay East (10.3%) - Presence of threatened marine species: <i>Montastraea annularis</i>, Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>) <p>Reptiles</p> <ul style="list-style-type: none"> - Sea turtles foraging area.
<p>KBA 2 - Windward point - Scrub and Little Scrub islets</p>	Windward point	<p>Plants</p> <ul style="list-style-type: none"> - Presence of restricted-range plant species: Turk's head (<i>Melocactus intortus</i>), <i>Mammillaria nivosa</i> <ul style="list-style-type: none"> - Nesting site for the 3 sea turtle species Hawksbill turtle, Green turtles, Leatherback turtle (Captain's Bay)
	Junks Hole	<p>Marine ecosystem</p> <ul style="list-style-type: none"> - Marine Park: recreational area - Presence of threatened marine species: Queen Triggerfish (<i>Balistes vetula</i>), Nassau Grouper (<i>Epinephelus striatus</i>)
	Scrub island	<p>Birds</p> <ul style="list-style-type: none"> - IBA (Scrub and Little Scrub Islands) (Bright et al. 2014, Hodge et al. 2008, Lloyd and Mukhida 2013, Soanes et al. 2013, BirdLife International): <ul style="list-style-type: none"> - Important breeding site for seabird species, including: Laughing Gull (neo-tropically important population), Least Tern, Bridled Tern, Roseate Tern, Brown Noddy (regionally important population). The Roseate Tern is considered as a trigger species and a neo-tropical important colony in Scrub Island with 66 breeding pairs recorded in 2013 (Lloyd and Mukhida 2013, Soanes et al. 2013). - Presence of restricted-range bird species: Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>) - the rare Audubon's Shearwater (<i>Puffinus lherminieri</i>) was observed breeding on Little Scrub (Bright et al. 2014, Soanes et al. 2013, Anguilla Dpt of Environment). <p>Marine ecosystem</p> <ul style="list-style-type: none"> - High densities of coral reef fishes, coral reefs - Presence of threatened marine species: <i>Acropora palmata</i> <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of reptile species endemic of the Anguilla Bank: Anguilla Bank Tree Lizard (<i>Anolis gingivinus</i>), Anguilla Bank ground lizard (<i>Ameiva plei</i>), Little Woodslave (<i>Sphaerodactylus parvus</i>); and of the Lesser Antilles: Least Island Gecko (<i>Sphaerodactylus sputator</i>) <ul style="list-style-type: none"> - Foraging area for sea turtles <p>Plants</p> <ul style="list-style-type: none"> - Presence of threatened plant species: West Indian Satinwood (<i>Zanthoxylum flavum</i>) <ul style="list-style-type: none"> - Scrub island is privately owned.

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	Little Scrub	<p>Birds Little Scrub is included in the IBA of Scrub and Little Scrub islands (cf data above).</p> <p>Reptiles - Only habitat for the endemic and vulnerable Anguilla Black Ameiva (<i>Ameiva corax</i>)</p> <p>Plants - Presence of plant species restricted to the Lesser Antilles - Puerto Rico: Turk's head (<i>Melocactus intortus</i>)</p>
KBA 3 - Ponds & IBAs	<ul style="list-style-type: none"> -West end pond -Cove pond -Merrywing pond - Meads Bay pond - Rendez vous Bay Pond - Road Salt Pond - Forest Bay Pond - Caul's pond - Long Salt pond - Grey pond - Mimmy Bay - East End Pond 	<p>Birds - IBA (Hodge et al. 2008, Lloyd and Mukhida 2013, BirdLife International): - Presence of 4 restricted-range bird species: Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Trasher (<i>Margarops fuscatus</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>) - Presence of congregatory seabird species: Brown Pelican, Laughing Gull, Common and Least Terns. - Least Terns is a trigger species for the IBAs of Cove Pond and Grey Pond with more than 100 pairs breeding in 2010 and for Long Salt Pond with about 444 pairs breeding in 2007 (Lloyd and Mukhida 2013).</p> <p>Ecosystems - Mangroves around the ponds.</p> <p>Management of sites: - East End Pond: Conservation area managed by Anguilla National Trust</p>
KBA 4 - Forest areas and bat caves	<p>Katouche area</p> <hr/> <p>The Valley</p>	<p>Terrestrial ecosystem - Only remaining forested area in Anguilla. High diversity of plant species including orchid species with <i>Tetramicra elegans</i> and <i>Psychilis correllii</i> that are restricted to the Lesser Antilles. - 1 species endemic to Anguilla (<i>Rondeletia anguillensis</i>)</p> <p>Birds - IBA: - Presence of restricted-range bird species: Caribbean Elaenia (<i>Elaenia martinica</i>), Pearly-eyed Trasher (<i>Margarops fuscatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>). Particular high-densities of Pearly-eyed trasher. - One of the only remaining forested area in Anguilla.</p> <p>Reptiles - Presence of endemic reptiles to Anguilla Bank: Black racer (<i>Alsophis rijgersmaei</i>)</p> <p>Mammals - Presence of the Insular Single-leaf Bat (<i>Monophyllus plethodon</i>) (cave at the north of Katouche Bay)</p> <hr/> <p>- Scientific and research reserve (3 ha)</p> <p>Terrestrial ecosystem - Presence of the threatened plant species: West Indies Mahogany (<i>Swietenia mahagoni</i>), Guaiac Tree (<i>Guaiacum officinale</i>) - 1 species endemic to Anguilla (<i>Rondeletia anguillensis</i>)</p> <p>Birds - High densities of the restricted-range birds species Pearly-eyed Trasher</p>

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KBA 5 - Marine areas (outside the MPA network)		<p><i>(Margarops fuscatus)</i></p> <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of reptiles endemic to the Anguilla Bank: Leeward Island Racer (<i>Alsophis rijgersmaei</i>)
	Fountain Cavern and Pitch Apple Hole	<p>Mammals</p> <ul style="list-style-type: none"> - Presence of 2 bat species endemic of the Lesser Antilles and Puerto Rico: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Insular Single-leaf Bat (<i>Monophyllus plethodon</i>)
KBA 5 - Marine areas (outside the MPA network)	Mimy Bay	<ul style="list-style-type: none"> - Nesting site for the 3 sea turtle species Hawksbill turtle, Green turtles, Leatherback turtle (Mimy Bay)
	Anguillita and Blowing Rock	<p>Marine ecosystems</p> <ul style="list-style-type: none"> - Coral reefs and seagrass beds - Connectivity between seagrass beds and coral reefs - Presence of threatened fish species: <i>Megalops atlanticus</i> <p>Birds</p> <ul style="list-style-type: none"> - Presence of 6 breeding seabird species in Anguilla recorded in 2013 (Soanes et al. 2013), including numerous breeding pairs of Roseate Terns (40 breeding pairs, regionally important population) and Laughing Gulls (57 pairs).
	Rendezvous Bay	<ul style="list-style-type: none"> - Presence of extensive seagrass beds - Sea turtles foraging area.



Maps of the KBAs for Anguilla.

➤ National environmental legislation

- **Environmental Charters** were signed in 2001 between UK and UK OTs, including all the OTs in the Caribbean region: Cayman islands, Montserrat, Anguilla, Virgin Islands, Turks and Caicos Islands.

- **Environment Charter for Anguilla:** this Charter is an agreement with the United Kingdom Government signed in 2001 that includes several objectives such as:
 - Ensuring the protection and restoration of key habitats, species and landscape features through legislation and appropriate management structures and mechanisms, including a protected areas policy, and attempt the control and eradication of invasive species.
 - Ensuring that environmental considerations are integrated within social and economic planning processes; promote sustainable patterns of production and consumption within the territory.
 - Undertaking environmental impact assessments before approving major projects and while developing our growth management strategy.
 - Commit to open and consultative decision-making on developments and plans which may affect the environment; ensure that environmental impact assessments include consultation with stakeholders.

- 18 Acts and Regulations related to biodiversity conservation and the environment, among them:
 - **Anguilla National Trust Act:** ANT has been established by law in 1998 to preserve and promote island's natural environment and its archaeological, historical and cultural resources.
 - **Access to beaches Act:** This Act gives everyone the right to use any beach for open-air recreation or fishing as long as they do not cause any damage, their boats do not exceed 50 ft in length, and they do not engage in any illegal activity or fail to comply with rules governing their conduct as set out in the Act.
 - **Beach protection Act** – Ordinance No. 101988: 18 beaches and foreshores are protected from sand mining and aggregate removal.
 - **Beach control Act** – Ordinance No. 101988: The utilization of foreshore and floor of the sea are prohibited except by license granted by the Minister.
 - **Biodiversity and Heritage Conservation Act:** the purposes of this Act are:
 - (a) To support and promote the conservation of wildlife species, their habitats and their ecosystems;
 - (b) To prevent wildlife species from being extirpated or becoming extinct;
 - (c) To prevent vulnerable species from becoming endangered or threatened;
 - (d) To support and promote the conservation of heritage sites and listed buildings in Anguilla;
 - (e) To protect heritage objects in Anguilla from being exported.
 - **Wild Birds Protection Act-** Ordinance 1913: protects specified wild bird species, their nests and eggs, and establishes an open hunting season for specific game birds (Mountain Dove, Wild Pigeon).
 - **Plant protection Act**– Ordinance No. 21981: Plants are protected on the foreshore and inside an area extending no more than 100 feet beyond the landward limit of the foreshore.
 - **Fisheries Protection Act** - Ordinance No. 41988: applies to territorial waters plus the contiguous 200 mile fisheries zone. It provides for the appointment of Fisheries Officers and gives them enforcement powers. The Ordinance regulates the taking and killing of a list of marine species, and establishes open fisheries seasons. It repeals the Turtles Ordinance No.6 of 1984. Details of the policing of fisheries are set out in the Fisheries Protection Regulations No. 12 1988 and the Fisheries Protection (Amendment) Regulations No. 4 1990.
 - **Cruising permit Act** regulating charter boat cruising.
 - **Land Development Act** - This Act prescribes the establishment and function of the Land Development Control Committee and the Regulations specify the procedures for land development permission.
 - **Marine Park Act** - This Act prescribes the procedures for the designation of marine parks, appointment and powers of a Controlling Officer, and acquisition of land for marine parks.
 - **Quarantine Act** - This Act deals primarily with public health issues and the control of persons with infectious diseases arriving by ship or aircraft. Provisions are also made in the regulations for control of pest and diseased materials, including plants coming from areas with specified diseases.
 - **Trade in Endangered Species Act** - An Act to further the protection and conservation of endangered, threatened and exploited species of wild fauna and flora by regulating the export and import of specimens of those species and thereby enable Anguilla to fulfill its obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

➤ **Policy, Programmes and Action Plans**

- **Environment Charter**: this Charter is an agreement with the United Kingdom Government signed in 2001
- **Anguilla National Biological Diversity Strategy and Action Plan (NBSAP) (2009)**: Anguilla National Biological Diversity Strategy and Action Plan 2006 & Beyond, Anguilla (OTEP ANG403). It provides a further mechanism for Anguilla to discharge its obligations under the Environmental Charter and the National Environmental Management Strategy and Action Plan.
- **National Environmental Management Strategy and Action Plan (2005-2009)**, it establishes the key strategies and priority areas and prescribes the activities to be developed by the different agencies.
- **Anguilla Invasive Species Strategy**: strategy that aims to provide specific recommendations regarding ports of entry, new invasive species, management of established invasive species, community involvement and assessment of the marine environment. The Department of Fisheries and Marine Resources has developed a Lionfish Response Plan (2009) to deal with the social, economic, and ecological impacts of the invasion of this exotic fish species into Anguilla's waters.
- **Strategic Country Programme (SCP, revised in March 2003)**: The Environment Section of this policy document, established between the Government of Anguilla and the Government of UK, aims to support the livelihoods of the people of Anguilla through sustainable management of the environment.
- **Native Plant and Animal Habitat Conservation (Biodiversity) Policy (2001)**: This policy establishes the need for protection of key habitats and species, selected by adequate criteria, the need for public participation in planning and management, and the need to establish agreements with the landowners, acquire lands, avoid invasive species, and promote access to information on biodiversity.
- **St Georges Declaration of Principles (2001)**: 21 principles for Environmental Sustainability in the Organisation of Eastern Caribbean States (OECS). The principles that are considered priority for Anguilla serve as the basis of the development of the **National Environmental Management Strategy and Action Plan (NEMS)**.
- **Climate Change Policy (2012) and Comprehensive Disaster Management Policy (2013)**: It aims at incorporating comprehensive disaster management and climate change adaptation into all aspects of development and daily lives, creating a culture of safety and sustainability.

Main threats to biodiversity (Hodge 2011)

- **Exotic invasive species**: Exotic invasive species (such as the lionfish, the green iguana, the Cuban tree frog, the African giant snail, brown and black rats, mice) have a negative impact on Anguilla's biodiversity. Many exotic species have been introduced by the importation of containers with exotic plants or other building materials to supply island development. Rats have a negative impact on biodiversity located on offshore Cays (Prickly Pear, Scrub island). Mice occur on Sombrero island.
- **Land use and human impacts**: growing pressure from physical development that has impacted terrestrial and marine ecosystems, fragmentation or degradation of habitats (dry scrubs, mangroves), pollution, over-fishing.
- **Coastal zone issues**: land reclamation, urban development.
- **Climate change**: rising sea temperature, rising sea levels, ocean acidification, more frequent and intense hurricanes and tropical storms

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Fundings dedicated to biodiversity and conservation.

Funding resources	Beneficiary / Projects
- Ecological assessment, mapping and Monitoring	
Overseas Territories Environment Programme (OTEP) / Dpt for International Development (UK) / Foreign Commonwealth Office / Government of Anguilla	Anguilla Coastal Resources Assessment Monitoring and Management Project (ACRAMAM) (2004-2007)
Overseas Territories Environment Programme (OTEP)	ANT / Foundation for Anguilla's wetlands future (2010)
	ANT / Conservation of Anguilla's wetlands (2011)
Ramsar Secretariat	ANT / Developing a platform for wetlands conservation (2014)
Overseas Territories Environment Programme (OTEP) & JNCC	Ecological assessment of Little Scrub Island (2010)
JNCC	Terrestrial habitat mapping for Anguilla (2011-2012)
JNCC	Wetlands Ecosystem Assessment (2011-2012)
DEFRA	Marine habitat mapping for Anguilla (2012-2013)
UK Government - Dpt for International Development (DFID)	Project in Fisheries enforcement and management (2011)
DCF	Anguilla National Ecosystem Assessment – A Foundation for Green Economy (2012-2013)
Fauna & Flora International - Flagship Species Fund	ANT / Strengthening the conservation of seaturtle nesting populations (research and capacity building in Anguilla) (2009-2010-2014)
Rufford Small Grant for Nature	ANT / Feasibility study for the reintroduction of the endangered Lesser Antillean Iguana to Dog Island, Anguilla
International Iguana Foundation	ANT / Establishing baseline population and distribution data to inform population recovery of Iguana delicatissima on Anguilla
Royal Society for the Protection of Birds	ANT / Offshore Cay seabird monitoring programme (2012)
Society for the Conservation and Study of Caribbean Birds	ANT / Seabird monitoring on Anguilla's Offshore Cays (2013)
Darwin Plus Initiative	ANT - Univ. Liverpool - Jost Van Dykes Preservation Society / Using seabirds to inform marine spatial planning (2013)
Mohamed bin Zayed species conservation fund	Translocation of the threatened Lesser Antilles iguana (Iguana delicatissima) to Prickly Pear East.
- Exotic invasive species and Wildlife recovery	
JNCC	Anguilla Invasive Species Project and Management Project (ACRAMAM) (2009)
JNCC	Lionfish Response Strategy Project for Anguilla (2013-2014)
National Fish and Wildlife Foundation / Anguilla Governor's Office	ANT / Exotic invasive species eradication and control on Dog Island (rats, goats,...) (2011)
Royal Society for the Protection of Birds / BEST Initiative	ANT / Conserving species and sites through the eradication of invasive alien species (2013)
Rufford Small Grant for Nature	ANT / Monitoring wildlife recovery on a restored Dog Island, Anguilla
- Environmental/conservation legislation - Multilateral Env. Agreements - Env economics	
	Technical assistance for drafting environmental/conservation legislation that will enable affordable and appropriate Multilateral Environmental Agreements to be extended to Anguilla (2004-2006)
Overseas Territories Environment Programme (OTEP)	Enhancing CITES implementation in Anguilla (2010)
FCO/JNCC	Environmental Economics (2013)
Royal Society for the Protection of Birds	ANT / Planning for Nature-based Tourism in Anguilla (2013)
- Monitoring and Management Plans / Biodiversity Strategy and Action Plan	
Overseas Territories Environment Programme (OTEP)	Anguilla Biodiversity Strategy and Action Plan Scoping Study and Workshop (2006)
	Anguilla National Biological Diversity Strategy and Action Plan (2007-2008)
Darwin Plus Initiative	ANT - Nat. Trust for the Cayman Islands - RSPB / Promoting the creation and appropriate management of PAs (2013)
- Energy	
	Anguilla National Energy Policy (2008-2010)
Governor's Office of Anguilla	ANT / Wave Energy and Energy Independence in Anguilla (2013)
- Agriculture	
Overseas Territories Environment Programme (OTEP)	Organic Soil Amelioration for Enhancing Anguilla's Agricultural Adaptation to Climate Change (2010)
LIME	ANT / Promoting local and culturally important plants (2011)
- Educational programs	
Government of Anguilla	ANT / Youth ESCAPE – Educational, cultural and environmental program (funded over the past 6 years)

- A collaboration between Kew RBG and Anguilla's Department of Environment (DoE) focused on the study of the endemic Anguilla Bush (*Rondeletia anguillensis*)

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- **Institutions and organizations**
 - List of local institutions and organizations

ANGUILLA	Departments, Institutions and Organisations related to environmental and biodiversity conservation.
Government of Anguilla	
Department of Environment (DoE)	Approved in 2005 and formally established in 2006 under the Ministry of Home Affairs, Natural Resources, Lands and Physical Planning. DoE is in charge of providing the framework for holistic environmental management and conservation of biodiversity working to improve and maintain the quality of life and the sustainable use of natural resources.
Department of Fisheries and Marine Resources (DFMR)	Department (created in 1991) in charge of the development and management of Marine Parks, fisheries management (including data collection, fish stock assessment, Monitoring, Control and Surveillance (MCS) and coastal resources management.
Department of Physical Planning (DPP)	Responsible for spatial land use planning and coordinate the development control process.
Department of Agriculture	Optimize the agricultural potential of Anguilla, provide technical assistance, conduct research programmes and transfer technologies to farmers.
Department of Health Protection	Department responsible for solid waste management, for monitor drinking and recreational water quality.
NGOs	
Anguilla National Trust (ANT)	The NGO (established in 1995 based on the Anguilla National Trust Ordinance) manages lands and sites vested to it for natural, historic or cultural preservation as well as the terrestrial protected areas. It is also involved in environmental education programmes, the development of marine parks management plans, wetlands and terrestrial species monitoring. The ANT relies on volunteers and the public to build local knowledge on species, habitat health, and conservation issues.
Youth Environmental Society of Anguilla (YESA)	Established in 2011, this NGO aims to involve youth community in all aspects of environmental protection and promotion.
Environmental Club at A.L.H.C.S.	The NGO (A.L.H.C.S. Albena Lake Hodge Comprehensive School) aims to promote environmental awareness among young people through various programmes and activities focused on environment (hikes, community and school clean-up, beautification projects). It supports activities of other organizations such as the ANT in the conduct of their educative programmes.
Anguilla Beautification Club	Created in 1999, this NGO is in charge of outreach and educational programmes and is involved in a project of Botanical Garden (under study).
Environmental Protection in the Caribbean (EPIC)	Foundation for environmental education and awareness on St. Maarten. EPIC's mission is to protect the Caribbean environment through research and community based action. Projects have included bird research, wetland restoration and conservation, and environmental outreach and education. EPIC conducts bird monitoring surveys on Anguilla.
Royal Society for the Protection of Birds (RSPB)	This charitable organisation is registered in the UK and promotes the conservation and protection of birds, wildlife and the wider environment. This organisation conducts surveys and monitoring campaign in the UK Overseas Territories of the Caribbean region. In Anguilla, RSPB conducts bird surveys and led a rat eradication study on Dog Island (RSPB/OTEP programme)
Birds Caribbean	This NGO is working to conserve the birds of the Caribbean and their habitats through research, education, conservation action and capacity building. Founded in 1988, BirdsCaribbean is the largest single bird conservation organization in the Greater Caribbean region, including Bermuda, the Bahamas and all islands within the Caribbean basin.
Fauna and Flora International	This international conservation organisation (based in the UK) aims to act to conserve threatened species and ecosystems worldwide, choosing solutions that are sustainable, based on sound science and take into account human needs.
Wider Caribbean Sea Turtle Conservation Network (WIDECASST)	WIDECASST is an international scientific network founded in Santo Domingo (Dominican Republic) in 1981 to ensure the survival of six Caribbean sea turtle species. WIDECASST is a Regional Activity Network of the UNEP Caribbean Environment Programme, and is comprised of more than 60 Country Coordinators resident in more than 40 Caribbean nations and territories. Each Country Coordinator works closely with an active national coalition of governmental and non-governmental stakeholders
Joint Nature Conservation Committee (JNCC)	JNCC is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. Originally established under the Environmental Protection Act 1990, JNCC was reconstituted by the Natural Environment and Rural Communities (NERC) Act 2006
Durrell Wildlife Conservation Trust	Conservation organisation which aims to save species from extinction. Durrell works overseas with local governments, communities, and other conservation organisations to save species and their habitats. In Anguilla, this organisation is involved in projects on the Lesser Antillean iguana or the Black racer.
Private sector	
Environment Systems	This company is based in the UK and provides geographic and environmental information consultancy and services. In Anguilla, this company is in charge of mapping terrestrial habitats.
theNRgroup	Association of independent consultants providing a wide range of services promoting sustainable development, and providing consultancy, research, training and advisory services in environment. This association is leading a project of mapping benthic resources in Anguilla.
Research institutions	
Partnership with international research institutions	Although there is no permanent research institution in Anguilla, the local actors develop partnerships with research institutions (i.e. University of Liverpool, University of Roehampton, Univ. Of Westminster, Kew Royal Botanic Gardens...)

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➤ Sectors of activity

- Anguilla's economy relies heavily on tourism, a sector that began expanding rapidly during the 1980s. Financial services are another important economic sectors.
- Traditional industries (boat building, fishing, farming, salt production, livestock rearing) have, in recent years, been overshadowed. Anguilla's fishing industry is largely artisanal and targets lobster and finfish. A small Queen conch fishery is also present. Aside from local demand, the fishing industry is driven by the increasing tourist sector and concerns exist regarding fisheries sustainability and the ecological impact of such activities on marine ecosystems (Wynne 2013).
- Agriculture: with generally poor soils, Anguilla is largely unsuitable for agriculture (several pockets of rich soil are cultivated) (Hodge et al. 2008).

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - VIRGIN ISLANDS (BVI)

Policy and Socioeconomic context

- **Location and Political Status** (Pelembé and Cooper 2011, Government of the BVI - Conservation and Fisheries Department 2011)



- The Virgin Islands, commonly known as British Virgin Islands (BVI), consist of approximately 60 islands, small islets and cays and are located in the northeastern part of the Caribbean, about 60 miles east of Puerto Rico (18°26'N, 18°44'N and 64°20'W, 64°37'W). The BVI are located on the Puerto Rican Bank and are separated from the Lesser Antilles by the Anegada passage.

- Four main islands are part of the BVI: Jost Van Dyke (9 km²), Tortola (54 km²), Virgin Gorda (21 km²), Anegada (38 km², located 25 km north of Virgin Gorda). Tortola is the largest island and supports 80% of the population.

- Most islands are hilly with steep slopes (uplifted submerged volcanoes) except for Anegada, the northernmost island of the BVI, which is a coral limestone platform.

- The BVI are European UK Overseas Territories.

- **Demographic Trends and Socio-economic context** (European OCTs Environmental profile 2015, Pelembé and Cooper 2011)

- Area: 153 km²

- EEZ: 80,117 km²

- Population (2013): 31,912 inhabitants

- GDP / capita (2012): \$29,236

- Main economic activities: financial services and tourism, with yachting being an important sector within the latter industry.

Protected and/or managed areas (References: Government of the BVI - Conservation and Fisheries Department 2011, European OCTs Environmental profile 2015, Pascoe Woodfield et al. 2013, Pelembé and Cooper 2011, Petrovic et al. 2008)

- **List of protected areas**

- The Government of the BVI has developed a well-structured system of marine and terrestrial protected areas that extends throughout the 60 islands and small cays over a total land area of 153.67 km² and marine area of 82,759 km².

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Terrestrial Protected Areas

- Terrestrial areas consist of 19 national parks, 20 bird sanctuaries, 1 forestry reserve (Sage Mountain National Park) and 6 watershed protected areas.
- Flamingo Pond, a salt pond of over 445 hectares on the Western end of the island was declared as the Aneгада Nature Reserve in 1977 and recognized as a Ramsar site in 1999. Ramsar site: Western Salt Ponds of Aneгада (1071 ha) (Ramsar database)

Marine Protected Areas (MPAs) (Pascoe Woodfield et al. 2013)

- There is 15 declared MPAs (over an area of 82,759 km²) comprising 14 fisheries PAs and 1 Marine Park.

Management of Protected Areas

- The National Parks Trust of the Virgin Islands (NPTVI) manages one marine park and 21 terrestrial protected areas (including national parks and 5 bird sanctuaries). The bird sanctuaries are: Dead Chest, Fallen Jerusalem, Great Tobago, Little Tobago and Prickly Pear.
- NPTVI, Jost Van Dyke Preservation Society and the BVI Conservation Department manage Bird Sanctuaries in the BVI. Other Bird Sanctuaries includes George Dog Island, Seal Dogs and Great Dog.
- The Conservation and Fisheries Department manages 14 fisheries protected areas.
- The Agriculture Department manages 6 wetlands and watershed protected areas and 1 forestry protected area.

On-going projects - Projects under study

- In addition to its current network of protected areas, the British Virgin Islands Protected Areas System Plan 2007–2017 (Gardner et al. 2007) has been approved by Cabinet in 2008 and identifies **another 40 areas for inclusion in the marine protected area network**. The National Parks Trust Protected Area Notice is a statutory instrument published in 2014 and provides information on the network of protected areas in the BVI.
- A project named "Biodiversity profile mapping" aims to map the distribution of important, endangered and endemic organisms occurring within the BVI territory. This information will assist with other projects such as habitat monitoring programmes (Government of the BVI - Conservation and Fisheries Department 2011).
- 2013-2015: "Using Seabirds to Inform Marine Spatial Planning" using remote sensing to map seabirds' foraging areas and to better understand marine habitat use. (Jost Van Dyke Preservation Society, National Parks Trust of the VI, RSPB, University of Liverpool).

Proposition of 2 sites recognized as Ramsar sites (Pienkowski 2005):

- Aneгада Eastern Ponds and the Horseshoe reef (300,019 ha)
- Fat Hogs and Bar Bays (20 ha)

International recognition of natural habitats and wildlife

- 1 area recognized as a Ramsar site: Flamingo Pond on Aneгада (1999)
- 3 Important Bird Areas (IBAs, BirdLife International) over 6120 ha

Species and habitats considered in the BEST Initiative

Species outcomes

Table 1 - List of species that are **globally threatened** (References: IUCN Red List, Pelembe and Cooper 2011, Government of the BVI - Conservation and Fisheries Department 2011, Susan Zaluski Jost Van Dyke Preservation Society (JVDPs) pers. comm. 2015). Different status according to the Caribbean Redlist are indicated into brackets.

Taxonomic group	Threatened species
Plants	
CR	Wire wist (<i>Metastelma anegadense</i>)*, Poke-me-boy <i>Vachellia anegadensis</i> *, <i>Varronia rupicola</i> , <i>Calypttranthes kiaerskovii</i> *, <i>Machaonia woodburyana</i> , Sebucan <i>Leptocereus quadricostatus</i> (CR on the Caribbean redlist and EN on the IUCN RedList - this species is restricted to the Puerto Rican Bank)
EN	Caribbean Mayten <i>Maytenus cymosa</i> , Thomas' Lidflower <i>Calypttranthes thomasiana</i> , St Thomas Prickly-ash <i>Zanthoxylum thomasianum</i> , <i>Commoner</i>

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	<i>Lignum Vitae Guaiacum officinale</i>
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i> (hybrid <i>Acropora prolifera</i>)
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i> , <i>Mycetophyllia ferox</i> , <i>Oculina varicosa</i>
Fish	
CR	<i>Epinephelus itajara</i>
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i> (CR on the Caribbean redlist)
VU	<i>Balistes vetula</i> , <i>Hyporthodus flavolimbatus</i> , <i>Mycteroperca interstitialis</i> , <i>Kajikia albida</i> , <i>Makaira nigricans</i> (EN on the Caribbean redlist), <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Thunnus obesus</i>
Sharks and rays	
CR	<i>Pristis pectinata</i> #
VU	<i>Carcharhinus longimanus</i> (CR on the Caribbean redlist), <i>Isurus oxyrinchus</i> , <i>Alopias vulpinus</i> , <i>Rhincodon typus</i> #
Amphibians	
CR	Puerto Rican Crested Toad (<i>Peltophryne lemur</i>) (pot. extirpated from the BVI)
EN	Virgin Islands Coqui (<i>Eleutherodactylus schwartzi</i>) Virgin Islands whistling frog (<i>Eleutherodactylus lentus</i>)
Reptiles	- Several endemic reptile species are highly threatened and should be considered in the IUCN RedList: the Virgin Islands dwarf gecko (<i>Sphaerodactylus parthenopion</i>), the anole <i>Anolis ernestwilliamsii</i> , Carrot Rock Skink (<i>Spondylurus macleani</i>)
CR	Anegada Rock Iguana (<i>Cyclura pinguis</i>)* Virgin Islands Bronze Skink (<i>Spondylurus sloanii</i>)* Culebra giant anole (<i>Anolis roosevelti</i> - presumed extinct in the BVI (Edgar 2010)) Lesser Virgin Islands Skink (<i>Spondylurus semitaeniatus</i>) Hawksbill turtle (<i>Eretmochelys imbricata</i>)
EN	Virgin Island Tree boa (<i>Chilabothrus granti</i>) Green turtle (<i>Chelonia mydas</i>) Loggerhead Turtle (<i>Caretta caretta</i>)#
VU	Leatherback (<i>Dermochelys coriacea</i>)
Birds	
VU	West Indian Whistling-duck (<i>Dendrocygna arborea</i>)#
Mammals	
VU	Red Fruit Bat (<i>Stenoderma rufum</i>)

* Species endemic to the BVI.

occasional species

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Table 2 - List of species that are **geographically restricted** (References: BirdLife International, Barun and Perry 2003, Barun et al. 2007, Churchyard et al. 2014, Edgar 2010, Pelembe and Cooper 2011, Government of the BVI - Conservation and Fisheries Department 2011, Petrovic et al. 2008, Philipbosian and Yntema 1976, Procter et al. 1999, Rodriguez-Robles et al. 2015, Susan Zaluski Jost Van Dyke Preservation Society (JVDPS) pers. comm. 2015, The Reptile Database, Environmental Profile of the Island of Tortola, British Virgin Islands. 2015- Island Re-sources Foundation, KEW RBG, pers. com. 2016, Clive Petrovic, pers. com. 2016)

Taxonomic group	Number of endemic species
Plants	<p>Plant species endemic to the BVI, or to few islands of the BVI:</p> <ul style="list-style-type: none"> - 2 plant species endemic to Anegada: Anegada Acacia (<i>Vachellia anegadensis</i>), Wire wist (<i>Metastelma anegadense</i>), , , - plant species restricted to the BVI: <i>Senna polyphylla</i>, <i>Pitcairnia jareckii</i>, <i>Calyptanthes kiaerskovii</i> (this species was endemic to the Puerto Rican Bank but is potentially extirpated from Puerto Rico) - 1 plant species restricted to the Virgin Islands: <i>Croton fishlockii</i>, <i>Galactia eggersii</i>, <i>Reynosia guama</i> - High diversity of plant species endemic to the Puerto Rican Bank (comprising the islands of Puerto Rico and the Virgin Islands), including: <i>Leptocereus quadricostatus</i> (CR- Status of the Caribbean Red List for this endemic species, about 90% of the world population of this species is found on Anegada (Linsky 2014), Puerto Rico Manjack (<i>Varronia rupicola</i>-CR), <i>Miconia thomasiana</i>, <i>Machaonia woodburyana</i> (CR-endemic to the Virgin Islands), <i>Sabal causiarum</i>, <i>Opuntia repens</i>, <i>Maytenus cymosa</i> (EN), <i>Calyptanthes thomasiana</i> (EN), <i>Zanthoxylum thomasianum</i> (EN), <i>Bastardiopsis eggersii</i>, <i>Erythrina eggersii</i>, <i>Coccothrinax barbadensis</i>, <i>Malpighia woodburyana</i>, <i>Epidendrum boricuarum</i> (end PR to LA area), <i>Tetramicra canaliculata</i>, <i>Odontosoria aculeata</i>, <i>Arachniodes chaerophylloides</i>, <i>Anthurium crenatum</i>, <i>Anthurium x selloum</i>, <i>Roystonea borinquena</i>, <i>Agave missionum</i>, <i>Psychilis kraenzlinii</i>, <i>Psychilis macconnelliae</i>, <i>Tolumnia prionochila</i>, <i>Digitaria eggersii</i>, <i>Ilex urbaniana</i>, <i>Lepidaploa sericea</i>, <i>Piptocoma antillana</i>, <i>Cordia rickseckeri</i> , <i>Ipomoea steudelii</i>, <i>Poitea florida</i>, <i>Neea buxifolia</i>, <i>Manilkara pleeana</i>, <i>Argythamnia stahlii</i>.
Invertebrates	<ul style="list-style-type: none"> - 2 butterfly species endemic to the BVI (Anegada Island): Satyrine butterfly (<i>Calisto anegadensis</i>), Anegada Skipperling (<i>Copaeodes eoa</i>), <i>Catabenoides lazelli</i> - 2 species endemic to Tortola: Tortola Goblin Spider (<i>Stenoonops tortola</i>), centipede (<i>Polycricus bredini</i>) - 1 spider endemic to the Greater Antilles (Hispaniola, Puerto-Rico, Virgin Islands): Ground Tarantula (<i>Cyrtopholis bartholomei</i>) - 1 sp of freshwater crab newly recorded in the Virgin Islands, is very rare and in danger of extinction in the BVI: River Crab (<i>Epilobocera sinuatifrons</i>). This species is restricted to the VI and Puerto-Rico. - 1 Palm snail (<i>Hemitrochus nemoralinus</i>) endemic to the Virgin Islands (Tortola, Guana Island).
Amphibians	<ul style="list-style-type: none"> - 2 amphibians endemic to the Virgin Islands: - Virgin Islands Whistling frog (<i>Eleutherodactylus lentus</i>), - the Virgin Islands Coqui (<i>Eleutherodactylus schwartzi</i>) which occurs in the BVI and in St John (USVI). In the BVI, the species is only observed in Tortola, Virgin Gorda, Jost Van Dyke island and Great Dog islands. It is interesting to note that this endemic species is frequently observed on JVD island where no invasive amphibian occurs yet. - 1 amphibian restricted to the Puerto Rican Bank: Puerto Rican Crested Toad

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	<p>(<i>Peltophryne lemur</i>), this species is potentially extirpated from the BVI (Virgin Gorda) (IUCN RedList), Red-eyed Whistling Frog (<i>Eleutherodactylus antillensis</i>-occurs on Tortola and Virgin Gorda, JVD), Cochran's Whistling Frog (<i>Eleutherodactylus cochranae</i>), Günther's White-lipped Frog (<i>Leptodactylus albilabris</i>)</p>
<p>Reptiles</p>	<ul style="list-style-type: none"> - 8 reptile species endemic to the BVI: <ul style="list-style-type: none"> - 6 sp. endemic to only few islands: <ul style="list-style-type: none"> - the Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) is the largest native terrestrial animal in the BVI. It is firstly endemic to Anegada and has been translocated to Guana, Necker, Islands, Little Thatch, Norman, Eustatia Island and Mosquito Island (Perry and Gerber 2006); - the anole <i>Anolis ernestwilliamsii</i> is endemic to Carrot Rock (near Peter Island, locally endangered and possibly extinct) (this species should be considered in the IUCN RedList) - Carrot Rock Skink (<i>Spondylurus macleani</i>) , restricted to Carrot Rock (this species should be considered in the IUCN RedList) - Anegada Worm Snake (<i>Typhlops catapontus</i>), restricted to Anegada and Necker - Virgin Gorda Worm Snake (<i>Typhlops naugus</i>) restricted to Virgin Gorda - Anegada Skink (<i>Spondylurus anegadae</i>) - 2 sp. endemic to the BVI: <ul style="list-style-type: none"> - the Virgin Islands dwarf gecko (<i>Sphaerodactylus parthenopion</i> -occurs on Virgin Gorda and Tortola), one of the world's smallest lizards, the biology of this species is poorly understood and population trends unknown (Perry and Gerber 2006). This endemic species is highly threatened and should be reported in the IUCN RedList (Clive Petrovic, com. pers. 2016). - Virgin Islands Bronze Skink (<i>Spondylurus sloanii</i>-CR)- endemic to the Virgin Islands, this species appears widespread but is not common (Perry and Gerber 2006) - endemic to the Puerto Rican Bank (VI and Puerto Rico): <ul style="list-style-type: none"> - Anegada ground snake (<i>Borikenophis portoricensis</i>- potentially extinct on Tortola (Perry and Gerber 2006), with the subspecies <i>B.p. anegadae</i> endemic to the BVI), - Virgin gorda worm snake (<i>Typhlops richardi</i>)-occurs on Guana, Necker and Tortola, - Puerto Rican Bush Anole (<i>Anolis pulchellus</i>), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>) - Virgin Islands Ground Lizard (<i>Ameiva exsul</i>) - Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>), - Culebra giant anole (<i>Anolis roosevelti</i> CR- potentially extinct on Tortola (Perry and Gerber 2006)), - Lesser Virgin Islands Skink (<i>Spondylurus semitaeniatus</i> CR-endemic to the Virgin Islands), - Virgin Island tree boa endemic to the northeastern part of Puerto Rico and the Virgin Islands (<i>Chilabothrus granti</i> EN; syn. genus name <i>Epicrates</i>- genetic analyses are needed to investigate the endemism of this species).
<p>Birds</p>	<ul style="list-style-type: none"> - 8 species are restricted-range bird species from Puerto-Rico, the Virgin Islands and the Lesser Antilles: Antillean Mango (<i>Anthracoceros dominicus</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>). - The Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>) is endemic to Puerto Rico and the Virgin Islands.

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Mammals	<ul style="list-style-type: none">- 2 bat species endemic to Puerto Rico, the Virgin Islands and the Lesser Antilles: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>), Red Fruit Bat (<i>Stenoderma rufum</i>).- The subspecies <i>Stenoderma rufum rufum</i> occurs in the Virgin Islands.
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Habitat outcomes

➤ **Terrestrial areas**

- The islands' vegetation is predominantly made up of cacti, thickets and dry forests. There are also rain forests on the upper slopes of the larger islands of Tortola and Virgin Gorda as well as woodlands and shrublands.

- The British Virgin Islands (BVI) forms part of the Puerto Rican Bank and its fauna is closely related to that of the US Virgin Islands and Puerto Rico. A quarter of the 24 reptiles and amphibians present on the BVI territory are endemic species to the BVI or to the Puerto Rican Bank (Government of the BVI - Conservation and Fisheries Department 2011).

➤ **Coastal areas: sea turtle nesting areas**

- Three sea turtles occur in the waters of the BVI and nest on the beaches: the green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*) and leatherback sea turtles (*Dermochelys coriacea*); with few nesting tracks reported for the leatherback turtle.

Loggerhead turtles (*Caretta caretta*) occur occasionally in the BVI (Procter et al. 1999).

- The island of Anegada is reported as one of the main nesting site within the BVI for Green and Hawksbill sea turtles (McGowan et al. 2006).

➤ **Marine areas and wetlands**

- The BVI has 380km² of coral reefs that range in size from small fragments of a few square metres to The Anegada reef which encompasses 77km² of coral reefs. Since the white-band disease affecting Acroporid species in the 1970s, the dominant coral species is the endangered *Montastraea annularis* (Woodfield Pascoe et al. 2013, Smith 2000).

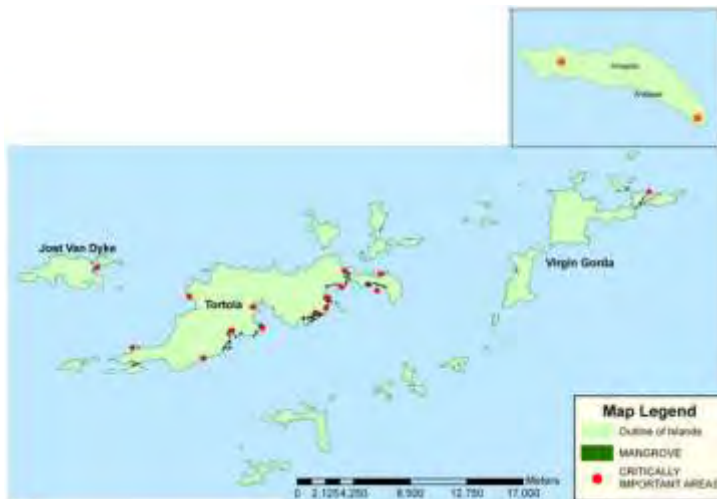
- Anegada Horseshoe Reef around Anegada Island is the 3rd largest continuous reef in the Eastern Caribbean (63 km long), it consists of patch reefs and barrier reefs.

- Beside the Anegada reef, all islands of the BVI are surrounding by fringing coral reefs.

- Some of the densest seagrass beds include Anegada's northern and south-western shore; Fat Hog's Bay, Tortola and Manchioneel Bay, Cooper Island.

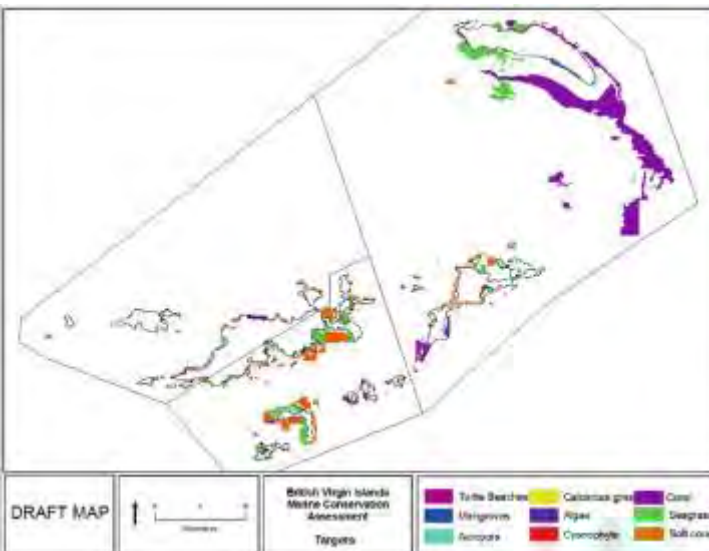
- The BVI archipelago has about 580 ha of mangroves (of which 75% are found in Anegada). Most of the mangroves and wetland areas have been destroyed in the other islands (about 75% of mangroves have been destroyed in Tortola, more than 84% of the original salt pond wetland area of the British Virgin Islands has disappeared) (European OCTs Environmental profile 2015, Sanders 2006, Wetland Policy Plan for the BVI, Mike Pienkowski pers. com. 2015).

- Following the inventory and mapping of mangrove sites in the BVI by the Conservation and Fisheries Department (CFD), 17 critically important mangrove sites were highlighted on Tortola, Virgin Gorda, Anegada, Beef Island and Jost Van Dyke.



Map of the BVI Critically Important Mangrove Sites (Conservation and Fisheries Department of the Government of the BVI)

- About 280 fish species have been observed in the waters of the BVI including some globally threatened fishes, such as: *Epinephelus striatus*, *Balistes vetula*, *Lachnolaimus maximus*, *Lutjanus analis*, *Lutjanus cyanopterus*, *Megalops atlanticus*.



Map of the BVI Marine Conservation Assessment (created by A. Huggins)

- On-going investigations aim to identify Red Hid (*Epinephelus guttatus*) spawning aggregations within the BVI in order to assist management of the fish stock (Government of the BVI - Conservation and Fisheries Department 2011).

- The British Virgin Islands Protected Areas System Plan 2007–2017 (Gardner et al. 2008) aims to propose **another 40 areas for inclusion in the marine protected area network**.

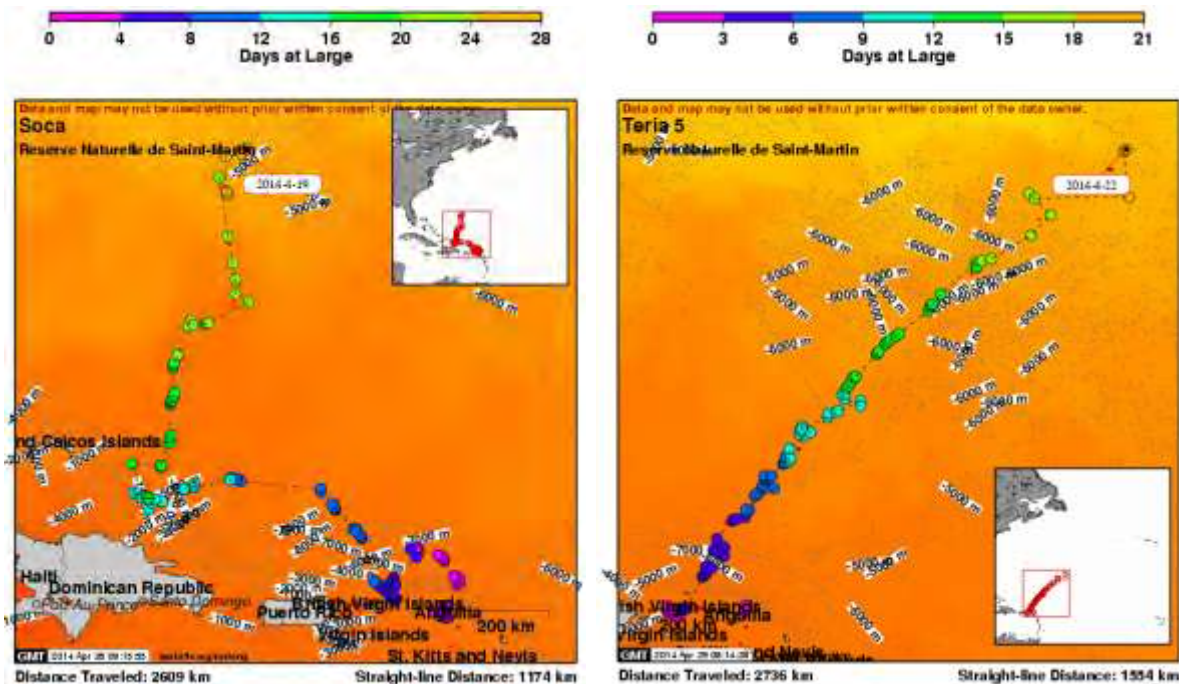
- **Important Bird Areas (IBAs)** (References: Allcorn et al. 2009, Petrovic et al. 2008, BirdLife International)
 - **3 IBAs are identified** (6120 ha, including their marine extensions) and represent 10% of the island's land area. The IBA of Great Tobago is protected as a national park and a bird sanctuary and Anegada IBA is partly protected as a Ramsar site and nature reserve. Green Cay IBA is unprotected.
 - **8 species are restricted-range bird species** from Puerto-Rico, the Virgin Islands and the Lesser Antilles: Antillean Mango (*Anthracothorax dominicus*), Bridled Quail-dove (*Geotrygon mystacea*), Green-throated Carib (*Eulampis holosericeus*), Antillean Crested Hummingbird (*Orthorhyncus cristatus*), Caribbean Elaenia (*Elaenia martinica*), Puerto Rican Flycatcher (*Myiarchus antillarum*), Pearly-eyed Thrasher (*Margarops fuscatus*), Lesser Antillean Bullfinch (*Loxigilla noctis*).
- Of these restricted-range species, the Antillean Mango (*Anthracothorax dominicus*) is a rare resident species that is suspected to be more common on Anegada and perhaps Guana Island. The Puerto Rican Flycatcher (*Myiarchus antillarum*) is endemic to Puerto Rico and the Virgin Islands.

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- The BVI host several seabirds that nest on offshore cays and islets. IBAs have been identified on the basis of 16 key bird species, the 8 restricted-range bird species and 8 congregatory seabirds.
- A total of 15 breeding seabird species have been recorded in the BVI, including 2 species with globally significant colonies breeding in the territory (roseate tern *Sterna dougallii* on Anegada and Broken Jerusalem and magnificent frigatebird *Fregata magnificens* on Anegada) and a further 8 species with regionally significant populations (McGowan et al. 2006)
- The Roseate Tern (*Sterna dougallii*-LC) is a medium-sized seabird with narrow breeding distributions along both the eastern and western coasts of the North Atlantic Ocean and throughout the greater Caribbean region. The western Atlantic breeding population is considered endangered and declining (US Fish and Wildlife Service 2010, Susan Zaluski (JVDPS) pers. comm. 2015).

Corridors

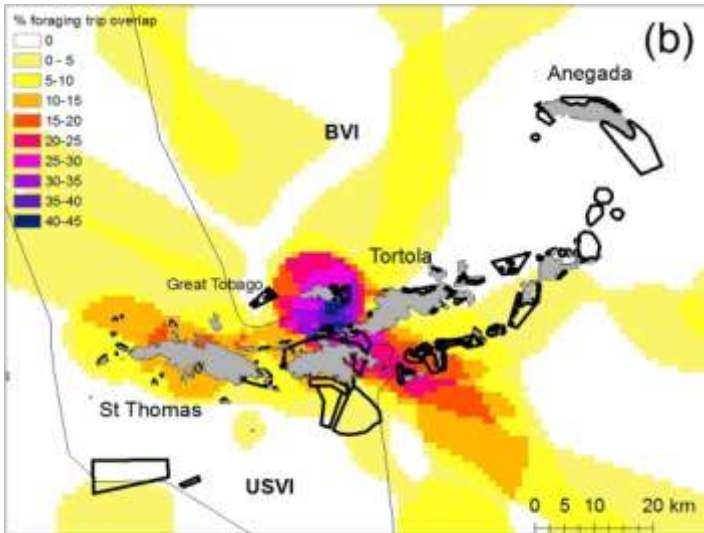
- The network of IBAs encompasses important habitats and breeding sites for restricted-range bird species and congregatory seabirds. The network of ponds and mangroves on Tortola, Guana and Norman Islands represents also important bird habitats that may qualify as IBAs (Petrovic et al. 2008).
 - Concerning marine mammal populations, humpback whales occur in the water of the BVI between January and June to reproduce and give birth.
- A satellite-tagging of Humpback whales coordinated by the Réserve Naturelle of St-Martin occurred in 2014 in the northern Lesser Antilles (Megara 2014 - Fossette et al. 2014) and showed a high connectivity between islands of the northern Lesser Antilles, Puerto Rico and the Dominican Republic.



Mapping of Humpback whales migration between the Lesser Antilles, Greater Antilles and Western Atlantic region (Réserve Naturelle St-Martin, Fossette et al. 2014).

- Since 2013, the Jost Van Dykes Preservation Society (JVDPS) is involved with South Carolina Cooperative Research Unit, Avian Research and Conservation Institute and University of Liverpool in seabird tracking projects using GPS loggers deployed on Magnificent Frigatebirds (*Fregata magnificens*).

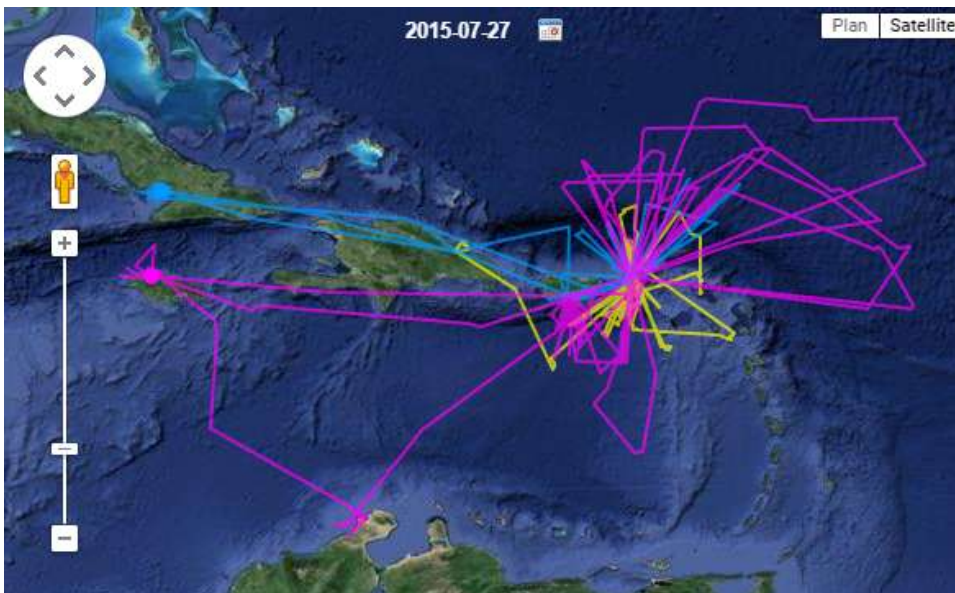
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- These satellite tagging enable to identify foraging tracks and migration patterns of seabirds. An important foraging area has been observed for the Magnificent Frigatebirds between Jost Van Dyke (BVI), St John (USVI) and Norman Island (BVI). Strong connectivity has been pointed out for this species between the Virgin Islands, the Greater Antilles and northern South America (Susan Zaluski (JVDPS), pers. comm. 2015).

- Satellite transmitters (PTT tags) have been deployed in June 2015 on Roseate Tern (*Sterna dougallii*) to monitor their migration patterns (Susan Zaluski (JVDPS), pers. comm. 2015).

Foraging areas of the Magnificent Frigatebirds across the Virgin Islands (Susan Zaluski (JVDPS), pers. comm. 2015).



Map of the distribution patterns of three satellite-tagged Magnificent Frigatebirds from the BVI (Atlantic Seabird Tracking project: Conservation of Magnificent Frigatebirds in the Virgin Islands; <http://www.atlanticseabirds.org/>).

- Satellite-tracking of sea turtles in the EEZ of the BVI (Godley et al. 2004)

- A leatherback sea turtle was tracked in 2002 using satellite transmitter between the BVI to Puerto Rico.

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Table 3. KBAs identified on the territory and justification.

N. KBA	KBAs	Criteria
1	KBA 1 - Anegada Island	<p>Terrestrial ecosystems & Plants (IUCN RedList, McGowan et al. 2006)</p> <ul style="list-style-type: none"> - Presence of plant species strictly endemic to Anegada: Anegada Acacia (<i>Vachellia anegadensis</i>-CR), <i>Metastelma anegadense</i>-CR, <i>Senna polyphylla</i>, - Species endemic to the VI (<i>Croton fishlockii</i>) <p>- 11 plant species endemic to the Puerto Rican Bank (BVI and Puerto Rico only), including: <i>Leptocereus quadricostatus</i> (CR) about 90% of the world population of this species is found on Anegada (Linsky 2014), <i>Varronia rupicola</i> (CR), <i>Machaonia woodburyana</i> (CR), <i>Sabal causiarum</i>, <i>Malpighia woodburyana</i>, <i>Melocactus intortus</i>, <i>Pilosocereus royenii</i> (end PR and LA), <i>Psychilis macconnelliae</i>, <i>Tolumnia prionochila</i>, <i>Argythamnia stahlia</i>, <i>Bastardiopsis eggertii</i></p> <p>- Presence of 6 threatened plant species (some of them are also listed as endemic species): <i>Vachellia anegadensis</i> (CR), <i>Metastelma anegadense</i> (CR), <i>Varronia rupicola</i> (CR) (this plant species is only observed on Anegada), <i>Machaonia woodburyana</i> (CR), <i>Leptocereus quadricostatus</i> (CR), <i>Guaiaicum officinale</i> (EN)</p> <p>- 5 IPAs identified on Anegada (KEW RBG, Linsky 2014): West End IPA (key area for <i>Metastelma anegadense</i>), Cays IPA (important area for <i>Leptocereus quadricostatus</i> <i>Argythamnia stahlia</i>, <i>Malpighia woodburyana</i>), "Soldier Plain" IPA (<i>Senna polyphylla</i>, <i>Argythamnia stahlia</i>), East End IPA (<i>Senna polyphylla</i>, <i>Leptocereus quadricostatus</i>), Warner Plain IPA (<i>Metastelma anegadense</i>, <i>Senna polyphylla</i>, <i>Argythamnia stahlia</i>, <i>Malpighia woodburyana</i>).</p> <p>Wetlands</p> <ul style="list-style-type: none"> - network of ponds (Bones Bight, Manhead, Point Peter, Flamingo, Budrock, Red Ponds) and mangroves occur on the island, with about 439 ha reported in 1999 (Procter et al. 1999). - 75% of the mangroves present on the BVI occur in Anegada and are mostly located in the interior of the island and on the south and east coasts of the island. <p>Marine ecosystems</p> <ul style="list-style-type: none"> - Anegada coral reefs (77km²) encompass the Anegada Horseshoe Reef, the 3rd largest continuous reef in the Eastern Caribbean (63 km long). - The reef around Anegada encompasses threatened coral species: <i>Montastrea annularis</i>, <i>Acropora cervicornis</i>, <i>Acropora palmata</i>, <i>Montastraea faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea franksi</i>, <i>Mycetophyllia ferox</i>, <i>Oculina varicosa</i> - Connectivity between seagrass beds and coral reefs and with mangroves that occur on the shoreline of the island. <p>Invertebrates</p> <ul style="list-style-type: none"> - Presence of 2 Lepidoptera species endemic to Anegada: Anegada Calisto (<i>Calisto anegadensis</i>), Anegada Skipperling (<i>Copaeodes eoa</i>) (Procter et al. 1999, Mike Pienkowski pers. com. 2015). <p>Reptiles</p> <ul style="list-style-type: none"> - The endemic and threatened Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) is only present on Anegada. The current population is estimated to be

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		<p>less than 300 individuals and restricted to the Bones Bight-Windlass Bight Western Ponds. About 300 iguanas has been established on Guana Island in the 1980s and juveniles were than translocated to Necker, Norman and Little Thatch Islands (Species Recovery Plan 2012-2017)</p> <ul style="list-style-type: none"> - Anegada Skink (<i>Spondylurus anegadae</i>), Anegada Worm Snake (<i>Typhlops catapontus</i>)- endemic to Anegada <p>Reptile species restricted to the Puerto Rican Bank:</p> <ul style="list-style-type: none"> - Virgin Islands Ground Lizard (<i>Ameiva exsul</i>), Puerto Rican Bush Anole (<i>Anolis pulchellus</i>), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>), Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>) - Threatened sea turtles (<i>Eretmocheyls imbricata</i>-CR, <i>Chelonia mydas</i>-EN) nest on the island and Anegada is considered as one of the most important nesting location in the BVI (McGowan et al. 2006). <p>Birds</p> <ul style="list-style-type: none"> - IBA Anegada wetlands (Petrovic et al. 2008) - Presence of 7 bird species restricted to the Puerto Rican Bank and the Lesser Antilles: Antillean Mango (<i>Anthracothorax dominicus</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Antillean Crested Hummingbird (<i>Orthorhyncus cristatus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>). - Presence of 7 seabird species that congregate on the site. - A project of re introduction of the Caribbean Flamingo (<i>Phoenicopterus ruber</i>) started in 1992 with the introduction of 18 birds. In 2016, the population was estimated to about 270 ind. (Nancy Pascoe NPT VI, pers. com. 2016). <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - The island of Anegada is owned by the Government - Anegada Nature Reserve - Ramsar site of Flamingo Pond (445 ha) - proposed protected terrestrial areas (Western Salt Ponds/ North Coast of Anegada), 1 National Park (eastern side), 2 proposed MPAs on the western and north side of Anegada. - 6 sites are proposed as Fisheries PAs - the Fishery Protected Area of Horseshoe Reef is proposed to become a Marine Reserve. <p>Threats</p> <p>In the 2006 Anegada Biodiversity Action Plan (BAP), 'future loss of habitat and invasive species' are considered the major threats to BVI's indigenous flora.</p>
2	KBA 2 - Virgin Gorda and nearby islands	<p>Terrestrial ecosystems & Plants</p> <ul style="list-style-type: none"> - Important forest habitats within the Virgin Gorda National Park. - Presence of plant species strictly endemic to the Virgin Islands and globally threatened (Hamilton 2015, Kew RBG pers; com. 2016): <i>Calypttranthes kiaerskovii</i> (CR) and to the Virgin Islands (<i>Croton fishlockii</i>, <i>Reynosia guama</i>) - Plant species endemic to the Virgin Islands and Puerto Rican Bank: <i>Machaonia woodburyana</i> (CR), <i>Calypttranthes thomasiana</i> (EN), <i>Zanthoxylum thomasianum</i> (EN), <i>Malpighia woodburyana</i>, <i>Sabal</i>

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		<p><i>causiarum</i>, <i>Opuntia repens</i>, <i>Cordia rickseckeri</i>, <i>Anthurium crenatum</i>, <i>Maytenus cymosa</i> (EN), <i>Poitea florida</i>, <i>Neea buxifolia</i>, <i>Tolumnia prionochoila</i>, <i>Agave missionum</i>, <i>Tolumnia prionochoila</i></p> <ul style="list-style-type: none"> - Plant species endemic to the LA and VI: <i>Pilocereus royenii</i>, <i>Melocactus intortus</i>, <i>Epidendrum boricuarum</i>, <i>Pisonia subcordata</i> - Presence of 4 threatened plant species, including <i>Maytenus cymosa</i> (EN)- greatest concentration of this species is observed in Gorda Peak National Park (at least 100 plants) (IUCN redlist). <p>Amphibians and Reptiles</p> <ul style="list-style-type: none"> - Presence of the endangered amphibian, endemic to the VI and restricted to Great Dog islands: the Virgin Islands Coqui (<i>Eleutherodactylus schwartzi</i>-EN) (IUCN RedList, Susan Zaluski (JVDPS), pers. comm. 2015) - Reptiles endemic to the BVI: the Virgin Islands dwarf gecko (<i>Sphaerodactylus parthenopion</i>) (Procter et al. 1999) - species restricted to the Puerto Rican Bank: Virgin Islands Ground Lizard (<i>Ameiva exsul</i>), Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>), Puerto Rican Bush Anole (<i>Anolis pulchellus</i>), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>), Lesser Virgin Islands Skink (<i>Spondylurus semitaeniatus</i>-CR) (Environmental profile of Virgin Gorda). - Necker Island, Eustatia and Mosquito Islands: translocation of individuals of the threatened and endemic Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR) <p>Birds</p> <ul style="list-style-type: none"> - Presence of a nesting colony of Roseate Terns (<i>Sterna dougallii</i> - about 200 pairs) on East Seal Dog island (JVDPS 2015). - Presence of restricted-range species: <i>Eulampis holosericeus</i>, <i>Orthorhynchus cristatus</i>, <i>Elaenia martinica</i>, <i>Margarops fuscatus</i>, <i>Loxigilla noctis</i>. <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - Gorda Peak National Park and Prickly Pear National Park - National Parks of Devil's Bay, Fallen Jerusalem, Little Fort, The Copper Mine, Spring Bay, The Baths - 2 Fisheries Protected Areas - 7 proposed MPAs around Virgin Gorda - 4 proposed terrestrial protected areas, including the Dog Islands, Round Rock, Broken and Fallen Jerusalem - 6 bird sanctuaries
3	KBA 3 - Jost Van Dyke (JVD)	<p>Terrestrial habitats and plant species</p> <ul style="list-style-type: none"> - Diversity of terrestrial habitats, including semi-deciduous forests and evergreen and dry shrublands (Environmental profile of JVD 2009). - Presence of <i>Reynosia guama</i> plant endemic to the Virgin Islands - Presence of plant species endemic to the Puerto Rican Bank: Indian Mallow (<i>Bastardiopsis eggersii</i>)- largest stands (about 20 trees) observed on JVD island, this plant species also occurs on other islands in the BVI; Coral Tree (<i>Erythrina eggersii</i>), <i>Opuntia repens</i>, <i>Coccothrinax barbadensis</i>, <i>Malpighia woodburyana</i>, <i>Anthurium crenatum</i>, <i>Agave missionum</i>, <i>Psychilis macconnelliae</i>, <i>Tolumnia prionochoila</i>, <i>Piptocoma antillana</i>, <i>Poitea florida</i> (Environmental profile of JVD 2009, 2015,

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		<p>Botanical Kew Gardens, Susan Zaluski (JVDPS), pers. comm. 2015). - Threatened plant species: Lignum Vitae (<i>Guaiaecum officinale</i>)</p> <p>- Presence of mangroves around the ponds (1 pond in the middle of JVD and 1 pond in Sandy Cay).</p> <p>Amphibians and Reptiles</p> <p>- Presence of the endangered amphibian, endemic to the VI: the Virgin Islands Coqui (<i>Eleutherodactylus schwartzi-EN</i>) (Environmental profile of JVD 2009), and the endangered Virgin Islands Whistling frog (<i>Eleutherodactylus lentus-EN</i>) (Susan Zaluski pers.comm. 2015). On-going research will occur this year in order to monitor populations of this endemic frog species, some bio-acoustic monitoring will enable to study this species distribution. The species <i>E. schwartzi</i> is regularly observed on JVD and no other exotic amphibian species occur on this island (Susan Zaluski pers.comm. 2015).</p> <p>- Presence of the Red-eyed Whistling Frog (<i>Eleutherodactylus antillensis</i>, Cochran's Whistling Frog (<i>Eleutherodactylus cochraeae</i>)</p> <p>- Presence of the endangered Virgin Island tree boa endemic to the northeastern part of Puerto Rico and the Virgin Islands (<i>Chilabothrus granti-EN</i>)</p> <p>- The Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>), endemic to the Puerto Rican Bank, occurs on Diamond Cay (Susan Zaluski pers.comm. 2015), Virgin gorda worm snake (<i>Tylops richardi</i>), Puerto Rican Bush Anole (<i>Anolis pulchellus</i>), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>), <i>Chilabothrus granti</i>.</p> <p>Birds</p> <p>- Presence of restricted range species: <i>Geotrygon mystacea</i>, <i>Eulampis holosericeus</i>, <i>Orthorhyncus cristatus</i>, <i>Elaenia martinica</i>, <i>Margarops fuscatus</i>, <i>Loxigilla noctis</i></p> <p>Mammals</p> <p>- Presence of the bat species endemic to Puerto Rico, the Virgin Islands and the Lesser Antilles: Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>)</p> <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <p>- National Park of Diamond Cay - 1 Fisheries Protected Area - proposition to add 3 MPAs and 4 terrestrial protected areas around JVD and Little JVD.</p>
	<p>KBA 3 - Green Cay (near Jost Van Dyke island)</p>	<p>Reptiles</p> <p>- The Racer endemic to the Puerto Rican Bank (<i>Alsophis portoricensis</i>), with a subspecies endemic to the BVI (<i>A.p. anegadae</i>) have been observed on Green Cay (Susan Zaluski (JVDPS) pers. comm. 2015).</p> <p>- The Virgin Islands Bronze Skink (<i>Spondylurus sloanii- CR</i>-endemic to the Virgin Islands) and the Lesser Virgin Islands Skink (<i>Spondylurus semitaeniatus</i> -CR-endemic to the Puerto Rican Bank) have been potentially seen on Green Cay in 2013 and 2014, respectively. Their occurrence and distribution patterns need some reviews (Susan Zaluski (JVDPS) pers. comm. 2015).</p> <p>Birds</p>

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		<p>- IBA of Green Cay (Petrovic et al. 2008)</p> <p>- Congregation of Roseate Terns (<i>Sterna dougallii</i>) with about 1,755 ind.</p> <p>- Presence of 5 bird species restricted to the Puerto Rican Bank and the Lesser Antilles: Green-throated Carib (<i>Eulampis holosericeus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>).</p> <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <p>- The IBA of Green Cay has been purchased by the Government and is proposed as a terrestrial protected area within the system of national parks (Petrovic et al. 2008)</p>
4	KBA 4 - Tortola & nearby islands	<p>Terrestrial habitats and plant species</p> <p>- Presence of threatened and restricted-range species to the BVI and PR Bank: <i>Miconia thomasiana</i>, <i>Coccothrinax barbadensis</i>, <i>Bastardiopsis eggersii</i>, <i>Erythrina eggersii</i>, <i>Sabal causiarum</i>, <i>Roystonea borinquena</i>, <i>Ilex urbaniana</i>, <i>Epidendrum boricuarum</i>, <i>Croton fishlockii</i>, <i>Zanthoxylum thomasianum</i> (EN), <i>Psychilis macconnelliae</i>, <i>Malpighia woodburyana</i>, <i>Tetramicra canaliculata</i>, <i>Agave missionum</i>, <i>Cordia rickseckeri</i>, <i>Opuntia repens</i>, <i>Pilosocereus royenii</i>, <i>Poitea florida</i>, <i>Pisonia subcordata</i>, <i>Reynosia guama</i>, , <i>Sabal causiarum</i>, <i>Calypttranthes thomasiana</i> (EN), <i>Zanthoxylum thomasianum</i> (EN), <i>Calypttranthes kiaerskovii</i> (CR)</p> <p>- Plant surveys enable to identify terrestrial areas of Plant species interest (Kew RBG) due to the presence of endemic and threatened plant species.</p> <p>- Important forest habitats within the National Park of Sage Mountain representative of rainforests and Caribbean dry forests (Gardner et al. 2008).</p> <p>Wetlands (National Wetland Policy Plan)</p> <p>- Beef Island: 5 ponds and 1 salt flat</p> <p>- Tortola: 4 ponds</p> <p>- Guana Island: 1 pond</p> <p>- Great Tatch Pond: 1 enclosed pond</p> <p>Invertebrates</p> <p>- Presence of endemic species: Tortola Goblin Spider (<i>Stenoopops tortola</i>), centipede (<i>Polycricus bredini</i>), Ground Tarantula (<i>Cyrtopholis bartholomei</i>), River Crab (<i>Epilobocera sinuatifrons</i>), Palm snail (<i>Hemitrochus nemoralinus</i>)</p> <p>Amphibians and Reptiles</p> <p>- Presence of the endangered amphibian, endemic to the VI: the Virgin Islands Coqui (<i>Eleutherodactylus schwartzi</i>-EN)</p> <p>- Presence of the restricted-range frog: Red-eyed Whistling Frog (<i>Eleutherodactylus antillensis</i>), Cochran's Whistling Frog (<i>Eleutherodactylus cochranæ</i>), Günther's White-lipped Frog (<i>Leptodactylus albilabris</i>).</p> <p>- Reptiles endemic to the BVI: the Virgin Islands dwarf gecko (<i>Sphaerodactylus parthenopion</i>) (Procter et al. 1999)</p> <p>- Presence of reptiles endemic to the Puerto Rican Bank: Anegeda ground snake (<i>Borikenophis portoricensis</i>, Guana Island) (Procter et al. 1999), Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>) and the Racer</p>

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		<p>(<i>Alsophis portoricensis</i>) were observed on Guana Island (Barun and Perry 2003, Barun et al. 2007), Virgin Island Tree boa (<i>Chilabothrus granti</i>-EN), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>), Puerto Rican Bush Anole (<i>Anolis pulchellus</i>)</p> <p>- Lesser Virgin Islands Skink (<i>Spondylurus semitaeniatus</i>-CR) (Tortola, Beef Island)</p> <p>- Guana Island and Little Thatch: translocation of individuals of the threatened and endemic Anegada Rock Iguana (<i>Cyclura pinguis</i>-CR)</p> <p>Birds</p> <p>- Presence of restricted-range bird species: <i>Anthracothorax dominicus</i> (Guana Island), <i>Geotrygon mystacea</i> (Guana Island), <i>Eulampis holosericeus</i>, <i>Orthorhyncus cristatus</i>, <i>Elaenia martinica</i>, <i>Margarops fuscatus</i>, <i>Loxigilla noctis</i></p> <p>- Necker Island: Occurrence of a population of Caribbean Flamingo (<i>Phoenicopterus ruber</i>) (about 200 individuals) regularly observed on this island (Clive Petrovic, pers. com. 2016)</p> <p>Mammals</p> <p>- Presence of the vulnerable and restricted-range bat species: Red Fruit Bat (<i>Stenoderma rufum</i>) (Environmental profile 2015).</p> <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <p>- Sage Mountain National Park is also recognized as a Forestry Reserve</p> <p>- Terrestrial National Park of Cam Bay (Great Camance Island), Terrestrial National Park of West Dog Island</p> <p>- 2 fisheries priority areas (Great Camance, Guana Island)</p> <p>- proposition of 18 areas to be included in the network of terrestrial and marine protected areas (Tortola, Beef Island, Great Thatch, Guana Island, Great Camance, Scrub Island, Dogs Islands western of Virgin Gorda) (Gardner et al. 2008).</p>
5	KBA 5 - Great Tobago	<p>Plants</p> <p>- Presence of plant species with a restricted distribution (Hamilton 2015): <i>Coccothrinax barbadensis</i>, <i>Agave missionum</i>, <i>Piptocoma antillana</i>, <i>Cordia rickseckeri</i>, <i>Opuntia repens</i>, <i>Melocactus intortus</i>, <i>Pilocereus royenii</i>, <i>Malpighia woodburyana</i>, <i>Pisonia subcordata</i>, <i>Psychilis macconnelliae</i>.</p> <p>Birds</p> <p>- IBA of Great Tobago (Petrovic et al. 2008, Susan Zaluski (JVDPS) pers. comm. 2015)</p> <p>- The IBA gathers one of the 5 main Magnificent Frigatebird (<i>Fregata magnificens</i>) colonies in the insular Caribbean with between 1,500-3,000 individuals. About 2,700 individuals and 925 nests were recorded during the last census in 2015 (Susan Zaluski (JVDPS) pers. comm. 2015).</p> <p>- Other seabird species, such as the Laughing Gull (<i>Larus atricilla</i>), nesting Red-billed Tropicbirds (<i>Phaethon aethereus</i>, at least 10 nests in 2015) and Audubon's Shearwaters (<i>Puffinus lherminieri</i>) congregate also in this site.</p> <p>- Presence of 6 bird species restricted to the Puerto Rican Bank and the Lesser Antilles: Bridled Quail-dove (<i>Geotrygon mystacea</i>), Green-throated Carib (<i>Eulampis holosericeus</i>), Antillean Crested Hummingbird (<i>Orthorhyncus cristatus</i>), Caribbean Elaenia (<i>Elaenia martinica</i>), Puerto Rican Flycatcher (<i>Myiarchus antillarum</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>)</p>

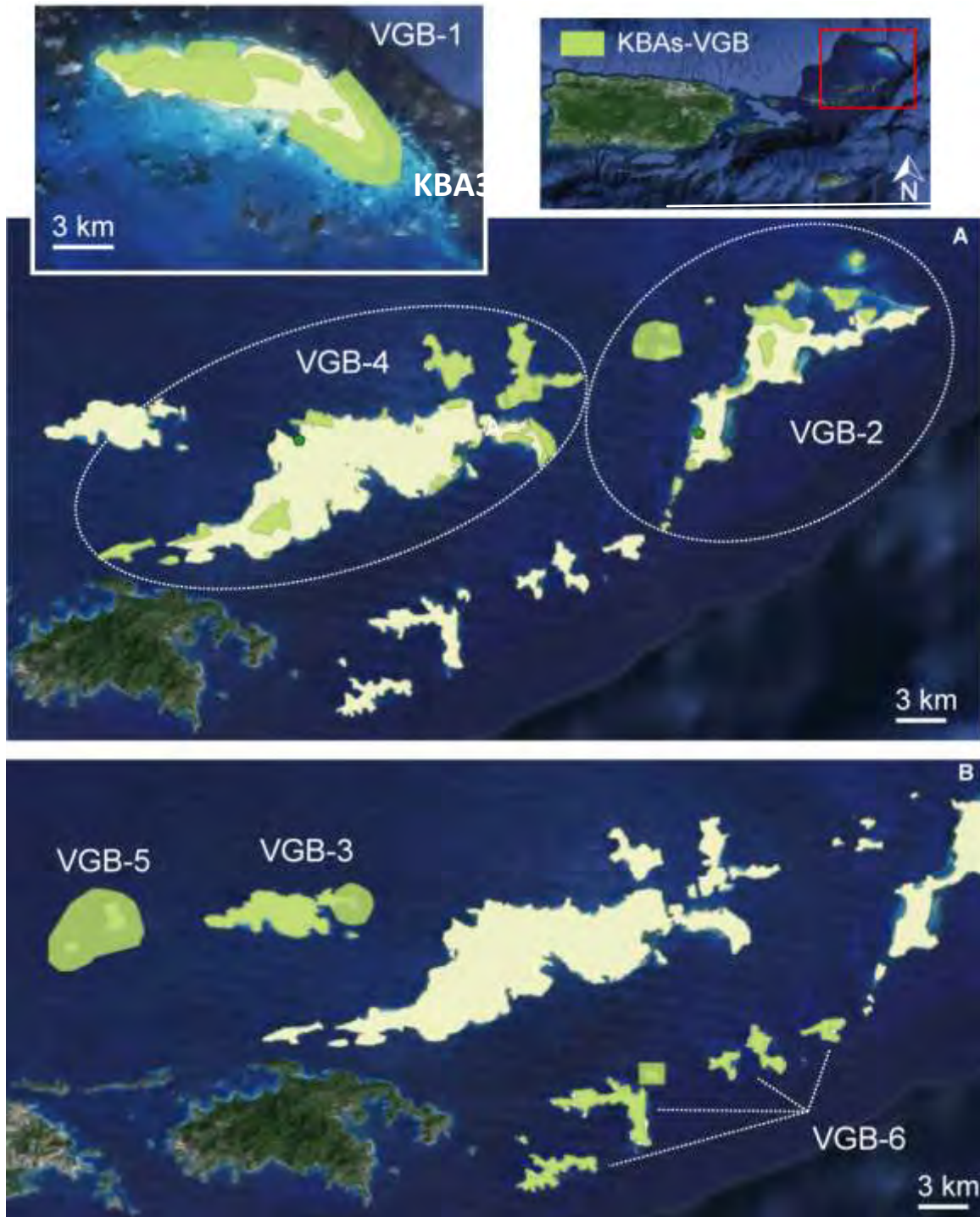
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		<p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - National Park and Bird Sanctuary of Great Tobago (about 95% of the goats have been removed from the islet) - 1 proposed MPA around Great Tobago - A 2012-2015 EU BEST Program aimed to remove invasive goats from Great Tobago in order to protect bird populations.
	KBA 5 - Little Tobago	<p>Plants</p> <ul style="list-style-type: none"> - presence of restricted-range species: <i>Agave missionum</i> <p>Birds</p> <ul style="list-style-type: none"> - Island includes within the IBA. Some reviews are needed regarding the abundance and composition of the bird population (Susan Zaluski (JVDPS) pers. comm. 2015). <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of threatened reptile species endemic to the Virgin Islands: Virgin Islands Bronze Skink (<i>Spondylurus sloanii-CR</i>) (IUCN RedList) - Presence of the Racer (<i>Alsophis portoricensis</i>) endemic to the Puerto Rican Bank (Susan Zaluski (JVDPS) pers. comm. 2015). <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - National Park of Little Tobago
6	KBA 6 - Sisters Islands - including Islands South of Virgin Gorda	<p>Species lists from the Environmental profile of the Sisters Islands (2015)</p> <p>Terrestrial habitats and plant species</p> <ul style="list-style-type: none"> - Presence of plants endemic to BVI.: <i>Croton fishlockii</i> (Great Camanoe, Guana Island), <i>Galactia eggersii</i> (Ginger Island, Great Camanoe Guana Island, Peter Island), <i>Reynosia guama</i> (Great Camanoe, Guana Island, Peter Island) - Plants endemic to the Puerto Rican Bank present on the Sisters Islands: <i>Opuntia repens</i>, <i>Bastardiopsis eggersii</i>, <i>Sabal causiarum</i>, <i>Malpighia woodburyana</i>, <i>Agave missionum</i>, <i>Psychilis macconnelliae</i>, <i>Tolumnia prionochila</i>, <i>Digitaria eggersii</i>, <i>Piptocoma antillana</i>, <i>Cordia rickseckeri</i>, <i>Ipomoea steudellii</i>, <i>Poitea florida</i>, <i>Neea buxifolia</i> <p>Wetlands</p> <ul style="list-style-type: none"> - Salt Island: 2 ponds - Norman Island: 1 pond <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of the anole <i>Anolis ernestwilliamsii</i> endemic to Carrot Rock (near Peter Island), Puerto Rican Spotted Anole (<i>Anolis stratulus</i>) - Virgin Islands Amphisbaena (<i>Amphisbaena fenestrata</i>) (Guana, Great Thatch, Great Camanoe), - Virgin Islands Ground Lizard (<i>Ameiva exsul</i>) - <i>Chilabothrus granti</i> (Great Camanoe, Guana Island) - Virgin gorda worm snake (<i>Typlops richardi</i>) (Guana Island, Salt Island) <ul style="list-style-type: none"> - Norman Island: translocation of individuals of the threatened and endemic Anegada Rock Iguana (<i>Cyclura pinguis-CR</i>). <ul style="list-style-type: none"> - Norman, Peter and Salt islands: Presence of threatened reptile species endemic to the Virgin Islands: Virgin Islands Bronze Skink (<i>Spondylurus sloanii-CR</i>) (IUCN RedList)

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		<p>Birds</p> <ul style="list-style-type: none"> - Presence of restricted-range bird species: <i>Eulampis holosericeus</i>, <i>Orthorhyncus cristatus</i>, <i>Elaenia martinica</i>, <i>Margarops fuscatus</i>, <i>Loxigilla noctis</i> <p>Mammals</p> <ul style="list-style-type: none"> - Presence of the Antillean Fruit-eating Bat (<i>Brachyphylla cavernarum</i>) <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - Wreck of the Rhone National Marine Park - Dead Chest Terrestrial National Park - 5 bird sanctuaries - 6 Fisheries protected areas (Ginger, Norman islands, Peter, Salt and Cooper islands) - proposition to include 9 areas as MPAs and 3 areas as terrestrial protected areas (Ginger island, Norman island) (Gardner et al. 2008)
7	KBA 7 - Marine space	<p>Coral reefs and seagrass beds</p> <p>Coral reefs occur around all of the BVI and cover an area of about 380 km².</p> <ul style="list-style-type: none"> - Presence of threatened coral species and reef species (IUCN Red List) - The critically endangered Acroporid species became relatively rare and occur on some part of the coral reef such as on the reefs between Prickly Pear and Necker Islands and around Great Tobago (Pascoe Woodfield et al. 2013, Susan Zaluski (JVDPS) pers. comm. 2015). - The endangered coral species <i>Montastraea annularis</i> is particularly abundant on the northeastern side of Tortola, the western part of Virgin Gorda, around Anegada island and around the islands south of Virgin Gorda (Pascoe Woodfield et al. 2013). - Strong connectivity between coral reefs and seagrass beds ecosystems. These marine habitats are inter related with mangroves that mostly occur on Anegada island. - Inter-connectivity between mangroves, seagrass beds and coral reefs around JVD island (Susan Zaluski (JVDPS) pers. comm. 2015). <p>Mangroves</p> <ul style="list-style-type: none"> - The 17 critically important mangrove sites occurring on Tortola, Virgin Gorda, Anegada, Beef Island and Jost Van Dyke represent important areas to consider for this ecosystem (Conservation and Fisheries Department). <p>Network of protected areas* (following Gardner et al. 2008 and the notice of 2014 of BVI National Trust)</p> <ul style="list-style-type: none"> - 14 fisheries protected areas - 1 Marine Park

*It is important to notice that protected areas are highlighted as potential KBAs due to the habitat and species outcomes that they encompass. Without biodiversity and ecosystem outcomes, a protected area by itself can't qualify as a KBA.



Map of KBAs in the British Virgin Islands



Map of KBAs in the British Virgin Islands

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International Treaties and Conventions (Pelembe and Cooper 2011)

- The Convention on Biological Diversity (CBD)
- Ramsar Convention on Wetlands of International Importance
- The Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- World Heritage Convention

National environmental legislation and strategies (Pelembe and Cooper 2011, Government of the BVI - Conservation and Fisheries Department 2011)

- **National Parks Act** (2006)
- Fisheries - Fishing priority areas and protected areas Order (2011): 6 areas designated a Fishing priority areas and 14 areas designated as PAs, such as: Horseshoe Reef, Hans Creek (Beef Island), Beef Island Channel, South Sound and Taylor Bay (Virgin Gorda), The Sound (Salt Island), The Sound (which includes Wedge Bay) (Ginger Island), Dead Chest, Big Reef (Peter Island), Green Cay (Jost Van Dyke), Money Bay and Santa Monica Rock (Norman Island), North Bay (Guana Island), Frenchman's Cay.
- **Fisheries Act** (2003)
- **Endangered Animals and Plants Ordinance** (1987)
- **Wild Bird Protection Ordinance** (1959) - protects 21 species of rare or threatened wild birds within the BVI.
- **Physical Planning Act** (2004) - addresses land development issues, environmental assessments and historical preservation.
- **British Virgin Islands Protected Areas System Plan 2007–2017** (Gardner et al. 2007)
- **Environmental charters** were signed in 2001 between UK and UK OTs, including all the OTs in the Caribbean region: Cayman islands, Montserrat, Anguilla, Virgin Islands, Turks and Caicos Islands.
- Anegada Iguana, *Cyclura pinguis*. **Species Recovery Plan 2014-2017**
- **National Wetland Policy - Wetland Management Plan**. National Policy and Programmes on Salt Pond wetland and mangrove ecosystem conservation for the British Virgin Islands: this Plan aims to set out policies and measures for the preservation, enhancement and management of the wetlands, salt ponds and mangroves in the BVI. The Government of the BVI will designate all salt ponds and mangroves as environmental PAs (National Wetland Policy - in progress).
- **Climate Change Policy** (2013)

Socio-economic context , government and civil society with a role in biodiversity

- The UK Joint Nature Conservation Committee (JNCC) is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. JNCC is led by the Joint Committee, which brings together members from the nature conservation bodies for England, Scotland, Wales and Northern Ireland and independent members appointed by the Secretary of State for the Environment, Food and Rural Affairs under an independent Chair.
- UK Overseas Territories Conservation Forum (UKOTCF) aims to promote the coordinated conservation of the diverse and threatened plant and animal species and natural habitats of the UK Territories Overseas. It provides assistance in the form of expertise, information and liaison between non-governmental organisations and governments, both in the UK and in the Overseas Territories.

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➤ **Table 4 - Government, local institutions and organizations, private sector**

BRITISH VIRGIN ISLANDS	Departments, Institutions and Organisations related to environmental and biodiversity conservation.
Government of the British Virgin Islands	
Ministry of Natural Resources and Labour	Main agency that manages environment in the BVI Territory.
Conservation and Fisheries Department (CFD)	CFD is responsible for biodiversity conservation including environmental monitoring and fisheries management. The Department manages 14 fisheries protected areas. The CFD includes several divisions such as Planning and Policy (responsible for the maintenance of the coastline, surveillance and protection of beaches); Coastal Zone Management (responsible for monitoring the natural, terrestrial and marine issues and natural and man-made changes and activities); Environmental Information Division which comprises two sections - Geographic Information Systems (GIS) and Environmental Education and Public Awareness; and Fisheries Management (responsible for data collection and research, fisheries extension services and surveillance and enforcement support).
Agriculture Department	The Department designates protected areas to protect watersheds, prevent deforestation, and protect water sources. It manages 6 watershed protected areas and 1 forestry protected area.
Town and Country Planning Department (T&CPD)	This Department, within the Premier's Office, manages the development of the territory and is in charge of the execution of the Physical Planning Act.
Ministry of Health and Social Development	Handles environmental health and solid waste management.
BVI Tourist Board (BVITB)	
Local NGOs and organisations	
National Parks Trust of the Virgin Islands (NPTVI)	The Trust has been established in 1961 following the National Parks Ordinance (replaced by the National Parks Act in 2006) and is a Statutory body under the Ministry of Natural Resources and Labour that is legally responsible for managing the terrestrial and marine protected areas system of the BVI. The Trust manages 19 land-based national parks (5 of which are bird sanctuaries) and one marine park. It proposes the 2007-2017 System Plan, in which more protected areas are proposed. The work includes preservation of all flora and fauna within the parks, maintenance, upgrading of trails and picnic sites and scientific research.
Jost Van Dyke Preservation Society (JVDPS)	NGO (founded in 2004) that aims to promote the conservation of Jost Van Dyke island, its adjacent smaller cays and marine systems through education, research, restoration and monitoring programmes. Since 2013, JVDPS is involved in seabird tracking projects (migrations, mapping of foraging grounds).
Virgin Islands Environmental Council (VIEC)	NGO founded in 2007 that aims to take action to address development issues, to protect wildlife and precious salt pond, creek and mangrove habitats within the BVI.
Caribbean Youth Environmental Network BVI Chapter (CYEN-BVI Chapter)	The CYEN is a non-profit, civil society, charitable body that focuses its resources on empowering young people and their communities to develop programmes/actions to address socio-economic and environmental issues.
BVI Heritage Conservation Group (BVIHCG)	A local NGO led by BVI citizens and supported by visitors that aims to preserve BVI's natural resources, history and culture. It provides information about pending development projects in the BVI and about ecofriendly, sustainable solutions.
Green VI	NGO founded in Tortola to help eliminate solid waste in the BVI.

➤ **Funding resources dedicated to biodiversity and conservation** (European OCTs Environmental profile 2015)

Most funding for conservation work is received from European funding, international donor agencies, local government and UK government funds such as the:

- Overseas Territories Environment Project (OTEP), funded for example the project "Assessment and Improved Management of New and Existing Marine Protected Areas in the British Virgin Islands (2004–2006)". OTEP fundings are no longer available for the UK Overseas Territories.
- The UK Darwin Initiative (such as the Anegada Darwin Initiative Project or seabirds satellite-tracking projects)
- Darwin Plus projects: Kew RBG on plant species distribution in 11 of the terrestrial national parks managed by NPTVI (2014, 2015). NPTVI and Kew have collaborated since 1999.
- Specific objectives of the Darwin Plus project on plant species in the BVI: collect baseline, phenotypic and monitoring data for threatened plant species; undertake ground truthing of vegetation maps and provide training for National Parks Trust of the Virgin Islands (NPTVI) staff in field collection, processing of collections and propagation of native and threatened plant species.

This specific project received financial support from Mohamed bin Zayed Species Conservation Fund and the Bentham-Moxon Trust.

- Royal Society for the Protection of Birds (RSPB), for projects related to the study and conservation of bird populations. RSPB provides also support to the management of Bird Sanctuaries in the BVI.
- UK Joint Nature Conservation Committee (JNCC)

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- UKOCT Forum
- EU funded project on Management of Protected Areas to Support Sustainable Economies (MPASSE), involving BVI, Cayman, TCI and UKOTCF.

The USGS, Avian Research and Conservation Institute, UK OTEP Fund, BVI Office of the Governor and UK Darwin Initiative, RSPB, National Parks Trust of the Virgin Islands and BVI Dpt of Conservation and Fisheries fund and support the seabird satellite-tracking project in the BVI.

- The NPTVI is applying for Darwin Plus fundings on a project to continue the eradication of invasive species removal in seabird colonies and a second project to pursue bathymetric mapping to assess coral ecosystems distribution in order to prevent ship groundings and environmental destruction.

- The British Virgin Islands National Parks Trust is a non-profit organisation that receives an annual subvention from the BVI government and raises the remainder of its budget from park entrance fees and mooring permit fees.

- A partnership with the University of the Virgin Islands (USVI) is on progress to conduct frog monitoring in the BVI with bio-acoustic monitoring on several islands.

- The J.A. Woollam Foundation (based in the USA) provided funded for the realisation of environmental profiles for Tortola (Publication of Island Resources Foundation 2015).

- Royal Botanic Gardens Kew has been involved, in partnership with NPTVI and local and international organisations, in projects funded by UK Government's Darwin Initiative: assessment of plant and animal species of Gorda Peak National Park on Virgin Gorda and proposition of protected wetlands on Anegada; assessment of the coastal biodiversity on Anegada.

- RBG Kew provided mapping of Plant Species of Interest on several islands in the BVI including Beef Island (mapping data of 2014).

- Continued work with Kew, under a new Darwin-funded project (2015-2017): Building Capacity to Monitor and Conserve the BVI's Flora, will extend BVI links to Puerto Rico and the USVI to better understand the distribution and significance of Puerto Rican Bank species (BVI Environmental profile 2015).

- Mohamed bin Zayed Species projects on: the Anegada Iguana (*Cyclura pinguis*) (awarded in 2010, \$15,000); the Pokemeboy (*Vachellia anegadensis*) (awarded in 2014, \$10,000); the Wire wist (*Metastelma anegadense*) (awarded in 2014, \$5,000). Partnership with Kew RBG and NPTVI on a Darwin Plus project on the distribution of plant species (endemic and threatened species) within BVI National Parks.

- A project performed in 2001 aimed to assess the status and exploitation of marine turtles in UK OTs in the Caribbean region and was funded by the UK Department of Environment, Food and Rural Affairs with additional funding for training and capacity building initiatives from the Foreign and Commonwealth Office Environment Fund for the Overseas Territories (Godley et al. 2004).

- The NPT's operational budget is funded by an annual subvention from Government along with revenues collected from the sale of permits for the use of NPT moorings at dive sites and entrance fees at designated park sites (the Botanic Gardens and Sage Mountain on Tortola). Project funding is obtained through grants and donations from private individuals, partner institutions and donor organisations. Estimated revenue in 2013 was \$1.7 million dollars. In 2013, the MNRL reduced the Trust's annual subvention of approximately \$400,000 (which accounts for about 20 percent of the NPT's operating budget), with a view to its eventual elimination. To compensate for the reduced subvention, the Ministry has formally allocated authority to the NPT to collect the seabed lease fees for all moorings in the territory. Collection of these fees began in April 2013 (NPT, 2013). It is anticipated that a proposed increase in moorings fees will provide sufficient funding to enable the NPT to eventually become self-financing (Standing Finance Committee, 2015) (Environmental profiles for the BVI 2009-2015).

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➤ **Priorities of action (References: Perry and Gerber 2006, Environmental profiles for the BVI)**

- Minimize impacts of development via enforcement of existing regulations and improve planning.
- Set additional areas for conservation (both terrestrial and marine)
- Establish baseline studies for population size of data-deficient species
- There is a need to conduct Red List surveys and updates on the species occurring in the BVI, particularly for marine species.
- Support the control or eradication of alien invasive species and harmful exotic species. Enhance prevention of additional invasive species introduction.
- Improve public education and awareness concerning the value of conservation and biodiversity outcomes.

➤ **Major threats identify for the BVI**

- Alien invasive species: Of the 44 introduced species, the following three species are of highest concern: *Scaevola taccada* (a beach shrub originally from the Indo-Pacific and introduced as a landscaping plant), *Casuarina equisetifolia* (originally from Australia and introduced as a shade tree) and *Cryptostegia madagascariensis* (originally from Madagascar and introduced as an ornamental) (Royal Botanic Gardens Kew).
- Habitat degradation and fragmentation: land reclamation/conversion (major threat for forests and wetlands)
- Negative impacts from terrestrial pollution.

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - CAYMAN ISLANDS

Policy and Socioeconomic context

- Political Status (Cottam et al. 2011, European Overseas Countries and Territories: Environmental Profiles 2015)



- Cayman Islands are located at the western end of the Greater Antilles, about 240 km south of Cuba.
- The territory consists of three islands, Grand Cayman (197 km²), Cayman Brac (38 km²) and Little Cayman (28 km²). Little Cayman is separated from Cayman Brac by a 7-km wide channel, with Grand Cayman located some 140 km to the south-west. Cayman Brac and Little Cayman form the Sister Islands.

- The Cayman Islands are an European Overseas Territory politically attached to the United Kingdom.

- Demographic Trends and Socio-economic context (Cottam et al. 2011, Pelembe and Cooper 2011, Eu Overseas Countries and Territories: Environmental Profiles 2015)

- Area: 262 km²
- EEZ: 119,137 (presently, the delineation of the Caymans' EEZ is under progress)
- Population (2014): 55,036 inhabitants, with about 200 inhabitants in Little Cayman and 1,800 in Cayman Brac.
- GDP (US\$/ inhabitant): €38,609 (2012)
- Main economic activities: Islands' economy is based on tourism and offshore financial sector.

Protected and/or managed areas (References: Cottam et al. 2011, Pelembe and Cooper 2011, Marine Parks regulations)

- **List of protected areas**

Marine protected areas (MPAs)

- A **network of marine protected areas (MPAs)** established by the Cayman Islands Department of Environment (DOE) and recently enhanced with new delineations for Marine Reserves, Environmental Zones, Wildlife Interaction Zones, Line Fishing Zones, No diving Zones and Fish Spawning areas.

- The MPAs consist of different types of regulations according to the area: Environmental zone (1020 ha), Grouper Hole (766.8 ha), Marine Park (1527.6 ha), No dive zone (263.2 ha), No scuba zone (23.6 ha), and wildlife interaction area (563.3 ha, zone that restricts interaction with marine fauna such as feeding).

- In the Cayman Islands, a total of 10,255.3 ha of marine areas are protected 3,816 ha of which are no-take zones.

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Among these zones, the Environmental zone, replenishment zone (no-take zones for spiny lobsters and Queen conchs) and Marine Park area specifically protect the marine habitats and species. These areas represent about 7554.6 ha within the overall Cayman Islands territory.

Terrestrial protected areas

- **5 terrestrial protected areas (including mangrove wetlands):** Brac Parrot Reserve (Cayman Brac), Central Mangrove Wetland, Governor Michael Gore Bird Sanctuary, Mastic Reserve (Grand Cayman), Queen Elizabeth II Botanic Park.

- Land based protected areas are limited to **Animal Sanctuaries** (104.2 ha, in Grand and Little Cayman), the **National Trust property** (1189 ha, in the 3 Cayman Islands) and **Environmental zones** (established by the Cayman Islands Government, 647 ha in Grand Cayman).

- the National Trust property protects a significant area of the Mastic forest (403 ha in Grand Cayman) and 187 ha of the Bluff forest as the Brac Parrot Reserve (Brac Cayman). It protects also shrublands of the Salina Reserve in Grand Cayman (252 ha).

International recognition of natural habitats and wildlife

- 1 Ramsar site (82 ha): Booby Pond and Rookery (Little Cayman)

Projects under study

- 4 proposed Ramsar sites (Cottam et al. 2011, Pienkowski 2004, 2005):

- Salina Reserve, Grand Cayman (252 ha)
- Little Cayman Crown Wetlands and Marine Parks (249 ha within Marine Parks and 652 ha of wetlands)
- Barker's Wetland: 348 ha of Marine Replenishment Zone and 112 ha of terrestrial area
- Central Mangrove Wetland, Little Sound, Ponds and associated Marine Zones (8039 ha)

- Project of the DoE for the Enhancement of Marine Park: The National Conservation Council recently approved this project (on 02/24/2016). The project is now sent to the Cabinet.

- Project of the DoE with Nature Conservancy on critical terrestrial areas (2015).

Species and habitats considered in the BEST Initiative

Species outcomes

Table 1 - List of species that are **globally threatened** (Churchyard et al. 2009, Cottam et al. 2009, DaCosta-Cottam et al. 2009, IUCN Red List, Logan 2013, consultation of local actors on February 25, 2016).

Taxonomic group	Threatened species (* also endemic species)
Plants	
CR*	<p><i>Hohenbergia caymanensis</i>, <i>Verbesina caymanensis</i>, <i>Banara caymanensis</i>, <i>Casearia staffordiae</i>, <i>Salvia caymanensis</i>, <i>Dendropemon caymanensis</i>, <i>Pisonia margaretae</i>, <i>Dendrophylax fawcettii</i>, <i>Encyclia kingsii</i>, <i>Agalinis kingsii</i>, <i>Aegiphila caymanensis</i>, <i>Chamaesyce bruntii</i></p> <p><i>Local plant varieties endemic and assessed against the National RedList (Burton 2008): Epiphyllum phyllanthus var. plattsii (CR), Consolea millspaughii caymanensis (CR), Pectis caymanensis var. robusta (CR), Terminalia eriostachya margaretae (CR)</i></p>
EN	<p><i>Swietenia mahagoni</i>, <i>Chionanthus caymanensis</i>*, <i>Myrmecophila thomsoniana</i>*, <i>Coccothrinax proctorii</i>*, <i>Scolosanthus roulstonii</i>*, <i>Terminalia eriostachya</i>, <i>Guaicum officinale</i></p> <p><i>Local plant varieties endemic and assessed against the National RedList (Burton 2008): Chionanthus caymanensis var. caymanensis (EN), Chionanthus caymanensis longipetala (EN), Myrmecophila thomsoniana var. minor* (EN), M. thomsiana var. thomsiana* (EN)</i></p>

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VU	<i>Agave caymanensis</i> * (VU on the National RedList and EN on the IUCN RedList), <i>Phyllanthus caymanensis</i> * (VU on the National RedList and EN on the IUCN RedList), <i>Cedrela odorata</i> , <i>Jacquinia proctorii</i> , <i>Zanthoxylum flavum</i> , <i>Jatropha divaricata</i> <i>Local plant varieties endemic and assessed against the National RedList (Burton 2008): Cordia sebestena var. caymanensis</i> * (VU)
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i> , <i>Millepora striata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Montastraea franksi</i> , <i>Mycetophyllia ferox</i> , <i>Oculina varicosa</i>
Molluscs	
CR	<i>Cerion nanus</i>
Fish	
CR	<i>Epinephelus itajara</i> #, <i>Hyporthodus nigritus</i> #
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Hyporthodus flavolimbatus</i> #, <i>Mycteroperca interstitialis</i> #, <i>Kajikia albida</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Thunnus obesus</i> ,
Sharks and rays	
EN	<i>Sphyrna lewini</i> , <i>Sphyrna mokarran</i>
VU	<i>Carcharhinus longimanus</i> , <i>Isurus oxyrinchus</i> , <i>Rhincodon typus</i> , <i>Manta birostris</i>
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Cyclura lewisi</i> , <i>Chelonia mydas</i> , <i>Caretta caretta</i>
VU	<i>Cyclura nubila</i> , <i>Dermochelys coriacea</i> #
Birds	
VU	<i>Dendrocygna arborea</i>
Mammals	
VU	<i>Physeter macrocephalus</i>

occasional species

Table 2 - List of species that are **geographically restricted** (Churchyard et al. 2009, Cottam et al. 2009, DaCosta-Cottam et al. 2009, Echternacht et al. 2011, Franck 2012, Hedges et al. 2009, IUCN Red List, Logan 2013, Mike Pienkowski pers. com. 2015, consultation of local actors on February 25, 2016, Burton 2008, National Conservation Law 2013)

* asterisks indicate species assessed against the National RedList (Burton 2008) and not yet reported in the global RedList.

Taxonomic group	Number of endemic species
Plants	<p>- 23 plant species endemic to the Cayman Islands:</p> <p>- on all 3 islands: <i>Chionanthus caymanensis</i> (EN), <i>Coccothrinax proctorii</i> (EN), <i>Crossopetalum caymanense</i>, <i>Argythamnia proctorii</i>, <i>Agave caymanensis</i> (VU), <i>Myrmecophila thomsoniana</i> (EN), <i>Phyllanthus caymanensis</i> (VU), <i>Harrisia caymanensis</i>, <i>Caesalpinia caymanensis</i>, <i>Cordia sebestena var. caymanensis</i> (VU-3CI), <i>Allophylus cominia var. caymanensis</i> (3 CI-NT*), <i>Pilostyles globosa var. caymensis</i> (3 CI)</p> <p>- strictly endemic to Grand Cayman: <i>Hohenbergia caymanensis</i> (CR), <i>Casearia staffordiae</i> (CR), <i>Salvia caymanensis</i> (CR), <i>Pisonia margaretae</i></p>

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	<p>(CR), Ghost orchid (<i>Dendrophylax fawcettii</i>-CR), <i>Agalinis kingsii</i> (CR), <i>Aegiphila caymanensis</i> (CR), <i>Scolosanthus roulstonii</i> (EN), <i>Myrmecophila thomsoniana</i> var. <i>thomsoniana</i> (EN-Grand Cayman), <i>Pectis caymanensis</i> var. <i>robusta</i> (CR-Grand Cayman), <i>Terminalia eriostachya</i> var. <i>margaretiae</i> (CR-Grand Cayman), <i>Chionanthus caymanensis longipetala</i> (EN-Grand Cayman)</p> <p>- <u>endemic to Sisters Islands</u>: <i>Banara caymanensis</i> (CR), <i>Encyclia kingsii</i> (CR), <i>Turnera triglandulosa</i>, <i>Myrmecophila thomsoniana</i> var. <i>minor</i> (EN-SI), <i>Chionanthus caymanensis</i> var. <i>caymanensis</i> (EN-Sister Islands)</p> <p>- <u>strictly endemic to Little Cayman</u>: <i>Chamaesyce bruntii</i> (CR*), <i>Dendropemon caymanensis</i> (CR)</p> <p>- <u>strictly endemic to Cayman Brac</u>: <i>Verbesina caymanensis</i> (CR), <i>Epiphyllum phyllanthus</i> var. <i>plattsii</i> (CR*-Cayman Brac)</p> <p>- Plant species endemic to the Cayman Islands and Cuba: <i>Pectis caymanensis</i>, <i>Pleurothallis caymanensis</i> (Grand Cayman), <i>Terminalia eriostachya</i> (EN), <i>Malpighia cubensis</i> (Grand Cayman), <i>Encyclia phoenicia</i> (Sister Islands), <i>Peperonia pseudopereskiaifolia</i> (Grand and Little Cayman), <i>Polygala propinqua</i></p> <p>- Plant species endemic to the Cayman Islands and Jamaica: <i>Jatropha divaricata</i> (VU), <i>Tabernaemontana laurifolia</i>, <i>Lepidaploa divaricata</i>, <i>Cionosicyos pomiformis</i>, <i>Astrocasia tremula</i> (Grand Cayman), <i>Peperonia simplex</i> (Grand Cayman), <i>Casearia odorata</i> (Grand Cayman), <i>Jacquinia proctorii</i> (VU), <i>Daphnopsis occidentalis</i></p> <p>- Plant species endemic to the Cayman Islands, Bahamas archipelago and Cuba: <i>Consolea millspaughii</i> with a subspecies endemic to Cayman Brac, <i>Consolea millspaughii caymanensis</i> (CR*)</p>
<p>Invertebrates</p>	<p>- 3 molluscs endemic to CI: Little Cayman land snail (<i>Cerion nanus</i>- CR restricted to Little Cayman), Tulip mussel (<i>Cosa caribbaea</i>), Commissioner Gerrard's Clam (<i>Transenella gerrardi</i>)</p> <p>- about 30 species of land snails are endemic to CI: <i>Alcadia lewisi</i>, <i>Brachypodella caymanensis</i>, <i>Cerion martinianum</i>, <i>C. pannosum</i>, <i>Choanopoma caymanense</i>, <i>Chondropoma caymanbracense</i>, <i>C. caymanense</i>, <i>Cyclopilsbrya fonticula</i>, <i>Eutrochatella fisheri</i>, <i>Geomelania alemon</i>, <i>Hemitrochus lewisiana</i>, <i>H. streatori</i>, <i>Lacteoluna caymanbracensis</i>, <i>L. caymanensis</i>, <i>L. steveni</i>, <i>L. summa</i>, <i>L. trochella</i>, <i>Lucidella caymanensis</i>, <i>Microceramus caymanensis</i>, <i>Pineria perpusillus</i>, <i>Proserpinula lewisi</i>, <i>Spiraxis caymanensis</i>, <i>S. subrectaxis</i>, <i>Stoastoma atomus</i>, <i>Strobilops wenziana</i>, <i>Tudora rosenbergiana</i>, <i>Varicella adolescentia</i>, <i>V. caymanensis</i>, <i>V. infantia</i>, <i>V. pinchoti</i></p> <p>- 1 land snail subspecies endemic to CI: <i>Chondropoma caymanbracense parvicaymanense</i></p> <p>- 3 arthropods endemic to CI: Grand Cayman scorpion (<i>Heteronebo caymanensis</i>- endemic to Grand Cayman), Centipede (<i>Leptophilus caribeanus</i>-endemic to Little Cayman and Swan Isl. (Honduras)), 1 copepod (crustaceans) endemic to Grand Cayman (<i>Tisbe caymanensis</i>)</p> <p>- 4 butterfly subspecies endemic to Grand Cayman island: Pygmy Blue butterfly (<i>Brephidium exilis thompsoni</i>), Chestnut Leaf Butterfly (<i>Anaea echemus danielana</i>), Cayman Lucas's Blue (<i>Hemiargus ammon erembis</i>), Cayman Swallowtail (<i>Papilio andraemon taylori</i>).</p> <p>(these endemic subspecies are protected under Part II of the National</p>

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	<p>Conservation Law).</p> <ul style="list-style-type: none"> - The Cayman Pygmy Blue is subject to a species Action Plan as part of the National Biodiversity Action Plan for the Cayman Islands. - Invertebrates potentially endemic to the CI: Slug (<i>Veronicella laevis</i>), Beetles (<i>Callida caymanensis</i>, <i>Derancistrus caymanensis</i>, <i>Diastolinus caymanensis</i>, <i>Diceroprocta caymanensis</i>, <i>Diceroprocta cleavesi</i>, <i>Diceroprocta ovata</i>, <i>Eburia caymanensis</i>, <i>Phaleria caymanensis</i>, <i>Phyllophaga caymanensis</i>, <i>Protosphaerion caymanensis</i>, <i>Stizocera caymanensis</i>).
Freshwater fishes	<ul style="list-style-type: none"> - 2 fish species restricted to the Cayman Islands: Cayman gambusia (<i>Gambusia xanthosoma</i>), Grand Cayman limia (<i>Limia caymanensis</i>)
Reptiles	<ul style="list-style-type: none"> - 14 out of the 26 indigenous reptile species are endemic to the Cayman Islands (Edgar 2010, Hedges et al. 2009, National Conservation Law 2013, DoE pers. com. 2016): - Grand Cayman Blue Iguana (<i>Cyclura lewisi</i> - EN, strictly endemic to Grand Cayman) - Grand Cayman Blind Snake (<i>Typhlops caymanensis</i>), endemic to Grand Cayman - Cayman Brac Blind Snake (<i>Typhlops epactius</i>) (endemic to Cayman Brac) - Cayman Blue-Throated anole (<i>Anolis conspersus</i>) - Little Cayman Green Anole (<i>Anolis maynardi</i>- strictly endemic to Little Cayman and Cayman Brac) - Anole (<i>Anolis luteosignifer</i>), endemic to Cayman Brac (Echternacht et al. 2011) - Cayman Ground gecko (<i>Sphaerodactylus argivus</i>) - Cayman Ground Boa (<i>Tropidophis caymanensis</i>), endemic to Grand Cayman (Echternacht et al. 2011) - Cayman Ground Boa (<i>Tropidophis parkeri</i>), endemic to Little Cayman (Echternacht et al. 2011) - Cayman Ground Boa (<i>Tropidophis schwartzi</i>), endemic to Cayman Brac (Echternacht et al. 2011) - Galliwasp (<i>Celestus maculates</i>) - endemic to Little Cayman and Cayman Brac (Echternacht et al. 2011) - Grand Cayman Racer (<i>Alsophis caymanus</i>)- endemic to Grand Cayman - Cayman Brac racer (<i>Alsophis fuscicauda</i>)-endemic to Cayman Brac - Little Cayman racer (<i>Alsophis ruttyi</i>) - endemic to Little Cayman (these 3 species formerly recognized as endemic subspecies of <i>Alsophis cantherigerus</i> recently described as endemic species - Hedges et al. 2009) - 1 reptile species endemic to the Sister Islands and Cuba: Sister Islands Rock Iguana (<i>Cyclura nubila</i>- VU) - Several reptile subspecies are endemic to the Cayman Islands² (GC Grand Cayman, CB Cayman Brac, LC Little Cayman): <i>Cyclura nubila caymanensis</i> (LC-CB), <i>Tretanorhinus variabilis lewisi</i> (GC), <i>Tropidophis caymanensis caymanensis</i>, , , , <i>Anolis conspersus conspersus</i> (GC), <i>Anolis conspersus lewisi</i> (CB), , , , <i>Leiocephalus carinatus granti</i> (CB-LC), <i>Leiocephalus carinatus varius</i> (GC), <i>Sphaerodactylus argivus argivus</i> (CB), <i>Sphaerodactylus argivus bartschi</i> (LC), <i>Sphaerodactylus argivus lewisi</i> (GC)
Birds	<ul style="list-style-type: none"> - 1 bird species endemic to the Cayman Islands, Bahamas archipelago and Cuba: Cuban Parrot (<i>Amazona leucocephala</i>)

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	<p>-</p> <p>- 4 bird species occurring in the CI and islands of the Greater Antilles: Yucatan Vireo (<i>Vireo magister</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Vitelline Warbler (<i>Dendroica vitellina</i>), Cuban Bullfinch (<i>Melopyrrha nigra</i> - restricted to Cuba and Grand Cayman)</p> <p>- Subspecies of the Cuban parrot endemic to the Cayman Islands: <i>Amazona leucocephala caymanensis</i> endemic to Grand Cayman and <i>A. leucocephala hesternana</i> endemic to Cayman Brac.</p> <p>- Other bird subspecies endemic to CI: Cuban Bullfinch (<i>Melopyrrha nigra taylori</i>), Red-legged thrush (<i>Turdus plumbeus coryi</i>-Endemic to Cayman Brac), Caribbean Dove (<i>Leptotila jamaicensis collaris</i> - Grand Cayman), West Indian Woodpecker (<i>Melanerpes superciliosus caymanensis</i> - Grand Cayman), Northern Flicker (<i>Colaptes auratus gundlachi</i> - Grand Cayman), Caribbean Elaenia (<i>Elaenia martinica caymanensis</i> -in the three Cayman Islands), Loggerhead Kingbird (<i>Tyrannus caudifasciatus caymanensis</i> -in Grand Cayman and Cayman Brac), Vitelline Warbler (<i>Dendroica vitellina vitellina</i> -only in Grand Cayman), <i>D. vitellina crawfordi</i> (in Little Cayman and Cayman Brac), Bananaquit (<i>Coereba flaveola sharpii</i> - in the three Cayman Islands), Stripe-headed Tanager (<i>Spindalis zena salvini</i> - in Grand Cayman), Thick-billed Vireo (<i>Vireo crassirostris alleni</i> - in Grand Cayman and Cayman Brac), Greater Antillean Grackle (<i>Quiscalus niger caymanensis</i> - in Grand Cayman, <i>Q. niger bangsi</i> - in Little Cayman).</p>
Mammals	<p>No restricted-range bat species.</p> <p>- Endemic bat subspecies: Big Brown bat subspecies endemic to Grand Cayman (<i>Eptesicus fuscus minor</i>). This bat species congregates in important numbers in bat roosts.</p>

¹ The level of vulnerability (CR, EN, VU) has been assessed for several subspecies and varieties endemic to Cayman Islands.

² For the BEST Initiative the species level is considered as a criteria to identify KBAs. The presence of endemic subspecies can add some information to a KBA but can't be used by themselves to propose a KBA.

Numerous subspecies and varieties of plants, invertebrates and vertebrates species are strictly endemic to the Cayman Islands. Some of these subspecies and varieties are related to species globally threatened or restricted to the Cayman Islands.

Habitat outcomes

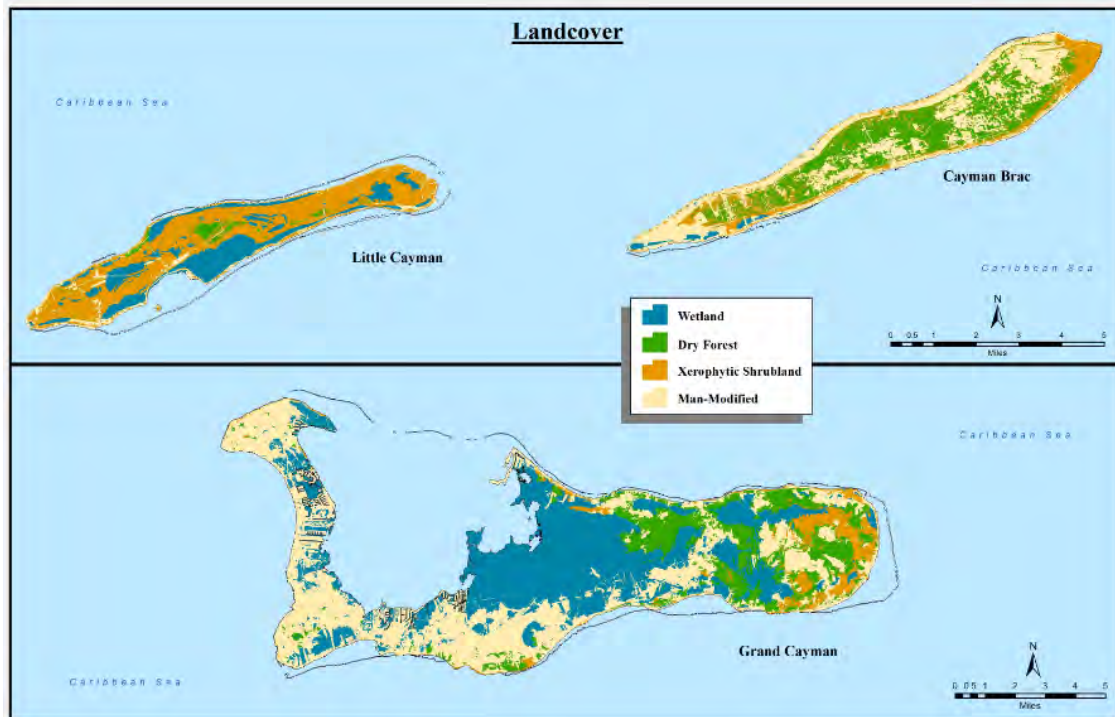
- **Terrestrial ecosystems** (Cottam et al. 2011, DaCosta-Cottam et al. 2009, Pelembe and Cooper 2011, Cayman Islands Government. Department of Environment. Action Plans)

- The dominant vegetation consists of: dry sub-tropical forests, shrubland and woodland, and wetlands (mangrove swamps, saline lagoons, ponds, freshwater ponds). Mangrove habitats cover an important area within the Central Mangrove Wetland (CMW) on Grand Cayman (about 3500 ha).

- Shrubland is a biodiverse habitat and of particular importance for reptiles, particularly for the endemic and threatened Grand Cayman Blue iguana (*Cyclura lewisi*).

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Habitat mapping project for the Cayman Islands (Cayman Islands Department of Environment, Darwin Initiative). The updated mapping of terrestrial habitats for the 3 Cayman Islands is considered (DoE, pers. com. 2016).



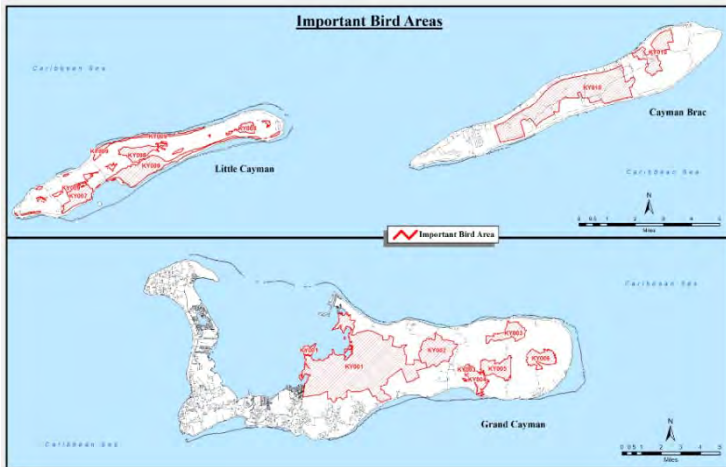
➤ **Marine ecosystems** (Cottam et al. 2011, DaCosta-Cottam et al. 2009, Logan 2013)

- The Cayman Islands are mostly surrounded by fringing reefs enclosing shallow, sand and seagrass filled lagoons. Shallowest reefs form a linear wave-resistant crest around most of Grand Cayman and Little Cayman and is rarely observed around Cayman Brac (Logan 2013).
- 9 threatened coral species occur within the coral reef ecosystem of the Cayman Islands.
- Coral reefs present a high biodiversity and play important ecosystem services for the territory.
- 6 areas are identified as fish spawning zones (2 areas for each island) and represent important marine areas for marine fishes, such as the threatened Nassau grouper (*Epinephelus striatus*) (SCRFA database).
- The Offshore Banks within the Cayman EEZ will be considered in the marine KBAs due to their importance as fish foraging and spawning areas, and the presence of threatened fishes, sharks, sea turtles and coral species.

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- **Important Bird Areas (IBAs)** (References: Allcorn et al. 2009, Bradley et al. 2008, Churchyard et al. 2009)

- Of the 222 bird species recorded on the Cayman Islands, 49 species are breeding species and 173 are non-breeding migrants (Neotropical migrants, occasional migrants).

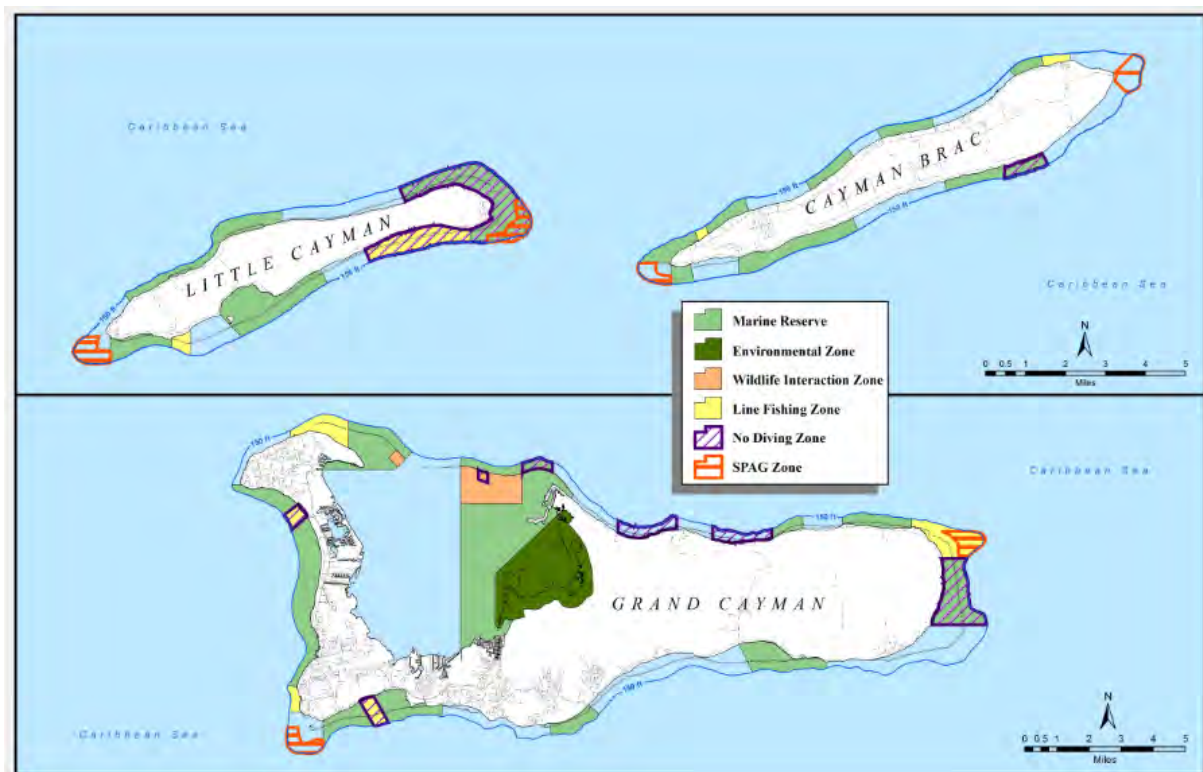


- **10 IBAs** are identified (6,700 ha, including marine areas). Only 2 of these IBAs are protected in their entirety (Boody Pond Nature Reserve, Botanic Park and Salina Reserve). 5 IBAs have no protection and 3 IBAs are partly protected (between 20 and 70% of their areas).

- The DoE conducts a mapping of IBAs with a revision of their delineations and extension particularly on Cayman Brac for the critical habitats for the Cuban Parrot. This updated version of IBAs for the 3 Cayman Islands is considered in the profile (DoE, pers. com. 2016).

- An important breeding colony of Red-footed Boobies (*Sula sula*) occurs in Little Cayman, with about 10,000-15,000 individuals, probably accounting for 30% of the Caribbean population.

Map of the proposed MPAs for the project of Enhancement of the MPA network for the Cayman Islands (DoE 2016). The final version of these MPAs maps is considered for the delineation of marine KBAs for the 3 Cayman islands.



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- **Sea turtles nesting areas** (Aiken et al. 2001, Bell et al. 2007, Godley et al. 2004, consultation of local actors on February 25, 2016, DoE data information, Janice Blumenthal and Jeremy Olynik, pers. com. 2016)

- Two sea turtle species nest in the Cayman Islands: Green turtles (*Chelonia mydas*) and Loggerhead turtles (*Caretta caretta*).

- The Leatherback (*Dermochelys coriacea*) and Hawksbill sea turtle (*Eretmochelys imbricata*) nest very occasionally in the Cayman Islands. Hawksbill sea turtles mainly occur as juveniles in Cayman waters and probably migrate when they are mature to nest elsewhere in the Caribbean region (Blumenthal et al. 2010a).

- Since 1998, the DoE has conducted a survey of sea turtle nesting areas in the 3 Cayman Islands. Data analyses indicate that 24 nesting beaches constitute key nesting areas for the Green and Loggerhead sea turtles (with more than 10 nesting tracks / year / species) (DoE, Janice Blumenthal and Jeremy Olynik, pers. com. 2016):

- **for Green turtles: 9 KBAs:** 7 nesting areas on Grand Cayman (Barefoot Gardens, Barkers, Little Spotts, Sand Hole Road, South Sound and 2 areas along Seven Miles Beach) and 2 key nesting sites on Little Cayman (Preston Bay and Point of Sand) (+ 1 candidate KBA: Jacksons).

- **for Loggerheads: 15 KBAs:** 7 key nesting areas on Grand Cayman (Rum Point, Bodden Town, Beach Bay, Spotts Beach, South Sound, two sites along Seven Miles Beach) (+ 5 candidate KBAs: South Sound West, Barefoot Gardens, Morritts, Little Spotts, Bat Cave) , 4 key nesting sites on Little Cayman (Jacksons, South Hole Sound, Preston Bay, Point of Sand), 4 key nesting sites on Cayman Brac (South Side East and West, Brac Reef West, Airport Beach).



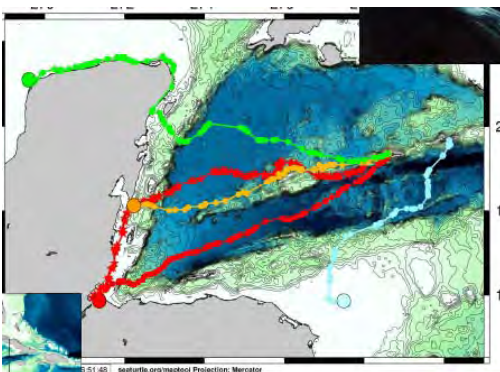
Maps of the key nesting areas for Green and Loggerhead sea turtles.

- Foraging populations of Green and Hawksbill sea turtles occur in the waters of the Cayman Islands. Hawksbill turtles are found on coral reefs and hardbottom areas (Blumenthal et al. 2009a) and the extensive areas of back-reef lagoons and North Sound with large extent of seagrass beds provide suitable foraging habitat for Green turtles (Blumenthal et al. 2010b).

- The Action Plan for the sea turtles is presently under revision (DoE).

➤ Corridors

Sea turtles



- Genetic analyses performed on sea turtles reveal that young hawksbills that occur in the waters of the Cayman Islands territory were born in distant parts of the Caribbean region (Central America, Cuba, Lesser Antilles) and migrate overseas when they mature (Blumenthal et al. 2010a)

Map of Green and Loggerhead sea turtle migration between Cayman Islands and Central America (Cayman Islands DoE, Marine Turtle Satellite Tracking Project)

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- Time-depth recorders deployed on 21 juvenile Hawksbill sea turtles and six juvenile Green turtles highlighted local movements, including movements across the boundaries of marine protected areas (Blumenthal et al. 2009b, Blumenthal et al. 2010b).

- Satellite tracking indicates that sea turtles from the Cayman Islands nesting populations are migratory with Green turtles tracked to foraging areas in Central America, Mexico, Florida keys and Loggerhead turtles tracked to Nicaragua (Blumenthal et al. 2006).

Fishes and marine invertebrates

- Important ecological corridors between the proposed MPAs (Project for the enhancement of MPAs) for the dispersion of larvae and juveniles of threatened fish and coral species.- Following the last version of the MPAs delineation, areas that are interconnected between 2 MPAs will be considered as marine ***ecological corridors***.

Marine mammals

- The vulnerable Sperm whale (*Physeter macrocephalus*) occurs in the waters of the Cayman Islands.

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Table 3. KBAs identified on the territory and justification.

N. KBA	KBAs	Justification
KBA 1	Terrestrial areas of Grand Cayman	<p>Terrestrial habitats and wetlands</p> <ul style="list-style-type: none"> - significant dry forest habitats within the Mastic region (a part of this forest is protected by the National Trust property) - Central Mangrove Wetland (CMW, covering about 3500 ha) on Grand Cayman represents the most significant area of wetlands and mangroves in the islands and remains largely intact (Cottam et al. 2011, Pienkowski 2004). - presence of plant species endemic to the Cayman Islands, with some of them globally threatened (Cottam et al. 2011, Kew Royal Botanic Gardens, DoE, Conservation Law 2013): <ul style="list-style-type: none"> -- Endemic to the 3 CI: <i>Chionanthus caymanensis</i> (EN), <i>Coccothrinax proctorii</i> (EN), <i>Crossopetalum caymanense</i>, <i>Argythamnia proctorii</i>, <i>Agave caymanensis</i> (VU), <i>Myrmecophila thomsoniana</i> (EN), <i>Phyllanthus caymanensis</i> (VU), <i>Harrisia caymanensis</i>, <i>Caesalpinia caymanensis</i>, <i>Cordia sebestena</i> var. <i>caymanensis</i> (VU-3CI), <i>Allophylus cominia</i> var. <i>caymanensis</i> (3 CI-NT*), <i>Pilostyles globosa</i> var. <i>caymensis</i> (3 CI) -- Endemic to Grand Cayman: <i>Hohenbergia caymanensis</i> (CR), <i>Casearia staffordiae</i> (CR), <i>Salvia caymanensis</i> (CR), <i>Pisonia margaretae</i> (CR), Ghost orchid (<i>Dendrophylax fawcettii</i>-CR), <i>Agalinis kingsii</i> (CR), <i>Aegiphila caymanensis</i> (CR), <i>Scolosanthus roulstonii</i> (EN), <i>Myrmecophila thomsoniana</i> var. <i>thomsoniana</i> (EN-Grand Cayman), <i>Pectis caymanensis</i> var. <i>robusta</i> (CR-Grand Cayman), <i>Terminalia eriostachya margaretae</i> (CR-Grand Cayman), <i>Chionanthus caymanensis longipetala</i> (EN-Grand Cayman) <p>- 15 plant species endemic to the Cayman Islands and islands of the Greater Antilles (Cuba, Jamaica): <i>Pectis caymanensis</i> (a subspecies endemic to the Grand Cayman, <i>Pectis caymanensis</i> var. <i>robusta</i>-CR), <i>Astrocasia tremula</i>, <i>Peperonia simplex</i>, <i>Casearia odorata</i>, <i>Pleurothallis caymanensis</i>, <i>Malpighia cubensis</i>, <i>Peperonia pseudopereskiifolia</i>, <i>Terminalia eriostachya</i> (EN), <i>Polygala propinqua</i>, <i>Jatropha divaricata</i> (VU), <i>Tabernaemontana laurifolia</i>, <i>Lepidaploa divaricata</i>, <i>Cionosicyos pomiformis</i>, <i>Jacquinia proctorii</i>, <i>Daphnopsis occidentalis</i>.</p> <ul style="list-style-type: none"> - 2 threatened plant species: <i>Swietenia mahagoni</i> (in the Botanic Park and Saline Reserve), <i>Guaiaecum officinale</i> - Endemic and threatened plant species occur within the Barkers area, Ironwood forest, IBAs, Botanical Park, Colliers Wilderness Reserve. <p>Invertebrates</p> <ul style="list-style-type: none"> - 32 molluscs endemic to the Cayman islands, including 30 land snail species (see species list Table 2). - 2 arthropods endemic to Grand Cayman: Grand Cayman scorpion (<i>Heteronebo caymanensis</i>), copepod (<i>Tisbe caymanensis</i>) <p>- 4 butterfly subspecies endemic to Grand Cayman island: Pygmy Blue butterfly (<i>Brephidium exilis thompsoni</i>), Chestnut Leaf Butterfly (<i>Anaea echemus danielana</i>), Cayman Lucas's Blue (<i>Hemiargus ammon erembis</i>), Cayman Swallowtail (<i>Papilio andraemon taylori</i>).</p> <p>Fishes</p>

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		<p>- In ponds: presence of 2 freshwater fish species endemic to Grand Caymans: Cayman gambusia (<i>Gambusia xanthosoma</i>), Grand Cayman limia (<i>Limia caymanensis</i>)</p> <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of the endemic and threatened Grand Cayman Blue Iguana (<i>Cyclura lewisi</i> - EN). This species is strictly endemic to Grand Cayman and mostly occurs in the three protected areas: Queen Elisabeth II Botanic Park and Salina Reserve (areas included within an IBA) and Colliers Wilderness Reserve. - An ecological corridor for the Blue iguana has been highlighted between Salina Reserve and Colliers Wilderness Reserve. <p>- 5 other reptile species endemic to Grand Cayman: Grand Cayman Blind Snake (<i>Typhlops caymanensis</i>), Cayman Blue-Throated anole (<i>Anolis conspersus</i>), Cayman Ground gecko (<i>Sphaerodactylus argivus</i>), Cayman Ground Boa (<i>Tropidophis caymanensis</i>), Grand Cayman Racer (<i>Alsophis caymanus</i>)</p> <p>Birds - 6 IBAs (Bradley et al. 2008):</p> <ul style="list-style-type: none"> - presence of the vulnerable West Indian Whistling duck <i>Dendrocygna arborea</i> (about 83% of the Cayman Islands population) - presence of the main population of the CI of the Cuban Parrot (<i>Amazona leucocephala</i>) restricted to the Cayman Islands, Bahamas archipelago and Cuba, including the subspecies endemic to Grand Cayman (<i>Amazona leucocephala caymanensis</i>). - 4 bird species occurring in the CI and islands of the Greater Antilles: Yucatan Vireo (<i>Vireo magister</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Vitelline Warbler (<i>Dendroica vitellina</i>), Cuban Bullfinch (<i>Melopyrrha nigra</i> - restricted to Cuba and Grand Cayman) - About 1% of the global population of the Vitelline Warbler <i>Dendroica vitellina vitellina</i> occurs in Mastic Reserve IBA. - Endemic bird subspecies: <i>Leptotila jamaicensis collaris</i>, <i>Melanerpes superciliaris caymanensis</i>, <i>Tyrannus caudifasciatus caymanensis</i>, <i>Spindalis zena salvini</i>, <i>Quiscalus niger caymanensis</i>, <i>Melopyrrha nigra taylori</i> <p>The area of Malportas Pond is important for migratory birds.</p> <p>Network of protected areas</p> <ul style="list-style-type: none"> - The CMW is 19% protected under marine conservation law, 7% by the National Trust. - Mastic Reserve is owned at 70% by the National Trust - 50ha of Botanic park owned by the National Trust - 2 Animal Sanctuaries
KBA2	<p>Marine ecosystems of Grand Cayman</p>	<ul style="list-style-type: none"> - The Cayman Islands are mostly surrounded by fringing coral reefs enclosing shallow, sand and seagrass filled lagoons (Cottam et al. 2011, DaCosta-Cottam et al. 2009). <p>Grand Cayman</p> <ul style="list-style-type: none"> - Fringing coral reefs around most of the island. Key sites for coral reefs include: Seven Mile Beach marine park, Southwest Point (Sand Cay High Heads) and North Side Reefs (DaCosta-Cottam et al. 2009) - Key lagoon areas: North Sound, South Sound, Frank Sound, East End Bodden Town lagoon, Pease Bay lagoon (DaCosta-Cottam et al. 2009)

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		<p>- About 6230 ha of seagrass beds and 6520 ha of mangroves occur in Grand Cayman.</p> <p>- Key seagrass sites encompass North Sound, South Sound, Frank Sound and East End and key mangrove areas include Central Mangrove Wetland,, North Sound Mangrove Buffer, Barkers mangroves (DaCosta-Cottam et al. 2009)</p> <p>Threatened marine species</p> <p>- High biomass values of fish species within the Marine Parks and presence of 18 threatened coral and fish species (with 4 more fish species occurring occasionally).</p> <p>Network of protected areas</p> <p>- Marine reserves, 2 Fish Spawning areas, 1 Environmental Zone (part of the CMW), 2 no-diving zones</p>
KBA 3	Terrestrial areas of Little Cayman	<p>Terrestrial habitats and wetlands</p> <p>- Variety of habitats: Dry forests, ponds, hyper-saline lagoons, mangroves</p> <p>- Wetlands (with mangroves) cover about 40% of Little Cayman with 9 ponds</p> <p>- Ramsar site of Booby Pond and Rookery (cf. below)</p> <p>- presence of plant species endemic to the Cayman Islands, with some of them globally threatened (Cottam et al. 2011, Kew Royal Botanic Gardens, DoE, Conservation Law 2013):</p> <p style="padding-left: 40px;">-- Endemic to the 3 CI: <i>Chionanthus caymanensis</i> (EN), <i>Coccothrinax proctorii</i> (EN), <i>Crossopetalum caymanense</i>, <i>Argythamnia proctorii</i>, <i>Agave caymanensis</i> (VU), <i>Myrmecophila thomsoniana</i> (EN), <i>Phyllanthus caymanensis</i> (VU), <i>Harrisia caymanensis</i>, <i>Caesalpinia caymanensis</i>, <i>Cordia sebestena</i> var. <i>caymanensis</i> (VU-3CI), <i>Allophylus cominia</i> var. <i>caymanensis</i> (3 CI-NT*), <i>Pilostyles globosa</i> var. <i>caymensis</i> (3 CI)</p> <p style="padding-left: 40px;">-- Endemic to Sister Islands: <i>Banara caymanensis</i> (CR), <i>Encyclia kingsii</i> (CR), <i>Turnera triglandulosa</i>, <i>Myrmecophila thomsoniana</i> var. <i>minor</i> (EN-SI), <i>Chionanthus caymanensis</i> var. <i>caymanensis</i> (EN-Sister Islands)</p> <p style="padding-left: 40px;">-- Endemic to Little Cayman: <i>Chamaesyce bruntii</i> (CR*), <i>Dendropemon caymanensis</i> (CR)</p> <p>- 11 plant species endemic to the Cayman Islands and islands of the Greater Antilles (Cuba, Jamaica): <i>Pectis caymanensis</i>, <i>Terminalia eriostachya</i> (EN), <i>Encyclia phoenicia</i> (Sister Islands), <i>Peperonia pseudopereskiiifolia</i> (Grand and Little Cayman), <i>Polygala propinqua</i>, <i>Jatropha divaricata</i> (VU), <i>Tabernaemontana laurifolia</i>, <i>Lepidaploa divaricata</i>, <i>Cionoscyos pomiformis</i>, <i>Jacquinia proctorii</i>, <i>Daphnopsis occidentalis</i>.</p> <p>Invertebrates</p> <p>- presence of the land snail <i>Cerion nanus</i> (CR) strictly endemic to Little Cayman restricted to an area close to the Ramsar site.</p> <p>- 32 molluscs endemic to the CI (including about 30 endemic land snails).</p> <p>- 1 centipede endemic to Little Cayman and Swan Isl. (Honduras) (<i>Leptophilus caribeanus</i>)</p> <p>Fishes</p> <p>- In ponds: presence of the freshwater fish species endemic to Grand Caymans: Cayman gambusia (<i>Gambusia xanthosoma</i>), Grand Cayman limia (<i>Limia caymanensis</i>)</p>

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	<p>Reptiles</p> <ul style="list-style-type: none"> - Presence of the Little Cayman Green Anole (<i>Anolis maynardi</i>) - Presence of the endemic (CI and Cuba) and threatened Sister Islands Rock Iguana (<i>Cyclura nubila</i>), including the endemic subspecies <i>Cyclura nubila ssp. caymanensis</i> <p>- Foraging and breeding areas for the Sister Islands Rock Iguana occur on the western tip of Little Cayman.</p> <p>- 5 other reptile species endemic to the CI:</p> <ul style="list-style-type: none"> - Cayman Blue-Throated anole (<i>Anolis conspersus</i>) - Little Cayman Green Anole (<i>Anolis maynardi</i>- strictly endemic to Little Cayman and Cayman Brac) - Cayman Ground gecko (<i>Sphaerodactylus argivus</i>) - Cayman Ground Boa (<i>Tropidophis parkeri</i>) - Little Cayman racer (<i>Alsophis ruttii</i>)* - endemic to Little Cayman - Galliwasp (<i>Celestus maculates</i>) - endemic to Little Cayman and Cayman Brac <p>Birds - 3 IBAs covering about 50% of the island's area (Bradley et al. 2008): Booby Pond Reserve (Ramsar site), Crown Wetlands and Sparrowhawk Hill.</p> <ul style="list-style-type: none"> - presence of the vulnerable West Indian Whistling duck <i>Dendrocygna arborea</i> (at least 135 pairs) - congregation of 3 seabird species, including important populations of the Red-footed Booby (<i>Sula sula</i>) up to 20,000 individuals - presence of 3 bird species restricted to CI and islands of the Greater Antilles: Yucatan Vireo (<i>Vireo magister</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Vitelline Warbler (<i>Dendroica vitellina</i>) - endemic bird subspecies: <i>Quiscalus niger bangsi</i> <p>Network of protected areas</p> <ul style="list-style-type: none"> - Booby Pond Nature Reserve and Rookery Animal Sanctuary - Ramsar site and IBA - 135 ha of the IBA owned by the National trust
Booby Pond and Rookery	<ul style="list-style-type: none"> - Ramsar site (82 ha) <p>Terrestrial and coastal ecosystems:</p> <ul style="list-style-type: none"> - Representative of a variety of habitats: mangrove-fringed lagoon, dry forests. - presence of endemic plants to the CI (cf. above the list of plant species for Little Cayman) <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of the endemic (CI and Cuba) and threatened Sister Islands Rock Iguana (<i>Cyclura nubila</i>), including the endemic subspecies <i>Cyclura nubila ssp. caymanensis</i> <p>Birds</p> <ul style="list-style-type: none"> - presence of the vulnerable West Indian Whistling duck <i>Dendrocygna arborea</i> - Important breeding colony of Red-footed Boobies (<i>Sula sula</i>) with about 10,000-15,000 individuals, probably accounting for 30% of the Caribbean population - Important breeding and foraging area for resident and migratory bird species - endemic bird subspecies: <i>Quiscalus niger bangsi</i>

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KBA 4	Marine ecosystems of Little Cayman	<p>Little Cayman</p> <ul style="list-style-type: none"> - Fringing coral reefs around most of the island. Key sites for coral reefs include: White Bay marine park (DaCosta-Cottam et al. 2009) - Key lagoon areas: South Hole Sound, Mary's Bay, Charles Bight, Preston Bay, Point of Sand (DaCosta-Cottam et al. 2009) <p>- About 145 ha of seagrass beds and 475 ha of mangroves occur in Little Cayman.</p> <p>- Key seagrass sites encompass South Hole Sound and Mary's Bay. Key mangrove sites include Crown Wetlands (especially Tarpon Lake and surrounds), Booby Pond (northern mangrove fringe), South Hole Sound (DaCosta-Cottam et al. 2009)</p> <p>Threatened marine species</p> <ul style="list-style-type: none"> - High biomass values of fish species within the Marine Parks and presence of 18 threatened coral and fish species (with 4 more fish species occurring occasionally). <p>- Important foraging areas for Hawksbill and Green sea turtles.</p> <p>Network of protected areas</p> <ul style="list-style-type: none"> - Marine reserves, 2 Fish Spawning areas, 2 no-diving zones, 1 line fishing zone.
KBA 5	Terrestrial areas of Cayman Brac	<p>Terrestrial ecosystems</p> <ul style="list-style-type: none"> - Bluff forest: important dry forest area <p>- presence of plant species endemic to the Cayman Islands, with some of them globally threatened (Cottam et al. 2011, Kew Royal Botanic Gardens, DoE, Conservation Law 2013):</p> <ul style="list-style-type: none"> -- Endemic to the 3 CI: <i>Chionanthus caymanensis</i> (EN), <i>Coccothrinax proctorii</i> (EN), <i>Crossopetalum caymanense</i>, <i>Argythamnia proctorii</i>, <i>Agave caymanensis</i> (VU), <i>Myrmecophila thomsoniana</i> (EN), <i>Phyllanthus caymanensis</i> (VU), <i>Harrisia caymanensis</i>, <i>Caesalpinia caymanensis</i>, <i>Cordia sebestena</i> var. <i>caymanensis</i> (VU-3CI), <i>Allophylus cominia</i> var. <i>caymanensis</i> (3 CI-NT*), <i>Pilostyles globosa</i> var. <i>caymensis</i> (3 CI) -- Endemic to Sister Islands: <i>Banara caymanensis</i> (CR), <i>Encyclia kingsii</i> (CR), <i>Turnera triglandulosa</i>, <i>Myrmecophila thomsoniana</i> var. <i>minor</i> (EN-SI), <i>Chionanthus caymanensis</i> var. <i>caymanensis</i> (EN-Sister Islands) -- Endemic to Cayman Brac: <i>Verbesina caymanensis</i> (CR), <i>Epiphyllum phyllanthus</i> var. <i>plattsii</i> (CR*-Cayman Brac) <p>- 10 plant species endemic to the Cayman Islands and islands of the Greater Antilles (Cuba, Jamaica): <i>Pectis caymanensis</i>, <i>Terminalia eriostachya</i> (EN), <i>Encyclia phoenicia</i> (Sister Islands), <i>Polygala propinqua</i>, <i>Jatropha divaricata</i> (VU), <i>Tabernaemontana laurifolia</i>, <i>Lepidaploa divaricata</i>, <i>Cionosicyos pomiformis</i>, <i>Jacquinia proctorii</i>, <i>Daphnopsis occidentalis</i></p> <p>- Plant species endemic to the Cayman Islands, Bahamas archipelago and Cuba: <i>Consolea millspaughii</i> with a subspecies endemic to Cayman Brac, <i>Consolea millspaughii caymanensis</i> (CR*)</p> <p>- Occurrence of threatened plant species: <i>Cedrela odorata</i> (VU), this species is the main parrot nesting habitat)</p> <p>Invertebrates</p> <ul style="list-style-type: none"> - 32 molluscs endemic to the CI (including about 30 endemic land snails).

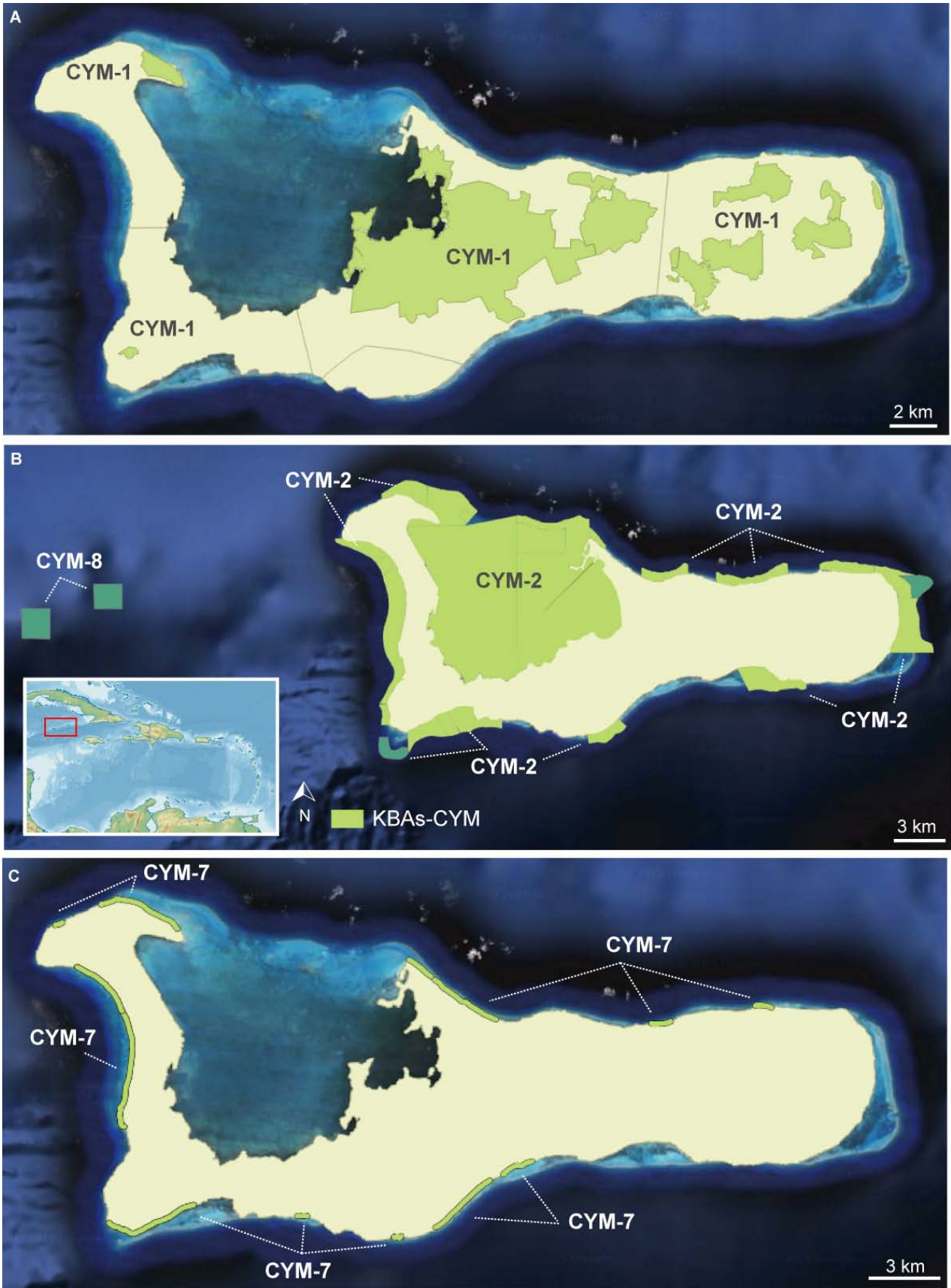
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		<p>Reptiles</p> <ul style="list-style-type: none"> - presence of the vulnerable and restricted-range Sister Islands Rock Iguana (<i>Cyclura nubila</i>) - 8 other reptile species endemic to the CI: <ul style="list-style-type: none"> - Cayman Brac Blind Snake (<i>Typhlops epactius</i>) (endemic to Cayman Brac) - Cayman Blue-Throated anole (<i>Anolis conspersus</i>) - Little Cayman Green Anole (<i>Anolis maynardi</i>- strictly endemic to Little Cayman and Cayman Brac) - Anole (<i>Anolis luteosignifer</i>), endemic to Cayman Brac - Cayman Ground gecko (<i>Sphaerodactylus argivus</i>) - Cayman Ground Boa (<i>Tropidophis schwartzi</i>), endemic to Cayman Brac - Cayman Brac racer (<i>Alsophis fuscicauda</i>)*-endemic to Cayman Brac - Galliwasp (<i>Celestus maculates</i>) - endemic to Little Cayman and Cayman Brac <p>Birds - 1 IBA covering about 20% of the island's area (Bradley et al. 2008) and a new delineation proposed by the DoE to consider critical habitats for the endemic Cuban Parrot (1262 ha):</p> <ul style="list-style-type: none"> - presence of the bird species restricted to the Cayman Islands, Bahamas archipelago and Cuba: Cuban Parrot (<i>Amazona leucocephala</i>) (60-70 pairs), including the subspecies endemic to Cayman Brac (<i>A. leucocephala hesternae</i>). - this IBA gathers about 9% of the global population of the Near Threatened Vitelline Warbler <i>Dendroica vitellina crawfordi</i>. - presence of 2 bird species restricted to some part of the Caribbean: Thick-billed Vireo (<i>Vireo crassirostris</i>), Vitelline Warbler (<i>Dendroica vitellina</i>) - Important habitat for migratory bird species. - Endemic bird subspecies: <i>Tyrannus caudifasciatus caymanensis</i>, <i>Turdus plumbeus coryi</i> <p>Network of protected areas</p> <ul style="list-style-type: none"> - 113 ha of the Bluff forest is protected as the Brac Parrot Reserve (National Trust Property), with almost 20% of it recognized as an IBA. - Salt Water Pond Animal Sanctuary (the Westerly Ponds in Cayman Brac were dedesignated as Animal Sanctuary following the airport development).
KBA 6	Marine ecosystems of Cayman Brac	<p>Cayman Brac</p> <ul style="list-style-type: none"> - Fringing coral reefs around most of the island. Key sites for coral reefs include: Bloody Bay marine park (DaCosta-Cottam et al. 2009) - About 10 ha of seagrass beds and 14 ha of mangroves occur in Cayman Brac. - Dick Sessinger's Bay is recognized as a key seagrass site. Western ponds are considered as key mangrove sites (DaCosta-Cottam et al. 2009) - Key lagoon areas: Dick Sessinger's Bay, North East Bay (DaCosta-Cottam et al. 2009) <p>Threatened marine species</p> <ul style="list-style-type: none"> - High biomass values of fish species within the Marine Parks and presence of 18 threatened coral and fish species (with 4 more fish species occurring occasionally). - Important foraging areas for Hawksbill and Green sea turtles. <p>Network of protected areas</p> <ul style="list-style-type: none"> - Marine reserves, 2 Fish Spawning areas, 2 no-diving zones, 1 line fishing zone.

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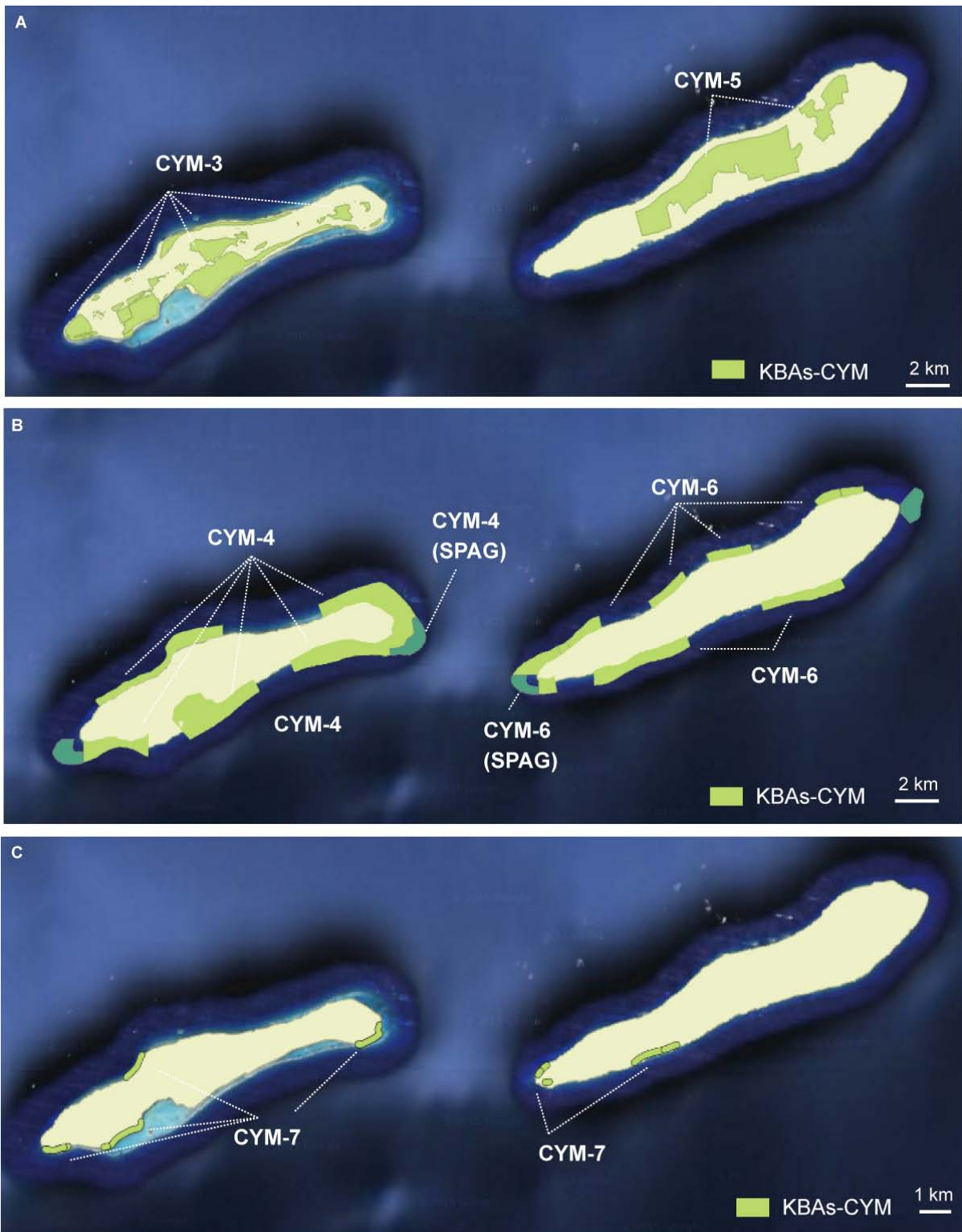
KBA 7	Sea turtle nesting sites	<p>Grand Cayman</p> <ul style="list-style-type: none"> - 10 key nesting areas for Green and Loggerhead sea turtles: Barefoot Gardens, Barkers, Little Spotts, Sand Hole Road, South Sound, 2 areas along Seven Miles Beach, Rum Point, Bodden Town, Beach Bay, Spotts Beach, - 5 <i>candidate nesting sites for Loggerheads</i>: South Sound West, Barefoot Gardens, Morritts, Little Spotts, Bat Cave - Important foraging areas for Hawksbill and Green sea turtles. <p>Little Cayman</p> <ul style="list-style-type: none"> - 4 key nesting areas for Green and Loggerhead sea turtles: Jacksons, South Hole Sound, Preston Bay, Point of Sand - 1 <i>candidate nesting sites for Green</i>: Jacksons <p>Cayman Brac</p> <ul style="list-style-type: none"> - 4 key nesting areas for Loggerhead sea turtles: South Side East and West, Brac Reef West, Airport Beach.
KBA 8	Offshore Banks	<p>12 Mile Bank West & East Grouper Holes</p> <ul style="list-style-type: none"> - Threatened coral, fish species and sea turtles: <ul style="list-style-type: none"> -- Coral species: <i>Montastraea annularis</i>, <i>Montastraea faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea franksi</i>, <i>Mycetophyllia ferox</i> -- Fishes: <i>Epinephelus itajara</i>#, <i>Hyporthodus nigrurus</i>#, <i>Epinephelus striatus</i>, <i>Thunnus thynnus</i>, <i>Balistes vetula</i>, <i>Hyporthodus flavolimbatus</i>#, <i>Mycteroperca interstitialis</i>#, <i>Kajikia albida</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>, <i>Megalops atlanticus</i>, <i>Thunnus obesus</i> -- Occurrence of threatened shark species occurring in the Cayman EEZ: <i>Sphyrna lewini</i>, <i>Sphyrna mokarran</i>, <i>Carcharhinus longimanus</i>, <i>Isurus oxyrinchus</i>, <i>Rhincodon typus</i>, <i>Manta birostris</i> -- Sea turtles: <i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>, <i>Caretta caretta</i>, <i>Dermochelys coriacea</i># <p># occasional species</p>

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Maps of KBAs in Grand Cayman (UKOT).

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Maps of KBAs in Little Cayman and Cayman Brac (UKOT).

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International Treaties and Conventions

- The Convention on Biological Diversity (CBD)
- Ramsar Convention on Wetlands of International Importance
- The Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- World Heritage Convention
- Environmental Charter signed with the UK

Policy Plans and Policies (Reference: Cottam et al. 2011)

- **National environmental legislations** related to area protection and the conservation of a limited number of animal species.
 - Animals Law (2003 revision)
 - Development and Planning Law (2008 revision)
 - Endangered Species (Trade and Transport) Law, 2004
 - Marine Conservation Law (2007 revision)
 - Marine Conservation (Marine Parks) Regulations (2007)
 - National Trust Law (1997 revision)
 - National Conservation Law (2013)

- Cayman Islands has a **Biodiversity Action Plan** (BAP, 2009), including 19 Habitat Action Plans and 30 Species Action Plans:

- Habitats Action Plans

- Marine habitats: Open Seas, Coral Reefs, Lagoons, Seagrass beds, Dredged seabeds, Artificial installation
- Shoreline habitats: Maritime cliffs and ironshores, Sandy beaches and cobbles, Mangrove, Invasive coastal plants, Coastal shrublands
- Terrestrial habitats: Salt-Tolerant Succulents, Ponds and Mangrove Lagoons, Dry shrubland, Forest and woodlands, Caves, Farm and grasslands, Urban and man-modified areas, roads

- Species Action Plans

- Marine species: Invertebrates, Fishes, Reptiles
- Shoreline species: Freshwater fishes, Plants, Invertebrates
- Terrestrial species: Plants, Invertebrates, Reptiles, Birds, Mammals

- Cayman Island **Development Plan and National Sustainable Development Strategy** developed by the Sustainable Development Unit within the Department of Environment.

- Environmental charters were signed in 2001 between UK and UK OTs, including all the OTs in the Caribbean region: Cayman islands, Montserrat, Anguilla, Virgin Islands, Turks and Caicos Islands.

Socio-economic context , government and civil society with a role in biodiversity

The Department of Environment (DoE) constitutes the Environmental local agency of the territorial Government responsible for biodiversity and conservation programmes. The Territory of the Cayman Islands does not have municipalities or cities of a territory that are responsible for biodiversity and conservation actions.

Several **local organisations are not officially registered as local NGOs**: Cayman Islands Bird Club, Cayman Nature, Cayman Islands Orchid Society.

The **Tourism Attraction Board** (TAB) of the Cayman Islands oversees the management of four on-island attractions as well as the national festival: Queen Elizabeth II Botanic Park, Pedro St. James Castle historic site, Cayman Craft Market, Hell Attraction Site, Pirates Week National Festival. The Tourism Attraction Board was created in 1996 under the Tourism Attraction Board Law.

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➤ **Table 4 - Government, local institutions and organizations, private sector**

CAYMAN ISLANDS	Departments, Institutions and Organisations related to environmental and biodiversity conservation.
National Conservation Council	The National Conservation Council is a statutory body established by and to facilitate the goals of the National Conservation Law, that is a modern environmental law which will allow the Cayman Islands to protect and conserve endangered, threatened and endemic plants and their habitats as well as the variety of wildlife in the Cayman Islands. The Department of Environment is a member of and provides administrative services to the National Conservation Council.
Cayman Islands Government	
Ministry for Financial Services, Commerce and Environment (FS, C & E)	
Department of Environment (DoE)	The DoE is the main government agency responsible for the management and conservation of the environment and natural resources in the Cayman Islands and the implementation of the CBD and other MEA commitments. The DoE has established, and monitors, several marine parks around the islands, and has drafted legislation (currently pending) to enable the establishment of a series of terrestrial national parks. The DoE is subdivided into Research and Assessment (11 staff), Operations (7 staff) and Enforcement (9 staff).
Organisations and local NGOs	
The National Trust for the Cayman Islands	The National Trust is a statutory body and local NGO that has powers to buy, lease, sell, hold or deal property of any nature. The Trust has steadily been purchasing lands, currently about 800 ha which have been secured through direct purchase, gifted or by Crown transfer.
Royal Botanical Garden Queen Elizabeth II	The Botanical Garden is owned by half by the local Government and by the other half by the National Trust.
Central Caribbean Marine Institute (CCMI) - Cayman Branch	Created in 1998, CCMI's goal is to conduct and facilitate research, education, outreach and conservation programmes that will sustain marine biodiversity. CCMI is incorporated as a US nonprofit organization, a UK charity and Cayman Islands charity. CCMI programmes provide a solid foundation in education and awareness for students and researchers. This local organisation is based in Little Cayman.

- The UK Joint Nature Conservation Committee (JNCC) is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. JNCC is led by the Joint Committee, which brings together members from the nature conservation bodies for England, Scotland, Wales and Northern Ireland and independent members appointed by the Secretary of State for the Environment, Food and Rural Affairs under an independent Chair.

- UK Overseas Territories Conservation Forum (UKOTCF) aims to promote the coordinated conservation of the diverse and threatened plant and animal species and natural habitats of the UK Territories Overseas. It provides assistance in the form of expertise, information and liaison between non-governmental organisations and governments, both in the UK and in the Overseas Territories.

- Several UK-based NGOs, organisations and researchers have been involved in biodiversity conservation in the UK Overseas Territories: e.g. UK Overseas Territories Conservation Forum, Royal Society for the Protection of Birds (RSPB), Durrell Wildlife Conservation Trust (DWCT), Royal Botanic Gardens Kew, Marine Conservation Society (MCS), San Diego Zoo Conservation and Research of Endangered Species; Society for the Conservation and Study of Caribbean Birds (SCSCB), Harvard University, University of Exeter.

➤ **Current fundings dedicated to biodiversity and conservation** (European OCTs Environmental profile 2015, BEST meeting 2016 - consultation of local actors and stakeholders)

- UK and local fundings:

- Local Government of the Cayman Islands provides fundings to the DoE and the National Trust.
- Royal Society for the Protection of Birds (RSPB)
- UK Joint Nature Conservation Committee (JNCC) (marine resources, ecosystem services valuation, lionfish workshop, CITES workshop)
- UK DEFRA through the Darwin Initiative and Darwin Initiative Biodiversity Action Plan (Darwin Plus project on Cayman Turtle Socioeconomics - 2014)
- KEW RBG: provides expertise and in kind in the projects
- The Cayman Islands Government Environmental Protection Fund (EPF) was established in 1997 through a levy of US\$ tax per person departing the territory (between US\$ 2 to 4). One of the aim of the fund is the purchase by the Government of conservation land.

- European fundings:

- EU BEST (National Trust / RSPB) on Alien Invasive Species and bird populations

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- EU EDF through the Management of Protected Areas to Support Sustainable Economies (MPASSE) involving UKOCTF, Cayman, BVI and TCI.

- Other fundings:

- Mohamed bin Zayed Species projects on: the Sister Islands Rock Iguana (*Cyclura nubila*) (awarded in 2015, \$8,500); the plant species *Dendropemon caymanensis* (awarded in 2013, \$3,500).
- US Wildlife service for sea turtle programmes.
- PEW Charitable Trust: funding for a project focusing on groupers.
- Guy Harvey Research Institute / Ocean Foundation (registered in the US)

The Overseas Territories Environment Project (OTEP) fund is no longer available.

➤ **Priorities for action** (BEST meeting 2016 - consultation of local actors and stakeholders)

- There is a need to conduct projects focusing on the study, control or/and eradication of alien invasive species (both terrestrial and marine).
- Plant species assessments and improvement on import permits to limit the introduction of exotic species.
- Assessment of the Cuban parrot individuals owned as pets and establishment of a Conservation Action Plan for the wild population.
- Establishment of a plant nursery for native species.
- Restoration of terrestrial habitats.
- Conduct genetic studies to study the subspecies or species level of native fauna and flora.
- Improve data information on the trigger species (i.e. threatened and endemic species): species distribution patterns, abundance, population trends....
- Implementation of species management plans, in particular for threatened and endemic species.
- Mapping the offshore banks.
- Updated surveys on bat populations and roosts.
- Important need for resources dedicated to outreach and educative programmes.
- Protect nesting and foraging grounds for sea turtles.
- Conduct monitoring programs on sea turtles to determine the status and provide answers to specific management questions.

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - MONTSERRAT



Delineation of the exclusion zone: The exclusion zone is an area that has been established to minimize risk to the population of Montserrat. Persons are not allowed into the majority of area unless it is under strict supervision of the authorities.

Policy and Socioeconomic context

➤ Political Status

- Montserrat is located in the Leeward Islands of the Lesser Antilles (16,7°N, 62,2°W).

The volcano, Soufrière Hills Volcano, began erupting in 1995 after more than 400 years of relative inactivity, it is under constant surveillance by the Montserrat Volcano Observatory. In 1997, the volcano's eruption destroyed the southern half of the island, including the capital Plymouth. This area is now an

exclusion zone.

- Montserrat is a European Overseas Territory politically attached to the United Kingdom.

➤ Demographic Trends and Socio-economic context (Gray 2011ab, Pelembe and Cooper 2011)

- Area: 102.6 km², habitable: 44 km²

- EEZ: 7582 km²

- Population (2011): 4,922 inhabitants (in 1995 before the first volcanic eruption: 10,400 inhabitants)

- GDP (\$/per capita, 2012): US\$9271.45

- Main economic activities: government services (41.5% of the GDP), real estate, housing, banks and insurance, construction and transport, tourism.

Protected and/or managed areas (References: Gray 2011, European OCTs Environmental profiles for the Caribbean region 2015)

➤ List of protected areas

- 3 terrestrial protected areas representing 11% of the total land area and 30% of the volcano safe zone:

- Centre Hills protected area (1116 ha)

- Silver Hills Forest Reserve (30.4 ha)

- Foxes Bay Bird Sanctuary (6.1 ha), ponds and marsh infilled decimated by volcanic activity.

➤ Exclusion zone

Since the eruption of the Soufrière Hills volcano in 1995 the island is separated in two zones: a Safe zone in the north (33% of the area of the island) and an Exclusion zone in the south.

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Projects

- 2 areas proposed to be designated as Ramsar sites (Pienkowski 2004, 2005):

- Centre Hills and the forested ghauts;
- the coast and shallow areas in the north-western part of the island.

- Blue Halo Montserrat (ongoing initiative): the Waitt Institute partners with the local government of Montserrat to develop and implement a science-based, community-driven solutions for sustainable ocean management. The objective is to benefit coastal communities while restoring fish populations and habitats.

- Montserrat's Department of Environment is undertaking a Feral Livestock control programme, funded in part by the BEST initiative. This action is key for maintaining the integrity of protected areas and for the conservation of biological diversity and richness (Stephen R. Mendes, Gerard A.L. Gray, pers. com. 2015).

- UKOTCF has resourced and provided training in Environmental Impact Assessment and is exploring other needs with Montserrat Government and NGOs (Mike Pienkowski, pers. comm. 2015).

Species and habitats outcomes

Species outcomes

Table 1 - List of species that are **globally threatened** (References: Churchyard et al. 2014, Gray 2011, IUCN Red List 2014, species list revised by Stephen R. Mendes and Gerard A.L. Gray, pers. comm. 2015).

Taxonomic group	Threatened species	Local and or Common Name
Plants		
CR	<i>Epidendrum montserratense</i> (end.)	Montserrat orchid
	<i>Rondeletia buxifolia</i> (end.)	Pribby
EN	<i>Guaiaacum officinale</i> ,	Lignum-vitae
	<i>Swietenia mahagoni</i>	West Indian Mahogany
VU	<i>Cedrela odorata</i>	Stinking Cedar, Spanish Cedar, Red Cedar
	<i>Swietenia macrophylla</i>	Honduran mahogany
Corals		
CR	<i>Acropora cervicornis</i>	Staghorn coral
	<i>Acropora palmata</i>	Elkhorn coral
EN	<i>Orbicella annularis</i>	Boulder star coral
	<i>Orbicella faveolata</i>	Mountainous star coral
VU	<i>Agaricia lamarcki</i>	Lamarck's sheet coral
	<i>Dendrogyra cylindrus</i>	Pillar coral
	<i>Dichocoenia stokesii</i>	Elliptical star coral
	<i>Orbicella franksi</i>	Boulder star coral
	<i>Mycetophyllia ferox</i>	Rough cactus coral
	<i>Oculina varicosa</i>	Large Ivory Coral
Fish		
CR	<i>Epinephelus itajara</i> #	Atlantic goliath grouper
EN	<i>Epinephelus striatus</i>	Nassau grouper
	<i>Thunnus thynnus</i>	Atlantic bluefin tuna
VU	<i>Balistes vetula</i>	Queen triggerfish or old wife
	<i>Mycteroperca interstitialis</i> #	Yellowmouth grouper
	<i>Hyporthodus flavolimbatus</i>	Yellowedge grouper
	<i>Kajikia albida</i>	White marlin
	<i>Makaira nigricans</i>	Atlantic blue marlin
	<i>Lachnolaimus maximus</i>	Wrasse or hogfish
	<i>Lutjanus analis</i>	Mutton snapper.
	<i>Lutjanus cyanopterus</i>	Cubera snapper
	<i>Megalopsatlanticus</i>	Atlantic tarpon
	<i>Thunnus obesus</i>	Bigeye tuna
	<i>Hippocampus erectus</i>	Lined seahorse
NT	<i>Thunnus alalunga</i>	Long finned tuna
NT	<i>Scarus guacamaia</i>	Rainbow Parrotfish

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Sharks and rays (occurring in Montserrat's EEZ)		
EN	<i>Sphyrna mokarran</i>	Great hammerhead shark
	<i>Sphyrna lewini</i>	scalloped hammerhead
VU	<i>Carcharhinus longimanus</i>	Oceanic whitetip shark or brown shark
	<i>Carcharodon carcharias</i>	Great white shark
	<i>Isurus oxyrinchus</i>	Shortfin mako shark or blue pointer shark
	<i>Rhincodon typus</i> #	Whale shark
Amphibians		
CR	<i>Leptodactylus fallax</i>	Mountain Chicken (frog)
Reptiles		
CR	<i>Diploglossus montisserrati</i> ,	Montserrat galliwasp
	<i>Mabuya montserratatae</i> (recommended as CR)	Montserrat skink
	<i>Eretmochelys imbricata</i>	Hawksbill sea turtle
EN	<i>Chelonia mydas</i>	Green sea turtle
	<i>Caretta caretta</i> #	Loggerhead sea turtle
VU	<i>Dermochelys coriacea</i> #	Leatherback sea turtle
Birds		
CR	<i>Icterus oberi</i>	Montserrat oriole
VU	<i>Turdus-Iherminieri</i>	Forest Thrush
Mammals		
VU	<i>Chiroderma improvisum</i>	White lined bat
	<i>Sturnira thomasi</i>	Yellow Shouldered Bat
	<i>Physeter macrocephalus</i>	Sperm whale
NT	<i>Ardops nichollsi montserratensis</i>	Common tree bat
NT	<i>Monophyllus plethodon</i>	Long toungued bat
NT	<i>Tadarida brasiliensis</i>	Brazilian free-tailed bat

occasional species

There are approximately 2,340 native species on island. 11% or 253 species have undergone assessment against IUCN Red List criteria. Approximately 35 species are globally threatened and 16 are Near Threatened (RSPB 2014. The UK's wildlife overseas, a stocktake of nature in our overseas territories; Stephen R. Mendes pers. com. 2015).

The endangered West Indian Mahogany (*Swietenia mahagoni*) is not a native species but it is naturalized (KEW RBG), assessed against the global IUCN Red List (EN) and listed on CITES Appendix II.

Table 2 - List of species that are **geographically restricted** (References: Churchyard et al. 2014, Edgar 2010, Gray 2011, Hower & Hedges 2003, Pelembe and Cooper 2011, Powell 2005, Young 2008ab, Stephen R. Mendes, Nicolas Tirard, Gerard A.L. Gray, Mike Pienkowski, pers. com. 2015).

Taxonomic group	Number of endemic species
Plants	<ul style="list-style-type: none"> - 3 endemic plants endemic to the island: Montserrat orchid (<i>Epidendrum montserratense</i>), Pribby (<i>Rondeletia buxifolia</i>), <i>Xylosma serratum</i> (probably extinct-Royal Botanic Gardens Kew) - 70 sp. endemic to the Lesser Antilles, including: <i>Agave karatto</i>, Mountain mahogany (<i>Freziera undulata</i>), <i>Tabebuia pallida</i> - 8 sp. restricted to the Lesser Antilles and in small areas outside the LA
Invertebrates	- about 120 invertebrate (including 80 sp. of beetles) species potentially endemic to the island
Amphibians	- 1 sp. endemic to Montserrat and Dominica: the Mountain Chicken (<i>Leptodactylus fallax</i>), the second largest frog in the world.

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	<p>- 1 sp. endemic to few islands of the LA: Johnstone's whistling frog (<i>Eleutherodactylus johnstonei</i>)-considered as non-native in northern LA.</p>
Reptiles	<p>- 6 sp. endemic to the island (validation from Durrell Wildlife Conservation Trust): Montserrat anole (<i>Anolis lividus</i>), Montserrat galliwasp (<i>Diploglossus montisserrati</i>), Blind snake (<i>Antillotyphlops monastus</i>), Montserrat black snake (<i>Alsophis manselli</i>), Montserrat Ameiva (<i>Ameiva pluvianotata</i>).</p> <p>- The Montserrat skink (<i>Mabuya montserratae</i> sp. nov.) is potentially endemic to Montserrat (Hedges and Conn 2012, Reptile Database)</p> <p>- 1 gekko species restricted to the Lesser Antilles: Southern leeward dwarf gecko (<i>Sphaerodactylus fantasticus</i>) with one subspecies endemic to Montserrat (<i>Sphaerodactylus fantasticus ligniservulus</i>)</p>
Birds	<p>- 1 sp. strictly endemic to Montserrat: the Montserrat Oriole (<i>Icterus oberi</i>)</p> <p>- 1 sp. endemic to few islands of the LA (Dominica, Montserrat, Guadeloupe, St Lucia): Forest Thrush (<i>Turdus lherminieri</i>)</p> <p>- 8 sp. restricted to the LA: Brown trembler (<i>Cinlocerthia ruficauda</i>), Scaly-breasted Thrasher (<i>Alenia fusca</i>), Bridled Quail Dove (<i>Geotrygon mystacea</i>), Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>), Purple Throated Carib (<i>Eulampis jugularis</i>), Green Throated Carib (<i>E. holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Caribbean Elaenia (<i>Elaenia martinica</i>).</p>
Mammals	<p>- 2 bat species endemic to Montserrat and Guadeloupe: White-lined bat (<i>Chiroderma improvisum</i>), Yellow-shouldered bat (<i>Sturnira thomasi</i>)</p> <p>- The subspecies <i>Sturnira thomasi vulcanensis</i> is endemic to Montserrat.</p> <p>- 4 bat species endemic to the Lesser Antilles and Puerto-Rico: Tree bat (<i>Ardops nichollsi</i>), Lesser Antillean fruit bat (<i>Brachyphylla cavernarum</i>), Long-tongued bat (<i>Monophyllus plethodon</i>), Funnel-eared bat (<i>Natalus stramineus</i>)</p>

- Presence of the Black Apple (*Diospyros revoluta*) that is endemic to the Antilles (Lesser Antilles to Puerto-Rico and Hispaniola) and is very rare in Montserrat.

- The Honduran mahogany (*Swietenia macrophylla*) is listed on CITES II but as a non-native plant species it is not recognized as a priority.

- There is a gap in the assessment of plant species against the IUCN Red List. Montserrat has a list of protected plants listed in the Conservation and Environmental Management Act CEMA. However the selection was not based on the IUCN Red List system (Stephen Mendes, pers. com. 2015).

- The Greenheart (*Chlorocardium rodiei*) is listed as Data Deficient on IUCN Red List. This plant species has been heavily harvested on the island.

- A local Action Plan occurs on bat populations (Department of Environment).

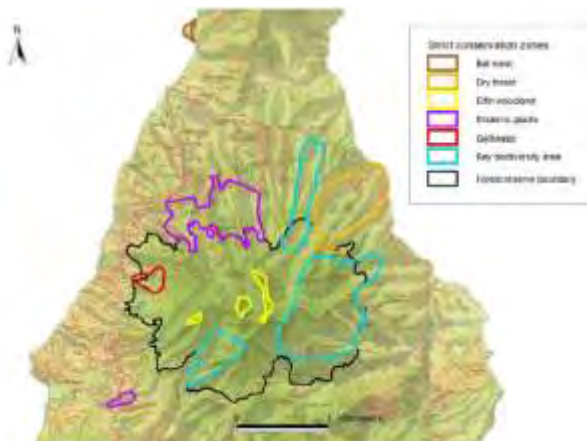
Habitat outcomes

➤ Terrestrial areas

- Map of the ghauts and forest ecosystems on the island (Young 2008)



- Delineation of Centre Hills protected forest area and site outcomes within and outside this site (Young 2008) ⇔ Boundary of the Protected Forest Area - **KBA 1**



➤ Reptiles:

- Presence of the Montserrat skink (*Mabuya montserratae* sp. nov.) a species endemic to Montserrat (Hedges and Conn 2012, Reptile Database). This species has been observed in few locations and is reported as rare, Hedges and Conn (2012) recommend to list this skink as critically endangered.

➤ Coastal areas: sea turtle nesting areas (References: Godley et al. 2004)

- The Fisheries Division conducts a marine turtle programme to monitor sea turtle nesting beaches. The Hawksbills and Green turtles are the main sea turtle species that nest on Montserrat's beaches.

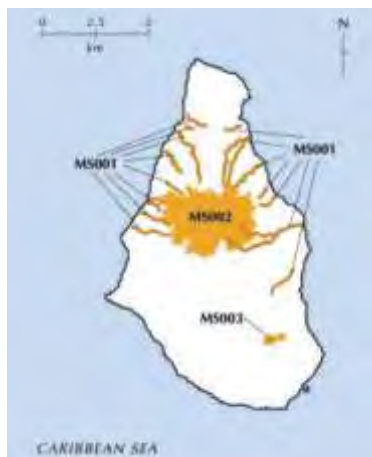
- Most nesting areas are located on the western side of the island and two nesting beaches occur on the eastern part following the volcanic activities (Trant's Bay - former Blackburne airport area - Farm Bay).

- Leatherbacks nest every year in Montserrat at Fox's Bay or Bransby point and Barton Bay.

- Key nesting beaches for Green and Hawksbill sea turtles are mainly located on the western side of the island: Rendez vous beach, Bunkum Bay, Woodlands, Lime Kiln and Old Road Bay and Iles Bay Beaches, Fox's Bay, Bransby point and Barton Bay. There are also reports of turtles nesting on the volcanic deposits on the eastern coast (Stephen R. Mendes, Gerard A.L. Gray, pers. com. 2015).

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Important Bird Areas (IBAs) (References: Allcorn et al. 2009, Hilton et al. 2008ab, Young 2008, BirdLife International)



- Of the 146 bird species recorded on the island, 90 migrant species, 34 breeding species and 11 are restricted-range.

- **3 IBAs** are identified (1645 ha) and represent 16% of the island's land area. Only the Centre Hills IBA is a protected area with plans to designate it as a National Park. The 2 other IBAs are situated on privately owned areas.

- Proposed delineation of KBAs:

- **KBA:** Centre Hills (MS002 IBA) - delineation of the protected forest area.
- **KBA:** Northern Ghauts (MS001 IBA)
- **KBA:** South Soufrière Hills (MS003 IBA)

➤ **Terrestrial areas and wetlands:**

- Prior to the eruption, Foxes Bay Bird Sanctuary, located in the western part of the island, contained areas of saline lagoon and mangroves, this area was destroyed by heavy silt deposits of eroded volcanic debris (Hilton et al. 2008).

- About 50% of the initial coverage of wetlands has been destroyed due to volcanic activities.

- A very small, partly degraded saline lagoon and mangrove area at Carr's Bay (26 ha) was lost to the proposed development of a town centre (Stephen R. Mendes, pers. com. 2015).

- Three wetland areas are reported: Foxes Bay (heavily impacted by volcanic activities. This site can be proposed for a restoration project, Stephen Mendes pers. com. 2015), Trants Bay, Marguerita Bay.

Other restoration projects: Bottomless Ghaut beach and Marguerita Bay are potential areas to develop as wetlands (Stephen Mendes pers. com. 2015).

➤ **Marine and coastal ecosystems.**

- The Blue Halo Initiative (Waitt Institute) is a non-profit organization that endeavors to ensure ecologically, economically, and culturally sustainable use of ocean resources. The Institute partners with governments committed to developing and implementing comprehensive, science-based, community-driven solutions for sustainable ocean management.

- Montserrat currently does not have any ocean zoning aside from the Maritime Exclusion Zone, which restricts access to the waters adjacent to the volcano. Marine and coastal ecosystems have not been surveyed comprehensively (Blue Halo Initiative).

- Montserrat has the 3NM territorial zone and has a negotiated equidistant agreement between Montserrat and Guadeloupe. The 12NM zone is to be negotiated as well as the EEZ with the island neighbors (Stephen Mendes pers. com. 2015).

- Large seagrass beds (750 ha) occur on the northern tip of Montserrat, between Bransby Point and Old Road Bluff and south of Bransby Point in the Maritime Exclusion Zone. Small patches occur close to the shores on the east, south and west coast (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015).

- There are no longer significant mangroves in Montserrat. Small patch reefs are distributed along Montserrat's coastlines. (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015).

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Table 3. KBAs identified on the territory and criteria.

N. KBA	KBAs	Criteria: threatened or endemic species, habitats, ecosystems, ecological corridors
KBA 1	Centre Hills - forest reserve boundary	<p>- Important area due to the presence of island and regionally endemic species and globally threatened species.</p> <p>- The area is a protected forest area.</p> <p>- The Centre Hills and Northern Ghauts are proposed to be recognised as RAMSAR sites (Pienkowski 2004)</p> <p>Forest ecosystem (References: Gray 2011, Ogradowczyk et al. 2006, Young 2008) Centre Hills area supports the largest remaining tract of forest on this island.</p> <p>- Since the eruption of the volcano, the island has lost about 45% of its forest. The remaining area is about 5656 ha with different forest types: wet forest, mesic forest, littoral forest, dry forest and elfin woodland forest (Gray 2011, Pelembe and Cooper 2011).</p> <p>- Volcanic activity led to the fragmentation of terrestrial ecosystems and the loss of biodiversity.</p> <p>Freshwater resources</p> <p>- Centre Hills supply the majority of island's freshwater resources.</p> <p>Forests & Plant species: would be qualified as an Important Plant Area (IPA) (Gray 2011, Young 2008)</p> <p>- one of the last forest remaining on the island and the largest contiguous area of this ecosystem</p> <p>- 74 plant species restricted to the Lesser Antilles (Young 2008)</p> <p>- presence of endemic and threatened plant species: Montserrat orchid (<i>Epidendrum montserratense</i>-CR), Pribby (<i>Rondeletia buxifolia</i>-CR)</p> <p>- presence of threatend plant species: <i>Cedrela odorata</i> (VU), <i>Guaicum officinale</i> (EN), <i>Swietenia mahagoni</i> (EN)</p> <p>- This would qualify the Centre Hills as an Important Plant Area (IPA) as defined by the Important Plant Area programme co-ordinated by Plantlife International and the World Conservation Union (Plantlife International 2004).</p> <p>- The long-term protection of the Centre Hills would be an important contribution to the implementation of Target 5 of the Global Strategy for Plant Conservation – „Protection of 50% of the most important areas for plant diversity assured“ (CBD, 2003).</p> <p>Invertebrates (Young 2008)</p> <p>- habitat for a high diversity of terrestrial invertebrates with about 170 sp. (mostly beetles) possibly endemic to the island: Extremely high levels of endemism are apparent for this taxa.</p> <p>- 77 beetle species endemic to Montserrat</p> <p>- 92 beetle species restricted to the Lesser Antilles</p> <p>- land snail endemic to Montserrat: <i>Amphibulimus rawsonis</i></p> <p>- arachnids endemic to Montserrat: Montserrat tarantula (<i>Cyrtopholis femoralis</i>), Salticidae (<i>Lyssomanes michae</i>), Scorpion (<i>Centruroides pococki</i>)</p> <p>- arachnids endemic to LA: Scorpion (<i>Oiclus purvesii</i>), Amblypygi (<i>Phrynus goesii</i>)</p> <p>- dragonfly endemic to Montserrat and Guadeloupe (<i>Protoneura romanae</i>) and to LA (<i>Orthemis macrostigma</i>)</p>

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		<p>Amphibians (Gray 2011, Young 2008)</p> <ul style="list-style-type: none"> - presence of the threatened and native species (endemic to Montserrat and Dominica): the Mountain chicken (<i>Leptodactylus fallax</i>). On the brink of extinction due to the present threat of the chytrid fungus and hunting. Both Dominica and Montserrat are engaged in recovery efforts for the species (Stephen R. Mendes, Gerard A.L. Gray, pers. com. 2015). <p>Reptiles (Gray 2011, Young 2008)</p> <ul style="list-style-type: none"> - presence of endemic species: Montserrat anole (<i>Anolis lividus</i>), Montserrat blind worm snake (<i>Typhlops monastus</i>), Montserrat galliwasp (<i>Diploglossus montisserrati</i>), Montserrat black snake (<i>Alsophis manselli</i>), Montserrat ameiva (<i>Ameiva pluvianotata</i>), Southern Leeward dwarf gecko (<i>Sphaerodactylus fantasticus</i>) - the endemic and threatened Montserrat galliwasp (<i>Diploglossus montisserrati</i>) is only observed in the Woodland Hills area within the Centre Hills. - The negative pressures on the Montserrat galliwasp are various and potentially disastrous, including predation by invasive alien mammals (e.g. rats, cats, dogs) and destruction of its forest habitat for urban and agricultural development. - presence of endemic reptile subspecies: Southern Leeward dwarf gecko (<i>Sphaerodactylus fantasticus ligniservulus</i>) <p>Birds (Hilton et al. 2008ab)</p> <ul style="list-style-type: none"> - the IBA of the Centre Hills supports a significant assemblage of threatened and restricted-range bird species (10 sp.): <ul style="list-style-type: none"> - the island endemic bird species: Montserrat Oriole (<i>Icterus oberi</i>) (400-700 pairs) - presence of the threatened species endemic to few islands in the LA: Forest Thrush (<i>Turdus lherminieri</i>). Centre Hills is a global stronghold for this endangered species. - presence of 8 sp. endemic to the LA: Brown Trembler (<i>Cinclocerthia ruficauda</i>), Scaly-breasted Trasher (<i>Allenia fusca</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Antillean crested hummingbird (<i>Orthorhynchus cristatus</i>), Purple-throated Carib (<i>Eulampis jugularis</i>), Green-throated Carib (<i>E. holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Caribbean Elaenia (<i>Elaenia martinica</i>). <p>Mammals (Gray 2011, Young 2008)</p> <ul style="list-style-type: none"> - Presence of the endemic and threatened bat species: <i>Chiroderma improvisum</i>, <i>Sturnira thomasi</i> (the subspecies <i>S. t. vulcanensis</i> is endemic to Montserrat) - trails in the Centre Hills are important in supporting high-value tourism and thus livelihoods - Alliance for Zero Extinction identified the key site of the Centre Hills due to the presence of <i>Icterus oberi</i> (AZE 2010).
KBA 2	Northern Forested Ghauts and a buffer zone around the ghauts	<p>Terrestrial ecosystem</p> <ul style="list-style-type: none"> - discontinuous series of steep, forested streams that originate in the Centre Hills area. - continuous riparian fringe of forests - ecological corridor between the riparian forests and the forests of the Centre Hills. - The Centre Hills and Northern Ghauts are proposed to be recognised as RAMSAR sites (Pienkowski 2004)

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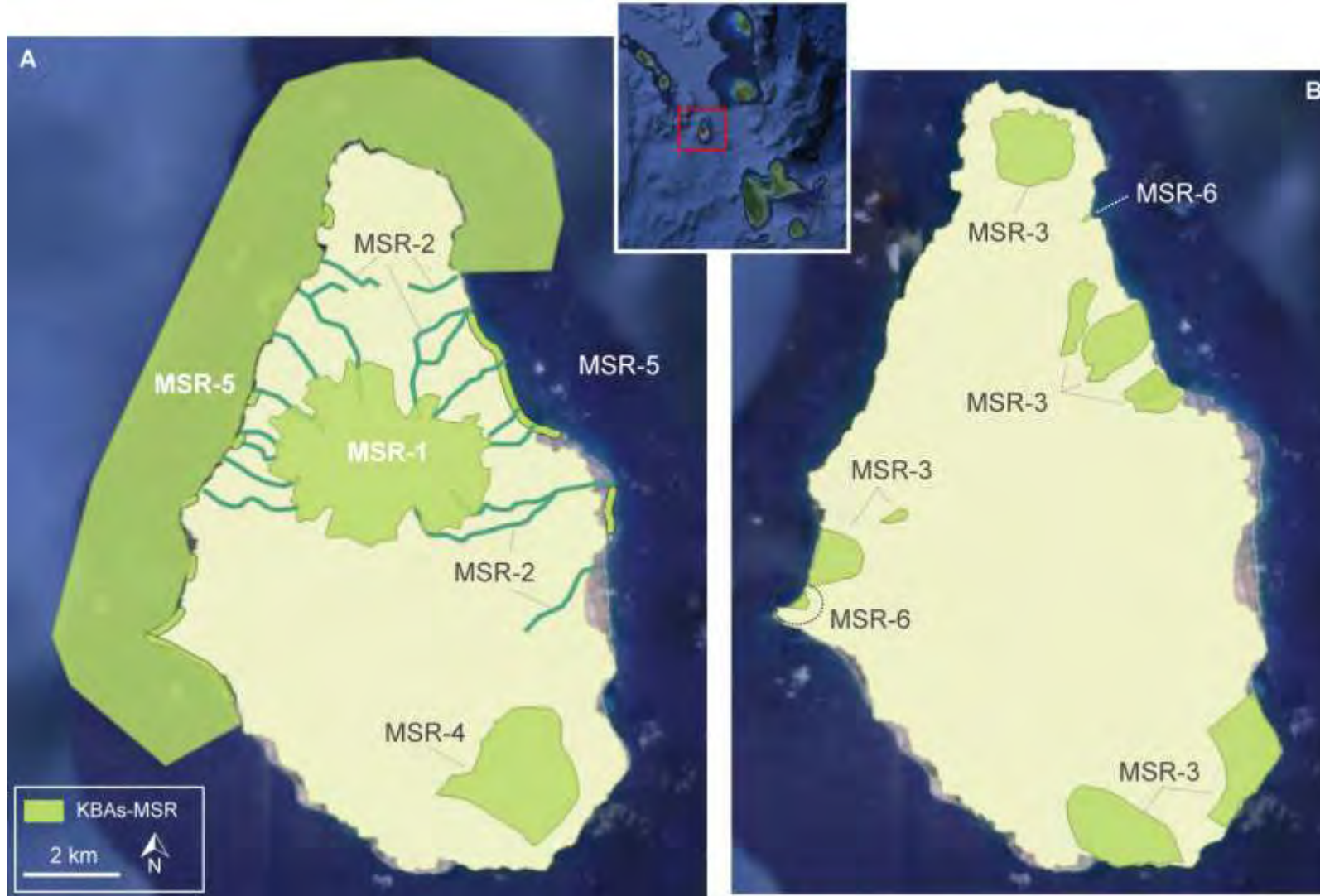
		<p>Birds IBA - Northern Forested Ghauts (Hilton et al. 2008)</p> <ul style="list-style-type: none"> - 9 endemic and/or threatened species - presence of the threatened species endemic to few islands in the LA: Forest Thrush (<i>Turdus lherminieri</i>) - presence of 8 sp. endemic to the LA: Brown Trembler (<i>Cinlocerthia ruficauda</i>), Scaly-breasted Trasher (<i>Allenia fusca</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Antillean crested hummingbird (<i>Orthorhynchus cristatus</i>), Purple-throated Carib (<i>Eulampis jugularis</i>), Green-throated Carib (<i>E. holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Caribbean Elaenia (<i>Elaenia martinica</i>). <p>Reptiles</p> <ul style="list-style-type: none"> - presence of the endemic reptile: Montserrat anole (<i>Anolis lividus</i>), Montserrat ameiva (<i>Ameiva pluvianotata</i>), Southern Leeward dwarf gecko (<i>Sphaerodactylus fantasticus</i>). - presence of endemic reptile subspecies: Southern Leeward dwarf gecko (<i>Sphaerodactylus fantasticus ligniservulus</i>) <ul style="list-style-type: none"> - High ecological connectivity between Centre Hills, ghauts and Silver Hills. - In order to manage land use change in the steep uplands, Montserrat's Physical Development Plan proposes the protection of several ghauts (rivers running down Montserrat's hillsides) to prevent soil erosion and minimize run-off (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015).
KBA 3	Silver Hills reserve and Dry forests (patchy habitats)	<p>Terrestrial ecosystem and plants (Young 2008, Holliday 2009)</p> <ul style="list-style-type: none"> - The White cedar (<i>Tabebuia heterophylla</i>) (restricted to the Lesser and Greater Antilles) is a distinctive tree of the dry forest ecosystems and is particularly affected by invasive plant pests. - presence of endemic and threatened plant species: Montserrat orchid (<i>Epidendrum montserratense-CR</i>), Pribby (<i>Rondeletia buxifolia-CR</i>) - Patchy dry habitats in the southern part of the island: the endemic plant species, <i>Xylosma serratum</i>, is known only from South Soufrière Hills (Young 2008). Following volcanic activities, this species is potentially still present. Studies are needed regarding the occurrence and present distribution of this species. - Dry habitats gather threatened species such as the Red Cedar (<i>Cedrela odorata</i>), the Pribby (<i>Rondeletia buxifolia</i>), West Indian Mahogany (<i>Swietenia mahagoni</i>) - There is a strong need to undertake studies in the dry forest ecosystem. <p>Reptiles</p> <ul style="list-style-type: none"> - Presence of endemic species: Montserrat anole (<i>Anolis lividus</i>), Montserrat Ameiva (<i>Ameiva pluvianotata</i>), Southern leeward dwarf gecko (<i>Sphaerodactylus fantasticus</i>).
KBA 4	South Soufrière Hills	<p>Terrestrial ecosystem</p> <p>The forest has been heavily impacted by the volcanic activity.</p> <ul style="list-style-type: none"> - A small and isolated patch of the original forest remains at Roche's Estate. <p>Plants</p> <ul style="list-style-type: none"> - Presence of the threatened Lignum-vitae (<i>Guaiacum officinale</i>).

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		<p>- the endemic plant species, <i>Xylosma serratum</i>, is known only from South Soufrière Hills (Young 2008). Following volcanic activities, this species is potentially still present. Studies are needed regarding the occurrence and present distribution of this species.</p> <p>Invertebrates</p> <p>- Potentially a high diversity of invertebrate species that are endemic to the island (beetles, grasshopper)</p> <p>Reptiles</p> <p>- presence of endemic species: Montserrat anole (<i>Anolis lividus</i>), Montserrat Ameiva (<i>Ameiva pluvianotata</i>).</p> <p>Birds (Hilton et al. 2008)</p> <p>- IBA- 9 endemic and/or threatened species</p> <p>- the island endemic bird species: Montserrat Oriole (<i>Icterus oberi</i>). Centre Hills support one of the largest population of this endemic bird.</p> <p>- presence of the threatened species endemic to few islands in the LA: Forest Thrush (<i>Turdus lherminieri</i>)</p> <p>- presence of 7 sp. endemic to the LA: Brown Trembler (<i>Cinclocerthia ruficauda</i>), Scaly-breasted Trasher (<i>Allenia fusca</i>), Bridled Quail-dove (<i>Geotrygon mystacea</i>), Antillean crested hummingbird (<i>Orthorhynchus cristatus</i>), Green-throated Carib (<i>E. holosericeus</i>), Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>), Caribbean Elaenia (<i>Elaenia martinica</i>).</p> <p>Mammals</p> <p>- Presence of the 2 endemic and threatened bat species: White-lined bat (<i>Chiroderma improvisum</i>), Yellow-shouldered bat (<i>Sturnira thomasi</i>).</p> <p>- Presence of the subspecies endemic to Montserrat: <i>Sturnira thomasi vulcanensis</i>.</p>
<p>KBA 5 - Marine and coastal ecosystems</p>	<p>Marine ecosystems</p>	<p>Marine habitats</p> <p>- fringing coral reefs are scattered around the island. Healthiest reefs located on the northern coast of the island, far from volcanic activity (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015).</p> <p>- patches of seagrass beds scattered around the island</p> <p>- connectivity between seagrass beds and coral reefs limited to some sites (north-western area).</p> <p>- Presence of 10 coral species and 12 fish species that are globally threatened. This species list may be revised following Blue Halo Initiative report.</p> <p>- 6 shark species globally threatened occur in Montserrat's EEZ.</p> <p>- Presence of the Vulnerable Sperm whale (<i>Physeter macrocephalus</i>) in Montserrat's EEZ.</p> <p>- Humpback whales (<i>Megaptera novaeangliae</i>) breed in the Lesser Antilles, including Montserrat's EEZ.</p> <p>- Ecological corridors (Pienkowski 2004)</p> <p>- Ecological connectivity between tidal mouth of ghauts and streams, seagrass and coral reefs</p> <p>- Proposed delineation: the western area that was formerly proposed as a Ramsar site.</p> <p>- Montserrat currently does not have any ocean zoning aside from the Maritime Exclusion Zone, which restricts access to the waters adjacent</p>

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		<p>to the volcano (Blue Halo Initiative). This delineation may be revised following Blue Halo Initiative report.</p> <ul style="list-style-type: none"> - Montserrat has the 3NM territorial zone and has a negotiated equidistant agreement between Montserrat and Guadeloupe. The 12NM zone is to be negotiated as well as the EEZ with the island neighbors (Stephen Mendes pers. com. 2015) - Threats to the marine environment: sedimentation from the volcano, storm damage, coastal development and climate change-associated sea level rise (Blue Halo Initiative).
	Sea turtle nesting areas	<p>Reptiles</p> <ul style="list-style-type: none"> - Sea turtle nesting sites are mostly located on the western beaches of the island (Godley 2004, Stephen R. Mendes, Gerard A.L. Gray, pers. com. 2015): Rendez vous beach, Bunkum Bay, Woodlands, Lime Kiln and Old Road Bay and Iles Bay Beaches, Fox's Bay, Bransby point and Barton Bay. - juvenile and adult sea turtles use this area as a foraging site - Two nesting areas occur on the eastern side of the island (following volcanic activities 2 new beaches appear along the eastern side): area from Trant's Bay to Cat ghaut southwards to white's bottom ghaut south of the former airport.
KBA 6	Wetlands: Marguerita Bay, Foxes Bay, Trant's Bay	<p>Ecosystems & Plants</p> <ul style="list-style-type: none"> - 3 wetland areas in Montserrat. - Marguerita Bay: presence of the threatened Lignum-vitae (<i>Guaicum officinale</i>). - Prior to the eruption, Foxes Bay Bird Sanctuary contained areas of saline lagoon and mangroves, this area was destroyed by heavy silt deposits of eroded volcanic debris (Hilton et al. 2008). - About 50% of the initial coverage of wetlands has been destroyed due to volcanic activities. - A very small, partly degraded saline lagoon and mangrove area at Carr's Bay and Little Bay (26 ha) was lost to the proposed development of a town centre (Stephen R. Mendes, pers. com. 2015). - Wetlands are now significantly degraded. Perhaps a potential site of restoration or a site due east at Marguerita Bay on the east coast could be explored. The silted river bed of Belham Valley area could potentially accommodate an engineered wetland (Stephen R. Mendes, pers. comm. 2015).
Candidate KBA	Streams	<ul style="list-style-type: none"> - Several permanent streams occur in the territory: Pelican ghaut, Bottomless ghaut, Soldier ghaut, Bunkum river, Runaway ghaut, Nantes river, Farm river, Daly River. - Presence of freshwater species: Molly fishes, crayfish.
Corridor	Dry forests	<ul style="list-style-type: none"> - important ecological corridor for bird and reptile populations.



Maps of KBAs in Montserrat.

International Treaties and Conventions - UK ratification

- Ramsar Convention on Wetlands of International Importance
- The Bonn Convention (or the Convention on Migratory Species of Wild Animals (CMS))
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- World Heritage Convention
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)
- Vienna Convention for the Protection of the Ozone Layer
- Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol)
- Convention on Biological Diversity
- United Nations Convention on the Law of the Sea (UNCLOS)
- United Nations Conference on Environment and Development

- Montserrat is a member territory of **CARICOM** (Caribbean Community). Established in 1973, the Caribbean Community (CARICOM) is an organization of 15 Caribbean nations and dependencies. CARICOM's main purposes are to promote economic integration and cooperation among its members, to ensure that the benefits of integration are equitably shared, and to coordinate foreign policy.

- Montserrat is a full member of the Organisation of East Caribbean States (OECS). The major environmental reporting framework is mentioned in St George's Declaration of Principles for Environmental Sustainability in the OECS.

National environmental strategies: Environmental policy framework (Gray 2011)

- St George's Declaration of Principles for Environmental Sustainability in the OECS;
 - Montserrat UK Overseas Territories Environment Charter;
 - Sustainable Development Plan 2008-2020;
 - Montserrat Climate Change Adaptation Policy (2011) (under revision) & Disaster Preparedness and Response Act (1999)
 - National Environmental Management Strategy;
 - Forestry Policy;
 - Biodiversity Research Protocol;
 - Species Action Plans (SAPs)
 - Physical Planning Act (1996)
 - Tourism Development Plan (2012-2020)
 - Public Participation Policy and Physical Development Plan (PDP) for North Montserrat (2012-2022)
 - Montserrat Forestry, wildlife, National Parks and Protected Areas Act (1996)
 - National Acts related to species and habitats: Endangered Animals and Plants Act (1982); Beach Protection Act (1980); Turtles Act (1952); Fisheries Act (2000); Plant Protection Act (1941)
 - Montserrat National Trust Act (1970)
 - Montserrat Conservation and Environmental Management Act (2014)
- Environmental charters were signed in 2001 between UK and UK OTs, including all the OTs in the Caribbean region: Cayman islands, Montserrat, Anguilla, Virgin Islands, Turks and Caicos Islands.

- The Conservation and Environmental Management Act of 2014 lays out the different types of protected areas that the government can create and establishes a process for gazetting new protected areas. There are currently no marine or coastal protected areas in Montserrat. In the early 1990s, the Montserrat National Trust tried to establish marine protected areas (MPAs), but they were unsuccessful due to the disruptions caused by the volcano (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015).

- In 2003, the Montserrat Tourism Board developed a National Tourism Strategy and Plan that called for the creation of a marine park. This initiative started in 2003 with several consultations through to 2007 (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015, Stephen Mendes pers. com. 2015).

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Socio-economic context , government and civil society with a role in biodiversity

➤ Table 4 - Government, local institutions and organizations, private sector

MONTSERRAT	Departments, Institutions and Organisations related to environmental and biodiversity conservation on the island.
Government of Montserrat (GoM)	
Ministry of Agriculture, Trade, Lands, Housing and Environment (MATLHE)	Lead Ministry for development of policy on environment and natural resources management. It has 6 major sections including Administration, Environmental Management, Agriculture, Lands and Survey, Physical Planning and Housing.
Department of Environment (DOE)	The DOE is in charge of the overall environmental management: Direction & implementation of environmental policy; Biodiversity conservation and research; Protected areas management; Multilateral Environmental Agreements; Provision of advice on environmental matters; Climate change adaptation; Sustainable forestry and watershed management; Invasive species management; Public education and outreach; Collection and management of environmental data.
Montserrat Land Development Authority	It was established under the MALHE in 1971 to promote efficient and economic utilization of land.
Department of Agriculture	It is responsible for food production, protection/management of coral reefs, sea grasses and supporting the regulation of sport fishing, dive establishments and water sports.
Physical Planning Unit (PPU)	This Unit is responsible for the orderly and progressive development of land, for the acquisition, preservation and management of historic buildings and sites, for restricting the export of artefacts and for matters connected therewith.
NGOs and non-profit organization	
Montserrat National Trust	Conserve and/or rehabilitate the natural and cultural heritage to include historical sites, artefacts, documents, biodiversity and aesthetics. Public awareness and outreach. Acquisition of property for the benefit of the island. Fund-raising in support of programmes. Provision of advice.
Montserrat Fishermen's Cooperative	Represent concerns of membership. Procure equipment for members; oversee fisheries activities of members; access project funding.
Montserrat Boat Owners and Fishermen Association	Local NGO representing boat owners and fishermen.
Montserrat Farmer's Association	Represent concerns of farmers; provides agricultural inputs for resale at competitive prices; access project funding to address priorities
Montserrat Volcano Observatory (MVO)	The observatory monitors air quality and the activity of the volcano, and raises alerts when necessary.
Fishermen Cooperation	This NGO looks out for the welfare of their members.
Inspirational Volunteer Journeys	This local NGO is a unique exchange of wisdom, culture, learning and skills that tackle global poverty and truly changes lives.
Coral Cay Conservation	Coral Cay Conservation is a UK NGO that aims to help to collect data to develop and implement effective grass-roots conservation solutions. An expedition is occurring in Montserrat where the NGO is working since 2013 in partnership with the Government of Montserrat and the RSPB. The project has a holistic approach, with scientific survey programmes to collect data from both tropical forests and coral reefs, accompanied by community education programmes and local capacity building.
Blue Halo Initiative - Waitt Institute	The Waitt Institute is a non-profit organization that endeavors to ensure ecologically, economically, and culturally sustainable use of ocean resources. The Institute partners with governments committed to developing and implementing comprehensive, science-based, community-driven solutions for sustainable ocean management. Our goal is to benefit coastal communities while restoring fish populations and habitats. Our approach is to engage stakeholders, provide the tools needed to design locally appropriate policies, facilitate the policymaking process, and build capacity for effective implementation and long-term success. - See more at: http://waittinstitute.org/mission/#sthash.lzGV0ff9.dpuf
CANARI (not based in Montserrat)	NGO engaged in participatory natural resource management throughout the Caribbean islands since 1989. CANARI provided technical assistance to the Government of Montserrat under the "Climate Change Adaptation and Sustainable Land Management Project in the Eastern Caribbean" project managed by the OECS Commission and supported by the European Union's Global Climate Change Alliance (EU GCCA).
Private sector	
Aqua Montserrat	Company involved in marine conservation, public awareness on marine biodiversity outcomes.
Montserrat Island Dive Centre	Dive shop involved in marine conservation.
Scuba Montserrat	Dive shop involved in marine conservation.
Scribers Adventure Tours	Guided tours that raise awareness on local biodiversity outcomes and conservation (hiking tours, terrestrial ecosystems in general, bat and birds populations).
Montserrat Hydroponics Ltd.	Founded in 2012, this company aims to use sustainable hydroponic growing techniques to supply fresh salads, herbs and other greens to the people of Montserrat. The company is involved in the creation of an educational farm in partnership with the Ministry of Education.

- The Joint Nature Conservation Committee (JNCC) is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. JNCC is led by the Joint Committee, which brings together members from the nature conservation bodies for England, Scotland, Wales and Northern Ireland and independent members appointed by the Secretary of State for the Environment, Food and Rural Affairs under an independent Chair.

- UK Overseas Territories Conservation Forum (UKOTCF) aims to promote the coordinated conservation of the diverse and threatened plant and animal species and natural habitats of the UK Territories Overseas. It provides assistance in the form of expertise, information and liaison between non-governmental organisations and governments, both in the UK and in the Overseas Territories.

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- Several UK-based NGOs, e.g. UK Overseas Territories Conservation Forum (UKOTCF), Royal Society for the Protection of Birds (RSPB), Durrell Wildlife Conservation Trust (DWCT) and Royal Botanic Gardens Kew, as well as the U.S. International Institute of Tropical Forestry have been involved in Montserrat's conservation in partnership with the Forestry Division of Department of Environment and the National Trust. Academic researchers have also been active in recent years in several thematic: entomology, bat survey, marine turtles... (Hilton et al. 2008).
- Partnership with research institutions (Centre Hills biodiversity assessment): Montana State University, South Dakota State University.
- LTS international: an environmental consulting group that conducted coral reefs and water quality surveys in Montserrat. This company worked with Montserrat Tourism Board to develop an ocean zoning proposal in 2007.
- About half of Montserrat's fishers are members of the Fishermen's Cooperative, which helps coordinate bulk purchase of equipment and supplies and distributes government subsidies. The Fisheries Division, which manages Montserrat's fisheries, falls under the Ministry of Agriculture, Housing, Land, Trade, and the Environment, and is overseen by the Director of Agriculture (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015). Another local NGO is named Montserrat Boat Owners and Fishermans Association.
- Finger Lakes Community College (New York, Pr. Hewlett) conducted Reef Check surveys in Montserrat from 2005 to 2013.
- In 2013 Coral Cay Conservation, in partnership with the Royal Society for the Protection of Birds (RSPB) and the Montserrat Ministry of Agriculture, Trade, Lands, Housing and the Environment (MALHE), established the Montserrat Ridge to Reef Conservation Project (MRRCP). The project is funded in part by a grant from the Darwin Initiative and in part by contributions from volunteers who join the project to assist with survey work. The project has four main objectives:
 1. Assessment and monitoring of marine resources (Montserrat Coral Cay Conservation 2014)
 2. Assessment and monitoring of terrestrial resources
 3. Community engagement, education and awareness raising
 4. Capacity building training programmes for members of the local community interested in or already working within the field of conservation.

➤ **Funding resources dedicated to biodiversity conservation (European OCTs Environmental profiles for the Caribbean region 2015)**

According to the Budget statement (2012-2013), the expenditure on environmental management in 2011/2012 was about € 208,000 with an estimated increase to €271,881 in 2013/2014.

- CEMA (Conservation and Environmental Management Act) itself does not have a trust fund mechanism but it however allows a provision for "Fundings for environmental management". These funds shall be provided under the special fund established under the Public Finance (Management and Accountability) Act for that purpose (Stephen Mendes pers. com. 2015).

Montserrat is a member of the Organization of Eastern Caribbean States (OECS), the Caribbean Community (CARICOM), of the Eastern Caribbean Central Bank (ECCB) and the Caribbean Development Bank (CDB).

Most funding for conservation work is received from international donor agencies and UK government funds such as the:

- Overseas Territories Environment Project (OTEP): \$172,500 in 2011-2012.
- The Darwin Initiative
- Royal Society for the Protection of Birds (RSPB)
- UK Joint Nature Conservation Committee (JNCC)

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- EU BEST (Control of Feral Livestock project) coordinated by RSPB in partnership with the Department of Environment of Montserrat
- UK Overseas Territories Conservation Forum (UKOTCF)
- Durrell Conservation Trust: Centre Hills Biodiversity Assessment (CHBA). A comprehensive assessment of the major plant, vertebrate and invertebrate animal taxa and the ecosystems. The biodiversity assessment aims to inform the design of a Management Plan for the Centre Hills and to make recommendations for conservation management priorities. Durrell Wildlife Conservation Trust is also leading a 3-year initiative funded with £237,000 by Defra's Darwin Initiative to support the Caribbean island of Montserrat to protect and restore this unique and enigmatic frog.
- This biodiversity assessment was performed by Durrell Conservation Trust in partnership with MATLHE, Montserrat National Trust, Montserrat Tourism Board, Royal Botanic Gardens Kew, RSPB, South Dakota University, Montana State University,
- Mohamed bin Zayed Species Conservation fund provides complementary funds to the Durrell Conservation project on the Mountain Chicken (awarded in 2011, \$10,000).
- GCCA fund (Global Climate Change Alliance) is an initiative of the European Union with its objective is to build a new alliance on climate change between EU and countries affected by the effect of climate change. This project is facilitated by the OECS and is dealing specifically with Climate Change.
- Montserrat received an allocation of € 15.66 million under the 10th EDF (European Development Fund) over a 5 year period but no project focusing on biodiversity has been funded through EDF.

Threat assessment - Major threats identify for the territory:

- Alien Invasive Species (AIS) constitute one of the major threats to biodiversity: lionfish, goats, sheeps, cattle pigs, donkeys and invasive plants have a negative impact on the environment. Several species (not all of them reported as AIS have more impacts on farmers' activities: agoutis, green iguanas, black rats, invasive plants, crickets, feral chickens. Threats related to weak phytosanitary security, invasive insects and mites that were shipped with goods.
- Habitat fragmentation and degradation (threats on the dry forest ecosystem and wetlands)
- Habitats outside the forest reserve remain threatened by destruction and fragmentation of habitats. The whole ecosystem of moist forest is threatened is negatively impacted by invasive mammals and plants.
- Threats from pollution from dumps: main threat to groundwater and biodiversity.
- Threats from the volcanic activity.
- Run-off and sedimentation in the marine environment due to construction sites, gravel quarries, sand minings, coastal infrastructures.
- Major potential sources of chemical and organic pollutants: fuel terminal in Little Bay, dump, sewage plants at Lookout and Davy Hill, power plant (Blue Halo Initiative in Montserrat - Sustainable Fisheries Group UC Santa Barbara. 2015). To note that this threat is potential due to an accidental spill.
- Threats to the marine environment: sedimentation from the volcano, storm damage, coastal development and climate change-associated sea level rise (Blue Halo Initiative).

➤ Priorities of actions in terms of conservation and biodiversity

- There is a need to conduct a whole island biodiversity assessment, with the exception of the Centre Hills protected area where a biodiversity assessment has already been conducted. There is a lack of data information in the remaining area of the island.
- There is a lack of information on the Dry forest ecosystem and the South Soufrière Hills area
- South Soufrière Hills is highly threatened due to volcanic activities and the negative impact of Alien Invasive Species (AIS).

- Urgent need to conduct a project against feral goats and livestock and AIS in general that represent a major threat to local biodiversity including endemic species.
- Insufficient human and financial resources constitute significant hindrances for environmental management and by extension sustainable development.
- key challenges facing biodiversity: climate change, habitat loss/fragmentation, alien invasive species, water harvesting.
- Strong need for an integrated coastal zone management plan (inventory and mapping of coastal and marine ecosystems), monitoring of the coastal and marine environments.
- Strengthen or build local capacities in terms of habitat restoration, coastal site restoration, alien invasive species control or eradication.
- Building on the Environmental Impact Assessment (EIA) to put in place open and consultative planning
- Opportunities for community involvement on both baseline surveys (and identifying further endemics), and assisting survival of endemics and other key species/ecosystems by plantings/management even in the built-up areas.
- Strategic planning and then implementation of a plan for use of the Exclusion Zone (some with day-time access) covering 2/3 of the south of the island: opportunities for helping reinstate all representative indigenous forest types that were lost due to volcanic activities (dry forests, tropical rain- and cloud-forest).

High priority conservation regarding the Centre Hills area (Young 2008):

- Protection of dry and littoral forest lying to the east and north- east of the Centre Hills.
- Protection of habitat in a hotspot for endemic plants that lies in the northern foothills of the Centre Hills outside the protected area boundary is an urgent priority. Tree protection orders are needed to safeguard veteran mango *Mangifera indica* trees in Belham Valley supporting important populations of *Epidendrum montserratense*.
- Enforce a series of appropriate regulations, and implement an improved population monitoring scheme, to ensure hunting of mountain chickens is sustainable. Improved biosecurity controls are needed at Montserrat's borders and elsewhere to minimise the risk of the Chytridiomycosis fungus arriving in Montserrat and infecting mountain chickens. A coordinated international captive breeding programme to hold a safety net population of mountain chickens in case of a Chytridiomycosis outbreak on Montserrat is also required.
- Strict protection of habitat in and around the site where galliwasp have been observed in Woodlands Spring is urgently required. A population assessment and ecological research to improve knowledge of the status and habitat requirements of the species must be conducted as soon as possible. Habitat restoration activities and lethal rat control is needed to reduce potential pressures on the galliwasp population.
- Monitoring of the Montserrat oriole and other forest birds should continue to provide early warning of population declines.
- Management of a variety of bat resources both inside and outside the Centre Hills forest
- Habitat restoration activities are urgently required to reduce the impact of invasive mammals and plants on native flora and fauna in the Centre Hills forest.
- Strategic conservation planning should be conducted to engage relevant stakeholders and set out plans of conservation action for priority species and habitats.

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This factsheet is a **working document** that was used as a guide during the consultation process involving local actors and stakeholders (i.e. local governments, institutions and NGOs) and was implemented following local actors' feedbacks.

The objectives were to identify and map Key Biodiversity Areas (KBAs) in order to define conservation outcomes. KBAs are defined at 3 ecological levels: **(1) species**, including: globally threatened species, endemic species, and species gathering in important number during their life cycle; **(2) sites**: habitats hosting the species previously identified; **(3) ecological corridors**: inter-connected landscapes of sites.

Ecosystem profile Factsheet - TURKS AND CAICOS ISLANDS (TCI)

Policy and Socioeconomic context

➤ Political Status



- The Turks and Caicos Islands (TCI, 21°45'N, 71°31'W) are situated south to the Bahamas in the northern part of the West Indies. This territory comprises 8 main and approximately 40 smaller islands that are separated in two groups by the Turk Island Passage (i.e. the Turks Islands and Caicos Islands). The TCI consist of 9 inhabited islands and 40 uninhabited cays.

- TCI are self-governing British Overseas Territory.

➤ Demographic Trends and Socio-economic context (European OCTs Environmental profile 2015)

- Area: 430 km²

- EEZ: 154,068 km²

- Population (2012): 31,458 inhabitants

- GDP per capita (2012): \$23,100

- Main economic activities: tourism industry, financial services, fishing (mostly lobster and conch for exportation to the US)

Protected and/or managed areas (References: Churchyard et al. 2014, Pelembe and Cooper 2011, Turks and Caicos Islands Government 2011, 2013)

➤ List of protected areas

- 35 protected areas (71 714 ha) within the TCI that are managed by the Department of Environment and Maritime Affairs (DEMA).

- 11 national parks

- 11 nature reserves

- 4 designated sanctuaries

- 9 areas of historic interest

- These protected areas consist of 5 terrestrial protected areas and 28 marine protected areas (MPAs).

- The Turks and Caicos National Trust manages a few of these protected areas: Cheshire Hall Area of Historical Interest, Conch Bar Caves National Park (Middle Caicos), a portion of the Princess Alexandra Nature Reserve.

- Wade 's Green is managed by the Turks and Caicos National Trust but is not considered as a protected area per se.

International recognition of natural habitats and wildlife

- 1 area recognized as a Ramsar site: North, Middle and East Caicos Islands (58 617 ha)

- 9 Important Bird Areas (IBAs, BirdLife International) over 247,142 ha

- 6 important Plant Areas (IPAs) identified for the territory (Williams 2009).

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In project

- Review and consultation process for the Ramsar site delineation in progress.
- Proposition of 6 sites (7940 ha) to be recognized as Ramsar areas (Pienkowski 2004, 2005):
 - Grand Turk salinas, ponds, shores, palustrine wetlands (seasonal ponds) (200 ha);
 - Salt Cay Creeks and Salinas (150 ha);
 - Turks Bank Cays (120 ha);
 - Caicos Bank Southern Cays (364 ha);
 - West Providenciales Wetlands (5613 ha);
 - West Caicos Lake Katharine and Coral Reef System (1310 ha);
 - Leeward Going Through Cays (182 ha), together with extensions to the existing site including more of Middle Caicos and East Caicos.
- Project of a new network of Protected Areas (both terrestrial and marine): review and consultation process for the proposed amendments to the National Park ordinance (including delineation of boundaries) is in progress.
- Caicos Pine (*Pinus caribaea* var. *bahamensis*) Recovery Project (Royal Botanic Gardens Kew, TCI Dpt of Environment and Maritime Affairs, Food and Environment Research Agency, Darwin Initiative, John Ellerman Foundation, JNCC, OTEP).

Species and habitats considered in the BEST Initiative

Species outcomes

Table 1 - List of species that are **globally threatened** (Churchyard et al. 2014, Godley et al. 2004, IUCN Red List, Logan and Sealey 2013, Pelembe and Cooper 2011, Pienkowski et al. 2008, Turks and Caicos Islands Government 2011).

	Threatened species
Plants	
CR	Caroline'spink flower (<i>Stenandrium carolinae</i>) (<i>TCI endemic</i>)
EN	Peppergrass (<i>Lepidium filicaule</i>) (<i>TCI endemic</i>) Silvery silverbush (<i>Argythamnia argentea</i>), (<i>TCI endemic</i>) West Indies Mahogany (<i>Swietenia mahagoni</i>), Caicos Encyclia orchid (<i>Encyclia caicensis</i>), (<i>TCI endemic</i>) Turks and Caicos heather (<i>Limonium bahamense</i>), (<i>TCI endemic</i>) Capillary buttonbush (<i>Spermacoce capillaris</i>), (<i>TCI endemic</i>) Guaiac Tree (<i>Guaiacum officinale</i>), Roughbark Lignum-vitae (<i>Guaiacum sanctum</i>)
VU	<i>Chamaecrista caribaea</i> , (<i>restricted to TCI, Bahamas and northern tip of Haiti</i>) Caicos pine (<i>Pinus caribaea</i> var. <i>bahamensis</i>) (<i>restricted to TCI and Bahamas</i>)
Corals	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Orbicella annularis</i> , <i>Orbicella faveolata</i> , Fire coral - <i>Millepora striata</i>
VU	<i>Agaricia lamarcki</i> , <i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Mycetophyllia ferox</i> , <i>Oculina varicosa</i>
Invertebrates	
CR	<i>Barbouria cubensis</i>
Fish	
CR	<i>Epinephelus itajara</i> [#] , <i>Hyporthodus nigritus</i> [#]
EN	<i>Epinephelus striatus</i> , <i>Makaira nigricans</i> , <i>Thunnus thynnus</i>
VU	<i>Balistes vetula</i> , <i>Mycteroperca interstitialis</i> , <i>Kajikia albida</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Thunnus obesus</i>
Sharks and rays	
EN	<i>Sphyrna mokarran</i>
VU	<i>Carcharhinus longimanus</i> , <i>Isurus oxyrinchus</i> , <i>Rhincodon typus</i>
Reptiles	

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CR	Turks and Caicos rock iguana (<i>Cyclura carinata</i>) Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)
EN	Green sea turtle (<i>Chelonia mydas</i>) Loggerhead turtle (<i>Caretta caretta</i>)
VU	Leatherback (<i>Dermochelys coriacea</i>)*
Birds	
EN	Giant Kingbird (<i>Tyrannus cubensis</i>)*
VU	West Indian whistling duck (<i>Dendrocygna arborea</i>)#
Mammals	
VU	<i>Physeter macrocephalus</i> (occurrence in the TCI EEZ)

occasional species * rare

Table 2 - List of species that are **geographically restricted** (References: Churchyard et al. 2014, Pelembe and Cooper 2011, Pienkowski et al. 2008, Turks & Caicos National Trust - UK Overseas Territories Conservation Forum - CABI Bioscience 2002, Turks and Caicos Islands Government 2011, Eric Salamanca pers. com. 2014, Mike Pienkowski, Naqqi B. Manco, pers. com. 2015)

Taxonomic group	Number of endemic species
Plants	<p>- at least 9 plant species endemic to the TCI: Turks and Caicos heather (<i>Limonium bahamense</i>-EN), Caroline's pink flower (<i>Stenandrium carolinae</i>-CR), Caicos Encyclia orchid (<i>Encyclia caicensis</i>-EN), Britton's buttonbush (<i>Spermacoce brittonii</i>), Capillary buttonbush (<i>Spermacoce capillaris</i>-EN), Silvery silverbush (<i>Argythamnia argentea</i>-EN), Peppergrass (<i>Lepidium filicaule</i>-EN), North Caicos milkweed vine (<i>Metastelma stipitatum</i>), Lucayan pear bush (<i>Opuntia x lucayana</i>). Two specimens of this last species (<i>O. x lucayana</i>) has been observed and the species is considered as an hybrid. The plant subspecies <i>Evolvulus bahamense (arbuscula)</i> is potentially endemic to the TCI.</p> <p>- 50 plant species restricted to TCI, Bahamas archipelago and Cuba: including <i>Bursera frenningae</i> (Burseraceae) restricted to 5 islands in the Bahamas and TCI (reported in South Caicos, Ambergris Cays, Bush and Seal Cays). This species list includes the Caicos pine, <i>Pinus caribaea</i> var. <i>bahamensis</i>, which is endemic to TCI and Bahamas.</p> <p>- <i>Chamaecrista caribaea</i> endemic to TCI, Bahamas and northern tip of Haiti</p>
Invertebrates	<p>- 13 invertebrate species endemic to TCI: Turks Islands leafwing butterfly (<i>Anaea intermedia</i>), Drury's hairstreak butterfly (<i>Strymon acis leucosticha</i>) Airport Cave amphipod (<i>Bahadzia stocki</i>), Caicos isopod (<i>Bahalana caicosana</i>), Cave crustacean (<i>Deevaya spiralis</i>), Cave crustacean (<i>Erebonectoides macrochaetus</i>), Conch Bar Cave fosshagenioid (<i>Fosshagenia ferrarii</i>), Cottage Pond remipede (<i>Godzillius robustus</i>), Remipede (<i>Kaloketos pilosus</i>), Cave remipede (<i>Lasionectes entrichoma</i>), Cave remipede (<i>Pelagomacellicephala iliffei</i>), Providenciales amphipod (<i>Spelaeonicippe provo</i>), Cave remipede (<i>Speonebilis cannoni</i>)</p> <p>- 3 invertebrate species restricted to TCI, Bahamas archipelago and Cuba: Spicebush swallowtail butterfly (<i>Papilio andraemon</i>), Cuban cave prawn (<i>Barbouria cubensis</i>), Garcia's cave shrimp (<i>Typhlatya garciai</i>)</p> <p>- Several subspecies endemic to TCI and Southern Bahamas: - 4 butterfly subspecies : Turk Island Leaf Butterfly (<i>Memphis intermedia intermedia</i>), Chamberlain's sulphur (<i>Eurema chamberlaini mariguanae</i>), Thomas' Blue (<i>Cyclargus thomasi clenchi</i>), the Dusky Swallowtail (<i>Heraclides aristodemus bjorndalae</i>). - 1 subspecies endemic to TCI: Drury's Hairstreak (<i>Strymon acis leucosticha</i>)</p>

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Amphibians	No indigenous amphibians.
Reptiles	<p>- 8 reptile species endemic to the TCI: 2 skinks (<i>Spondylurus caicosae</i> and <i>Spondylurus turksae</i>) this species was previously identified as an endemic subspecies (<i>Mabuya</i> Skink, <i>Mabouya mabouya sloanei</i>) now separated in 2 distinct species, Caicos barking gecko (<i>Aristelliger hechti</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>), Turks Islands dwarf gecko (<i>Sphaerodactylus underwoodi</i>), Turks and Caicos curly-tailed lizard (<i>Leiocephallus psammodomus</i>), Caicos pygmy boa (or Caicos trope Boa / Dwarf boa) (<i>Tropidophis greenwayi</i>), Turks and Caicos rock iguana <i>Cyclura carinata</i> (this species is mainly present in the TCI and has a small sub-population in the Bahamas)</p> <p>- 1 worm snake species potentially endemic to TCI: <i>Typhlops richardi</i></p> <p>- 3 reptile subspecies endemic to TCI: Caicos Bark Anole (<i>Anolis scriptus scriptus</i>), Turks & Caicos Rock Iguana (<i>Cyclura carinata carinata</i>), Bahaman Rainbow Boa (<i>Chilabothrus chrysogaster chrysogaster</i>).</p> <p>- 3 reptiles endemic to TCI and Bahamas: Bark anole (<i>Anolis scriptus</i>), Mayaguana dwarf gecko (<i>Sphaerodactylus mariguanae</i>), Southern Bahamas rainbow boa (<i>Chilabothrus chrysogaster</i>)</p>
Birds	<p>- 2 bird subspecies are endemic to TCI: Thick-billed vireo (<i>Vireo crassirostris stalagmum</i>), Greater Antillean bullfinch (<i>Loxigilla violacea ofella</i>)</p> <p>- 3 bird species are restricted to the Bahamas and TCI archipelago: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>)</p> <p>- 1 bird species occurring in Bahamas-TCI archipelago and Lesser Antilles: Pearly-eyed Thrasher (<i>Margarops fuscatus</i>)</p> <p>- 1 bird species restricted to Cuba and the TCI: Cuban Crow (<i>Corvus nasicus</i>). The restricted range Giant Kingbird (<i>Tyrannus cubensis</i>) has not been seen in the the TCI for a very long time.</p>
Mammals	<p>- bat species reported in the TCI, but these species occur in all the Caribbean region and are not endemic to TCI: Big-eared Bat (<i>Macrotus waterhousii</i>), Buffy Flower Bat (<i>Erophylla sezekorni</i>), Leach's Long-tongued Bat (<i>Monophyllus redmani</i>), Cuban Fruit-eating Bat (<i>Brachyphylla nana</i>), Jamaican Fruit-eating Bat (<i>Artibeus jamaicensis</i>), Red bat (<i>Lasiurus</i> sp.). There is a single record of a vagrant silver-haired bat (<i>Lasionycteris noctivagans</i>); it is a migratory North American species that does not typically visit TCI.</p> <p>- Potential presence of the presumed extinct Guinea pig (<i>Hutia</i> sp.) that is potentially endemic to TCI and the Bahamas.</p>

Habitat outcomes

➤ Terrestrial ecosystems

The Caicos pine, *Pinus caribaea* var. *bahamensis*, is endemic to the Turks and Caicos Islands (TCI) and the Bahamas.

This species occurs naturally in specific zones in Middle Caicos, North Caicos and Pine Cay (Naqqi B. Manco, Mike Pienkowski, Catherine Wensink, pers. comm. 2015). It is the dominant species of the pine forest ecosystem that

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covers about 13 km² in the TCI. This plant species is threatened by non-native scale insect infestation (*Toumeyella parvicornis*) and the variety is assessed as vulnerable species against the global IUCN Redlist.

The Caicos Pine Recovery Project (CPRP) and native plant biodiversity conservation nursery project was launched in 2008 and aims to build capacity and awareness to save the national endemic and threatened tree, to rescue and collect endemic and endangered plant species for biodiversity conservation, to conduct research on plants growing, population genetics, insect identification, map the distribution on pine forests. This project is and has been funded by the Darwin Initiative, John Ellerman Foundation, Kew Royal Botanical Garden, JNCC, OTEP.

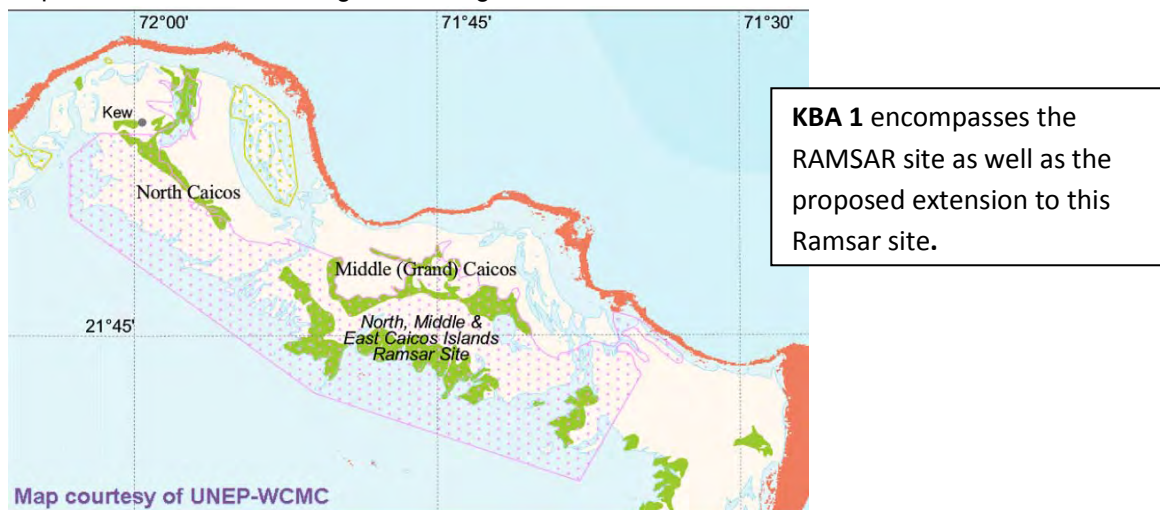
- Offshore Cays

BEST project with the RSPB and Turks and Caicos National Trust on the control and eradication of AIS such as on Little Water Cay.

- Wetlands:

- 26,700 ha of wetlands containing a variety of marine and coastal habitat types (Turks and Caicos Islands Government 2011, Pienkowski 2002, 2005, Ramsar factsheet): mangroves, swamps, estuaries, inlet cays, algal flats, seagrass beds.
- Most of mangroves occur along the shoreline of Caicos Islands with 3 of these islands recognized as a Ramsar site.
- These coastal ecosystems are interrelated and act as important shelters, nursery and foraging areas for diverse array of marine and estuarine organisms.
- Wetlands that occur in the Caicos Bank and some of these areas are recognized as Important Bird Areas (IBAs) (Pienkowski et al. 2008).

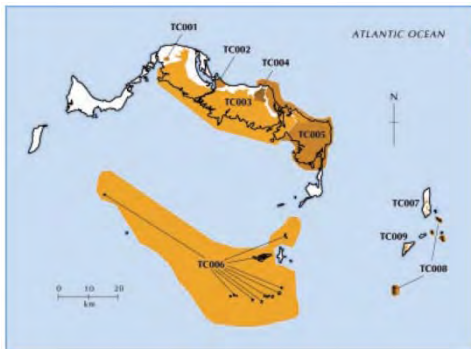
Map of the Ramsar site designated along the North, Middle and East Caicos.



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➤ Important Bird Areas (IBAs) (References: Allcorn et al. 2009, Hilton et al. 2000, Pienkowski et al. 2008)

- Of the 204 recorded bird species, 58 breed on the islands and 110 occur as migrants (Neotropical migrants, occasional migrants). Some of the bird species are of South American origin.



- **9 IBAs** are identified (247,142 ha, including large marine areas) and represent 15% of the island's land area. IBAs have been identified on the basis of 4 restricted-range bird species, 1 threatened species (the vulnerable *Dendrocygna arborea*) and 22 seabirds that congregate in large numbers. The identified IBAs consist of 2 forest areas (including ponds), seabird breeding cays, former saltpans and creeks, and 3 wetland areas.

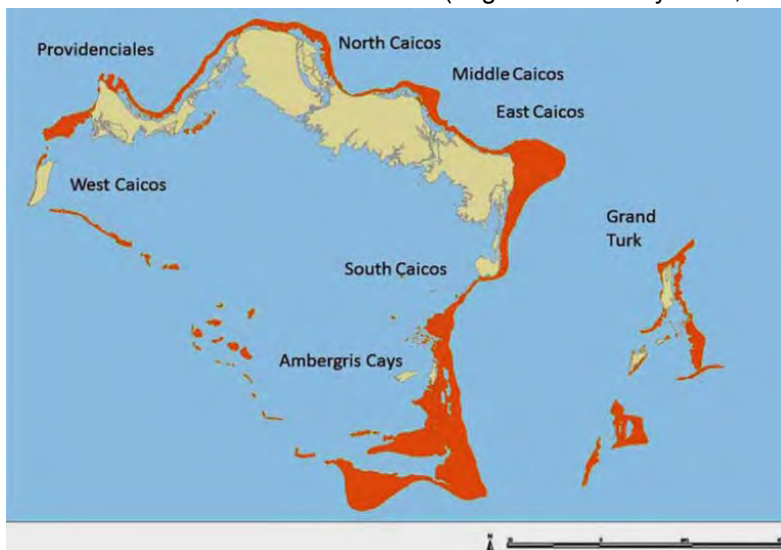
- **4 of the 7 Bahamas Endemic Bird Area restricted-range bird species** occur in the TCI: Bahama Woodstar (*Calliphlox evelynae*), Bahama Mockingbird (*Mimus gundlachi*), Pearly-eyed Thrasher *Margarops fuscatus* (present in Bahamas-TCI archipelago and Lesser Antilles) and Thick-billed Vireo (*Vireo crassirostris*). An endemic subspecies of the Thick-billed Vireo

(*V. crassirostris stalagmum*) is restricted to the Caicos Bank.

- The Cuban crow (*Corvus nasicus*) is shared by the Caicos Islands and Cuba.

➤ Marine ecosystems

- Distribution of coral reefs in the TCI (Logan and Sealey 2013, REEFBase GIS)



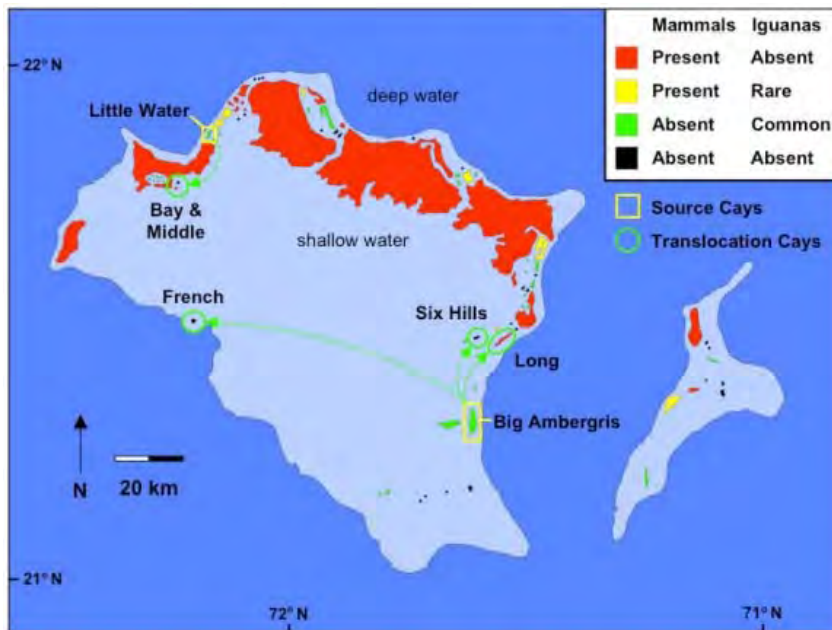
KBA 2 "Marine ecosystems" encompasses all the coral reefs.

Reptiles

- TCI has one of the largest populations of the restricted-range and threatened Rock Iguana in the Caribbean *Cyclura carinata carinata*, the subspecies is endemic to TCI. TCI also provides the bulk of the range of the species, a small part of the population of which occurs also on one island in the Bahamas. This species is threatened due to development, destruction and fragmentation of its habitat and the negative impact of AIS.

- The critically endangered Turks and Caicos iguana (*Cyclura carinata carinata*) is among the smallest of the Caribbean Rock Iguanas. Once widespread throughout the TCI, this species now occupies less than 5% of its historic range. A survey of the TCI population has been conducted in 1995 and indicated a total population of rock iguana of 50,000 to 60,000 specimens. Important populations occur on Little Water Cay and Ambergris Cay (Gerber and Pagni 2012).

- Translocation of iguanas from Big Ambergris and Little Water Cay to Long Cay, East Six Hills Cay, French Cay, Bay and Middle Cays of the Five Cays (Gerber and Pagni 2012).



Map of the distribution of the Turks and Caicos iguana (*Cyclura carinata carinata*) (Gerber and Pagni 2012).

- Sea turtle nesting areas.

- Between 2008 and 2010, 162 sea turtle nesting surveys were conducted opportunistically on 34 beaches around the TCI (Stringell et al. 2015, Marine Conservation Society dataset, Peter Richardson, Amdeep Sanghera, pers. com. 2015).

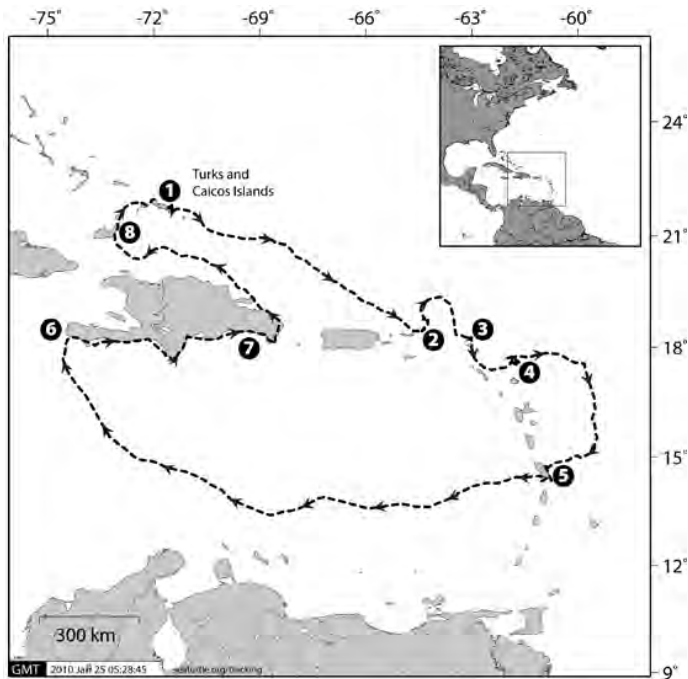
- Hawksbill turtle nesting distribution was almost entirely restricted to the eastern islands of the TCI, particularly on uninhabited cays and coasts. Several key nesting beaches are reported for Hawksbill turtles: Great Sand Cay, Bush Cay (Seal Cays), Fish Cay, East Caicos (beaches along the northern and eastern side of the island) (Stringell et al. 2015, Marine Conservation Society dataset, Peter Richardson, Amdeep Sanghera, Kathleen Wood, Tom Stringell, pers. com. 2015).

- Green turtle nesting activity appeared to be more widespread but at lower magnitudes than Hawksbills with evidence of activity on the Atlantic coast of Providenciales, Grand Turk (Gibb's Cay where most of the nests are observed), Fish Cays, Ambergris Cay, Seal Cays (Indian Cay) and North Caicos (Highas Cay), East Caicos (beaches along the northern and eastern side of the island), Cotton Cay, Eastern Cay, Great Sand Cay in addition to more sheltered islands (Stringell et al. 2015, Marine Conservation Society dataset, Peter Richardson, Amdeep Sanghera, Kathleen Wood, Tom Stringell, pers. com. 2015).

- These surveys provided approximate insights into the magnitude and spatio-temporal nesting patterns of sea turtles in the TCI. Indeed, due to logistical constraints and distances between islands in the TCI archipelago, frequent and regular nesting monitoring of all locations were not possible during the nesting season leading to an underestimation of the nesting activity (Stringell et al. 2015).

- Stringell et al. (2015) provide an estimate of the number and spatial distribution of nests of Hawksbill and Green turtles in the TCI.

- Satellite tracking of 2 adult green turtles and 5 adult hawksbill turtles showed a high fidelity for all the Hawksbill turtles within the waters of the TCI that provide year-round foraging habitat for locally breeding and foraging adult hawksbill turtles (Stringell et al. 2015). The tracked adults green turtles appear to occur on a seasonal pattern in the TCI and to travel between the TCI, the Lesser Antilles and the Dominican Republic (Richardson et al. 2010, Stringell et al. 2015).



Green turtle Suzie's migration path: a journey of 6,000 km in the eastern part of the Caribbean region (from Richardson et al. 2010)

Ecological corridors

- The TCI in general are important stopover and wintering areas for at least 110 bird species. Of particular importance are the mosaics of wetland habitats scattered across the islands, all of which function as ecological corridors. Uninterrupted upland habitats, such as those found on East Caicos, Middle Caicos and North Caicos are also important corridors. East and Middle Caicos are believed to provide overwintering habitat for Kirtland's warbler and several other passerines (Kathleen Wood, pers. comm. 2015).
- The Salinas, well and shores of Grand Turk and Salt Cay are internationally important for shorebirds migrating between North and South America. These and the outer cays of both the Caicos and the Turks Banks comprise some of the most important breeding areas in the Caribbean for seabirds which migrate over wide areas of the Caribbean and Atlantic (Mike Pienkowski, Catherine Wensink pers. comm. 2015).
- In TCI waters, Mouchoir Bank is an important whale breeding area (Mike Pienkowski, Catherine Wensink pers. comm. 2015).

The connectivity between Turks and Caicos Banks is relatively limited.

The local extinctions of some land-birds on some islands due to hurricanes and re-establishments point to some linkage, and this is probably helped in the islands on the two banks are visible to each other, especially from flying height. The patterns of change of numbers of Flamingos between the islands points clearly to frequent movements between the Turks Islands, the Caicos Islands and Great Inagua in the Bahamas (Mike Pienkowski, Catherine Wensink pers. comm. 2015).

Marine mammals are occasionally recorded traveling between the two banks. The Columbus Passage is a major migratory pathway for a variety of pelagic species. The deep waters surrounding TCI, within the EEZ are known migration pathways for pelagics, including but not limited to the threatened Bluefin tuna (*Thunnus thynnus*), in addition to several other tuna species, a variety of billfish, sharks, rays, etc (Kathleen Wood, pers. comm. 2015).

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Table 3. KBAs identified on the territory and justification.

N. KBA	KBAs' names	Criteria: threatened species, endemic species, habitats, ecosystems and ecological corridors
KBA 1 - Wetlands & Ramsar site	Wetlands and coastal areas	<p>Habitats and Ecosystems</p> <ul style="list-style-type: none"> - North, Middle and East Caicos Nature Reserve - - 26,700 ha of wetlands in all the TCI territory (Pienkowski 2002, Sanders 2006): including mangroves, swamps, estuaries, inlet cays, algal flats, seagrass beds. - Large mangrove areas occur in the southern part of North Caicos and in Middle and East Caicos where they form a continuous ecosystem. These areas are recognized as a Ramsar site. - Important drier lands (called "uplands"). Connectivity between marine - wetlands - and drier lands recognized as a key feature of the Ramsar site (this kind of ecological transition has becoming relatively rare worldwide). <p>It is important to note that only a small part of the wetlands on East Caicos are included within the Ramsar site and the remaining wetlands consist of some best examples of tidal creek and palustrine habitats are not protected. These wetlands are under major threats as a project of trans-shipping and cruise port is under study.</p> <p>Exclusion of sites on East and Middle Caicos from the designated Ramsar site was not on biological grounds and reviews have recommended extension of the site to include these areas (proposed Ramsar sites) (M. Pienkowski pers. comm. 2015).</p> <p>Plants</p> <ul style="list-style-type: none"> - presence of the Turks and Caicos Islands Heather endemic plant (<i>Limonium bahamense</i>) around ponds and salinas (Big Pond, Middle Caicos and adjacent wetlands; Jacksonville Creek Ease Caicos and adjacent wetlands) (Naqqi B. Manco, pers. com. 2015). - the endangered <i>Spermacoce capillaris</i> (EN) is limited to seasonally flooded areas on South Caicos and East Caicos. None of these land areas are currently under protection. - Presence of the Caicos pine (VU) on North and Middle Caicos and Pine Cay. <p>Reptiles</p> <ul style="list-style-type: none"> - presence of endemic reptile species within the Ramsar site: Caicos barking gecko (<i>Aristelliger hechti</i>), curlytail lizard (<i>Leiocephallus psammodyromus</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>), Caicos Islands trope boa (<i>Tropidophis greenwayi</i>), Turks & Caicos Rock Iguana <i>Cyclura carinata</i> (CR). - 4 reptiles endemic at the sub species level: Turks & Caicos Bark Anole (<i>Anolis scriptus scriptus</i>), Turks & Caicos Rock Iguana (<i>Cyclura carinata carinata</i>), Skink (<i>Spondylurus caicosae</i>), Bahaman Rainbow Boa (<i>Epicrates chrysogaster chrysogaster</i>), <i>Caicos pygmy boa</i> (<i>Tropidophis greenwayi</i>) - Marine and coastal areas of the Ramsar site are important foraging areas for green, hawksbill and loggerhead sea turtles. - Most nesting beaches that occur on these 4 islands of the Caicos Bank are not included within the delineation of the Ramsar site. <p>Birds -1 IBA "North, Middle, and East Caicos Ramsar site" following the delineation of the Ramsar site (Pienkowski et al. 2008):</p> <ul style="list-style-type: none"> - presence of the vulnerable West Indian Whistling-duck <i>Dendrocygna</i>

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		<p><i>arborea</i></p> <ul style="list-style-type: none"> - presence of the 4 restricted-range bird species: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>) - 16 waterbird species (over 20,000 waterbird individuals) occur in the Ramsar site, including 6 seabird species, with particular high numbers of Least Sandpiper <i>Calidris minutilla</i>
<p>KBA 2 - Marine KBA : Marine ecosystems</p>	<p>Coral reefs and seagrass beds</p>	<ul style="list-style-type: none"> - 8 threatened coral species occur in these coral reefs (Logan and Sealey 2013): <i>Acropora cervicornis</i>, <i>Acropora palmata</i>, <i>Montastraea annularis</i>, <i>Montastraea faveolata</i>, <i>Agaricia lamarcki</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Mycetophyllia ferox</i>. - About 1,200 km² of coral reefs. TCI archipelago has one of the least damaged coral reef in the Caribbean region with a high diversity of corals (Pelembé and Cooper 2011). - A single barrier reef fringes the north coasts of the 6 islands of the Caicos Bank (West Caicos, Providenciales, North Caicos, Middle Caicos, East Caicos, South Caicos) - Shallow-water patch reefs are common around all of the islands and cays. - Vast areas of seagrass beds occur in the Caicos Bank. - Ecological connectivity between mangroves, seagrass and coral reefs. - Representative coral reefs including threatened coral species occurred within the network of MPAs (Pelembé and Cooper 2011).
<p>KBA 3- Providenciales</p>	<p>Providenciales</p>	<p>Wetlands</p> <ul style="list-style-type: none"> - Mangroves occur within Princess Alexandra Land and Sea NP and NR, in North West Point Pond NR, and the Pigeon Pond and Frenchman's Creek Nature Reserve (PPFCNR). This reserve is threatened by development as this site encompasses the only protected beaches on Providenciales. <p>Plants</p> <p>The PPFCNR represents the only significant land area under protection on the island of Providenciales. As such, it is a critical reservoir of biodiversity for floral species. Endangered <i>Guaiacum sanctum</i> and <i>Swietenia mahagoni</i> (2EN) are abundant in these habitats, in addition to several TCI/Bahamas endemic floral species (Katherine Wood pers. comm. 2015).</p> <p>Marine ecosystems (included in KBA2)</p> <ul style="list-style-type: none"> - unprotected site between North West Point Marine NP and Princess Alexandra Land and Sea NP: area with globally threatened Elkhorn coral (<i>Acropora palmata</i>) located in north Providenciales (Don Stark TCI Reef Fund, pers. com. 2015). <p>Reptiles</p> <ul style="list-style-type: none"> - presence of important population of the endemic and threatened Rock Iguana (<i>Cyclura carinata</i>) in Princess Alexandra NP and NR including Little Water Cay where about 2,000 specimens occur (Gerber and Pagni 2012). - This iguana population is threatened on Princess Alexandra NP and Little

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		<p>Water Cay by AIS (rats, feral cats...)</p> <p>- Significant populations of endemic Turks and Caicos curlytail lizard (<i>Leiocephalus psammodromus</i>), and Caicos Islands trope Boa (<i>Trophidophis greenwayii</i>) are contained within PFFCNR, in addition to TCI/Bahamas endemic species (Katherine Wood pers. comm. 2015).</p> <p>Birds PPFCNR and Lake Catherine NR (West Caicos) are important overwintering and nesting areas for bird populations, such as herons. As the only protected land area on Providenciales, PFFCNR is also an important area for TCI/Bahamas endemics and local sub-species (Katherine Wood pers. comm. 2015).</p> <p>-a significant population of the restricted-range Pearly-eyed Thrasher (<i>Margarops fuscatus</i>) is found on Pine Cay.</p> <p>Network of protected areas*: - 4 National Parks (NP): Chalk Sound NP, North West Point Marine NP, Princess Alexandra NP, Fort George Land and Sea NP - 3 Nature Reserves (NR): Pigeon Pond and Frenchman's Creek NR, North West Point Pond NR, Princess Alexandra NR</p>
	Chalk Sound NP	- islets with Rock iguana populations, nursery and important habitat for a diverse array of species.
KBA 4 - North - Middle and East Caicos	North Caicos	<p>Terrestrial habitats & Wetlands - an important area of the island is included in the Ramsar site</p> <p>- tallest mangrove trees within the TCI (10 m high) are observed on Parrot Cay (North Caicos) (FAO 2005) - important mangrove areas within Dick Hill Creek and Bellefield Landing Pond NR. - Mangroves: important habitat for some globally threatened fishes.</p> <p>- Wade's Green-Teren Hill (IBA) is the most important remaining high forest area in the territory (Pienkowski et al. 2008). -The East Bay Cays National Park has important mudflats and wetlands that are habitat for the vulnerable West Indian whistling duck (<i>Dendrocygna arborea</i>) and also serve as important overwintering habitat (Katherine Wood pers. comm. 2015).</p> <p>Plants The north coastal areas of North Caicos and the East Bay Cays are an important reservoir for the endangered and endemic floral species <i>Encyclia caicensis</i>. Other TCI/Bahamas endemic species are also noted in abundance in these areas, particularly <i>Coccothrinax inaguensis</i>, <i>Wedelia bahamensis</i> and <i>Vernonia bahamensis</i>.</p> <p>- northern area close to Flamingo Pond: important area with the endemic and threatened Caroline'spink flower (<i>Stenandrium carolinae</i>) (Naqqi B. Manco, Kathleen M. Wood, pers. com. 2015).</p> <p>Invertebrates - presence of endemic Remipedia (crustaceans)</p> <p>Reptiles - Presence of the second largest population of the endemic Rock Iguana (<i>Cyclura carinata</i>) in East Bay Islands NP</p>

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KBA 4 - North Caicos		<ul style="list-style-type: none"> - Wade's Green–Teren Hill (IBA): Important site for endemic reptiles (Pienkowski et al. 2008): Caicos barking gecko (<i>Aristelliger hechti</i>), curlytail lizard (<i>Leiocephallus psammodromus</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>) and Caicos pygmy boa (<i>Tropidophis greenwayi</i>). - Highas Cay: important nesting area for Green turtles. - Birds - 1 IBA Wade's Green–Teren Hill (Pienkowski et al. 2008): <ul style="list-style-type: none"> - presence of the 4 restricted-range bird species: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>) - Mammals <ul style="list-style-type: none"> - East Bay Cay: potential presence of the Guinea pig (<i>Hutia</i> sp.) that is potentially endemic to TCI and the Bahamas (Naqqi B. Manco, pers. com. 2015). Network of protected areas*: <ul style="list-style-type: none"> - 1 National Parks (NP): East Bay Islands NP - 3 Nature Reserves (NR): Dick Hill Creek and Bellefield Landing Pond NR, Cottage Pond NR, Pumpkin Bluff Pond NR, - Three Mary Cays Sanctuary - part of the island included within the Ramsar site
KBA 5 - Middle Caicos	Middle Caicos	<ul style="list-style-type: none"> Terrestrial habitats & Wetlands <ul style="list-style-type: none"> - an important area of the island is included within the Ramsar site - presence of forests and wetlands Invertebrates <ul style="list-style-type: none"> - the Conch Bar cave system : presence of the endemic crustacean Cuban cave prawn (<i>Barbouria cubensis</i>) (Naqqi B. Manco, pers. com. 2015). Reptiles (Pienkowski et al. 2008) <ul style="list-style-type: none"> - endemic reptiles (observed in the 2 IBAs): Caicos barking gecko (<i>Aristelliger hechti</i>), curlytail lizard (<i>Leiocephallus psammodromus</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>) - Birds - 2 IBAs (Pienkowski et al. 2008): <ul style="list-style-type: none"> Middle Caicos Forest & Fish Ponds and Crossing Place Trail - Middle Caicos - presence of the vulnerable West Indian Whistling-duck <i>Dendrocygna arborea</i>: Middle Caicos Forest IBA supports the largest population of this species on the territory. - presence of the 4 restricted-range bird species: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Pearly-eyed Thrasher (<i>Margarops fuscatus</i>) and 1 subspecies: Greater Antillean bullfinch (<i>Loxigilla violacea ofella</i>). - Big pond: important Caribbean flamingos reproduction area. Mammals <ul style="list-style-type: none"> - the Conch Bar cave system is an important habitat for bat populations. Network of protected areas* <ul style="list-style-type: none"> - 1 National Park (NP): Conch Bar Caves NP - Ocean Hole Nature Reserve - part of the island included within the Ramsar site

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KBA6 - East Caicos	East Caicos	<p>Marine habitats (included in KBA 2)</p> <ul style="list-style-type: none"> - Significant populations of Elkhorn coral (<i>Acropora palmata</i>) around East Caicos. - Significant populations of staghorn coral (<i>Acropora cervicornis</i>) (the largest remaining in TCI and throughout much of the Caribbean). - Marine habitats also contain significant populations of <i>Agaricia lamarcki</i>, <i>Dichocoenia stokesii</i>, <i>Orbicella annularis</i> (complex), <i>Mycetophyllia ferox</i> and <i>Dendrogyra cylindrus</i>. <p>- East Caicos reefs have known spawning aggregations for <i>Epinephelus striatus</i>.</p> <p>Terrestrial habitats</p> <ul style="list-style-type: none"> - Variety of habitats: scrub, woodland, ponds, caves, marshes, Flats <p>Reptiles</p> <ul style="list-style-type: none"> - important nesting sites for green and hawksbill sea turtles: most of the nesting area is located along the northern and eastern side of East Caicos. - endemic reptiles (observed in the IBA): curlytail lizard (<i>Leiocephalus psammodomus</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>), Bahaman Rainbow Boa (<i>Chilabothrus chrysogaster</i>), Caicos pygmy boa (<i>Tropidophis greenwayi</i>), Bark anole (<i>Anolis scriptus</i>) <p>- Birds -1 IBA East Caicos and adjacent areas (Pienkowski et al. 2008):</p> <ul style="list-style-type: none"> - presence of the vulnerable West Indian Whistling-duck <i>Dendrocygna arborea</i> - presence of the 3 restricted-range bird species: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>), Cuban crow (<i>Corvus nasicus</i>) and 1 subspecies: Greater Antillean bullfinch (<i>Loxigilla violacea ofella</i>). - 8 waterbird species including 6 seabird species - Significant population of <i>Phoenicopiterus ruber</i> - Breeding populations of brown pelican, least tern, reddish egret, and several others. <p>Plants</p> <p>The only island in the TCI archipelago with 10 out of 10 TCI endemic plant species: <i>Lepidium filicaule</i>, <i>Stenandrium carolinae</i>, <i>Spermacoce capillaris</i>, <i>Encyclia caicensis</i>, <i>Argythamnia argentea</i>, <i>Evolvulus bahamensis</i>, <i>Opuntia lucayana</i>, <i>Spermacoce brittonii</i> and <i>Limonium bahamensis</i>. The population of CR <i>Stenandrium carolinae</i> represents approximately 75% of the known population of this species (Kathleen Wood pers. com. 2016).</p> <ul style="list-style-type: none"> - Numerous TCI/Bahamas endemic floral species are also recorded. <p>Cave systems</p> <ul style="list-style-type: none"> - Endemic Cuban cave prawn (<i>Barbouria cubensis</i>) occur in the ponds. - The only known Lucayan petroglyphs are contained within the vast network of caves on East Caicos (cultural outcomes). - Important habitat for bat populations. <p>- Stubbs Guano Caves and Cape Comete Hill (NW East Caicos): important habitat for bats and endemic crustaceans. Aggregation in important numbers of diverse bats communities.</p> <p>Network of protected areas*</p> <ul style="list-style-type: none"> - part of the island included within the Ramsar site
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KBA 7 South Caicos	South Caicos	<p>Plants</p> <ul style="list-style-type: none"> - Boiling hole area of historical interest: presence of the endemic and threatened Turks and Caicos heather (<i>Limonium bahamense</i>). Important step-over for bird populations (Kathleen Wood, pers. com. 2015). <p>Fishes</p> <ul style="list-style-type: none"> - presence of reef fish spawning aggregations along the eastern side of the NP (John Claydon, pers. com. 2015). <p>Reptiles</p> <ul style="list-style-type: none"> - presence of important population of the endemic Rock Iguana (<i>Cyclura carinata</i>) in Admiral Cockburn Nature Reserve - Bell Sound NR: presence of Green turtles and juvenile sharks. <p>Network of protected areas*:</p> <ul style="list-style-type: none"> - 1 National Park (NP): Admiral Cockburn Land and Sea NP => Sea NP included in KBA 2 "Marine ecosystems" - 2 Nature Reserves (NR): Bell Sound NR, Admiral Cockburn NR
KBA8 - southern Cays	Small cays south of South Caicos (including Ambergris Cay)	<p>Reptiles (Pienkowski et al. 2008)</p> <ul style="list-style-type: none"> - Little and Big Ambergris Cays are home to about a half of the known population of the threatened and endemic Turks and Caicos rock iguana (<i>Cyclura carinata carinata</i>). These island is threatened by development. - endemic reptiles: curlytail lizard (<i>Leiocephallus psammodomus</i>), Caicos dwarf gecko (<i>Sphaerodactylus caicosensis</i>) - Fish Cay: important foraging and nesting areas for Hawksbills and Green Turtles. - Ambergris Cay: nesting site for Green turtles. <p>Birds -1 IBA Caicos Bank Southern Cays (Pienkowski et al. 2008):</p> <ul style="list-style-type: none"> - significant seabird breeding for 5 species site with up to 40,000 birds occurring in the area. - population of Roseate Tern (<i>Sterna dougallii</i>), Bridled Tern (<i>S. anaethetus</i>), Brown Noddy (<i>Anous stolidus</i>) are globally important Some of the biggest seabird breeding populations in the Caribbean (M. Pienkowski, pers. com. 2015). <p>Network of protected areas*</p> <ul style="list-style-type: none"> - French, Bush and Seal Cays Sanctuary
KBA 9 - Grand Turk	Grand Turk	<ul style="list-style-type: none"> - Terrestrial habitats - Grand Turk Salinas, Wells, South Creek National Park and coastal areas encompass all the major wetlands (including mangroves) on Grand Turk Island. - North Creek: important nesting area for bird species and sea turtles. <p>- Plants</p> <ul style="list-style-type: none"> - Town Pond Salina and Red and other Salina Areas: presence of the Turks and Caicos Islands Heather endemic plant (<i>Limonium bahamense</i>) <p>- Reptiles</p> <ul style="list-style-type: none"> - the endemic rainbow boa to TCI and Bahamas (<i>Chilabothrus chrysogaster</i>) occurs in Gibbs Cay that is included in the Grand Turk Cays Land and Sea NP. This Cay potentially hosts the only known Turks Bank population. - Grand Turk (Gibb's Cay): important nesting sites for green and hawksbill sea turtles.

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		<p>- Birds - 1 IBA Grand Turk Salinas and Shores (Pienkowski et al. 2008):</p> <ul style="list-style-type: none"> - important habitat for waterbird species (over 20,000 waterbird individuals) occur in the Grand Turk and Salt Cay wetlands, including particular high numbers of several Stilt Sandpipers (<i>Calidris himantopus</i>) (Mike Pienkowski, pers. com. 2015). - 9 waterbird trigger IBA species including 4 seabird species - important breeding site for waterbirds and for 4 seabird species <p>Network of protected areas*:</p> <ul style="list-style-type: none"> - 3 National Parks (NP): Columbus Landfall Marine NP = > included in KBA 2 "Marine ecosystems" South Creek NP, Grand Turk Cays Land and Sea NP - Long Cay Sanctuary = > included in IBAs - Big Sand Cay Sanctuary = > included in IBAs - Town and Red Salina. Protection still needed for North Wells, North Salina, Bayles Pond Salina, South Salina, Great Salina, South Wells, Hawkes Pond Salina and Hawks Nest Salina.
<p>KBA10 - Turks Bank & Salt Cay</p>	<p>Turks Bank southern Cays - Salt Cay Creek and Salinas - Big Sand Cay</p>	<p>Reptiles</p> <ul style="list-style-type: none"> - threatened and endemic Turks and Caicos rock iguana <i>Cyclura carinata carinata</i> is common on Long Cay and Big Sand Cay endemic reptiles: curlytail lizard (<i>Leiocephallus psammodomus</i>) - Salt Cay Creek and Salinas: important nesting sites for green, hawksbill and loggerhead sea turtles - Big Sand Cay Sanctuary: important nesting area for Hawksbill and Green sea turtles along the eastern side of the island. - Cotton Cay and Eastern Cay: important nesting area for Green turtles. <p>- Birds - 2 IBAs Turks Bank Seabird Cays & Salt Cay Creek and Salinas (Pienkowski et al. 2008):</p> <ul style="list-style-type: none"> - The site supports over 100,000 breeding seabirds with globally important populations of Laughing Gull <i>Larus atricilla</i>, Bridled Tern <i>Sterna anaethetus</i>, Sooty Tern <i>S. fuscata</i> and Brown Noddy <i>Anous stolidus</i> Numbers of White-tailed Tropicbird (<i>Phaethon lepturus</i>) are regionally significant. - presence of the 3 restricted-range bird species at Salt Cay Creek and Salinas: Bahama Woodstar (<i>Calliphlox evelynae</i>), Bahama Mockingbird (<i>Mimus gundlachi</i>), Thick-billed Vireo (<i>Vireo crassirostris</i>) - Cotton Cay (private Cay): presence of <i>Acropora palmata</i> and skink (<i>Spondylurus turksae</i>) - Salt Cay: largest area of the endemic and threatened Turks and Caicos heather (<i>Limonium bahamense</i>) around Town Center pond.
<p>KBA 11</p>	<p>French, Bush and Seal Cays Sanctuary</p>	<p>Presence of the endemic Caicos barking gecko (<i>Aristelliger hechti</i>), Rock iguana populations (<i>Cyclura carinata</i>), threatened coral reef species, important site for bird populations.</p> <ul style="list-style-type: none"> - Indian Cay and Bush Cay (Seal Cays): important nesting area for Hawksbill and Green turtles.

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Candidate KBAs	Cand. KBA1 - West Caicos	West Caicos - Lake Catherine Nature Reserve - Wetlands of Lake Catherine Important area for bird populations
	Cand. KBA2 North Caicos	- Pumpkin Bluff Pond Nature Reserve - Three Mary Cays Sanctuary Important areas for bird populations. Presence of rare plant species.
	Cand. KBA3	South Caicos - Bell Sound Nature Reserve - occurrence of threatened sea turtles and juvenile sharks
	Cand. KBA4	Grand Turk eastern side - South Creek National Park - wetlands - important area for bird populations
	Cand. KBA5	- Cotton Cay (private island) - important area for bird populations

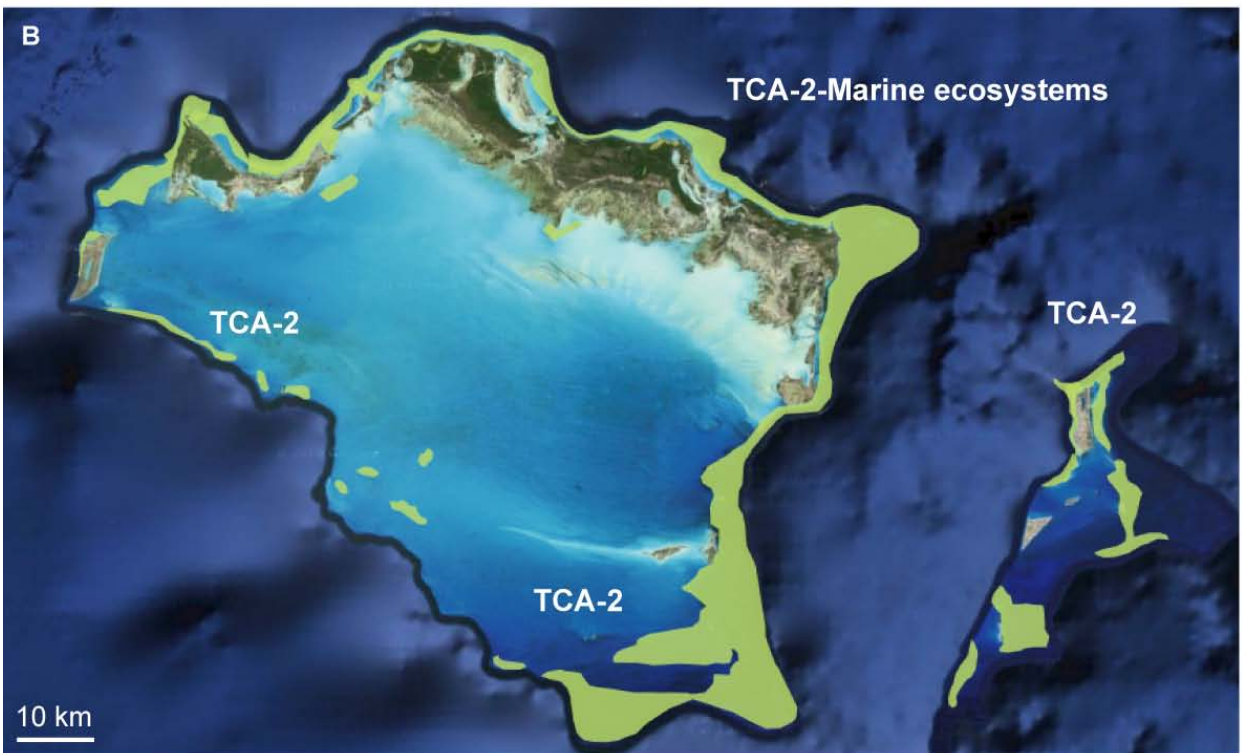
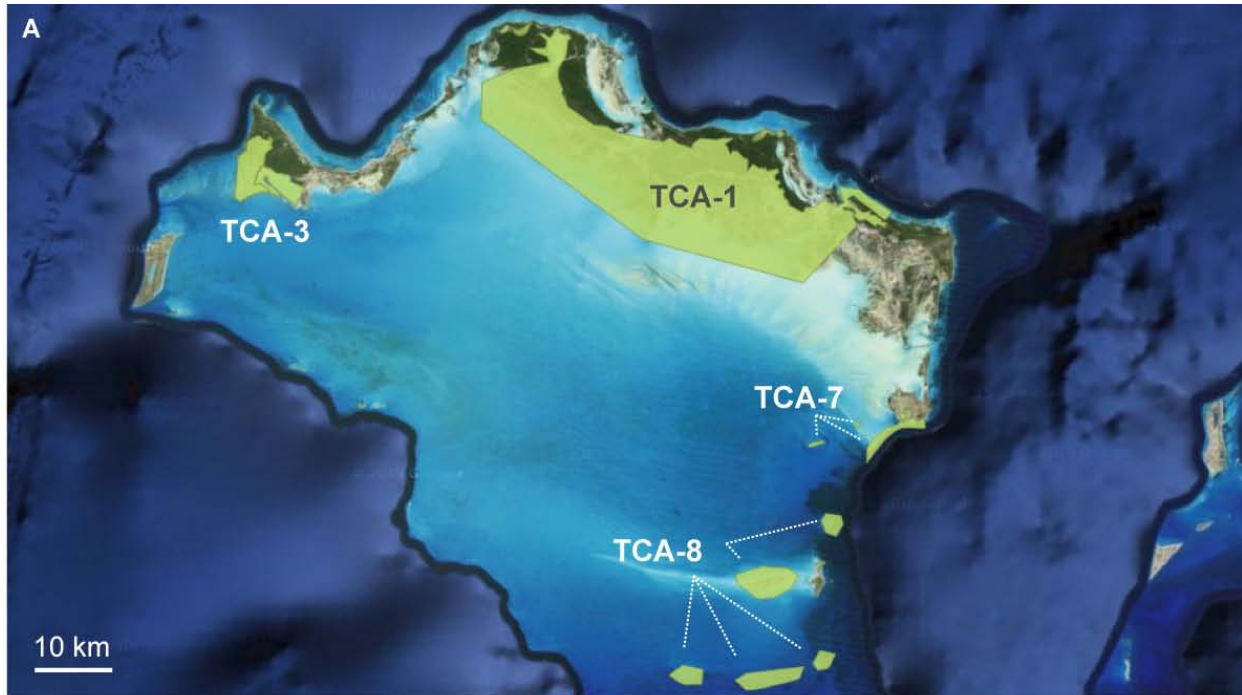
*It is important to notice that protected areas do not constitute KBAs due to their conservation status but due to the occurrence of trigger species.

International Treaties and Conventions - UK ratification

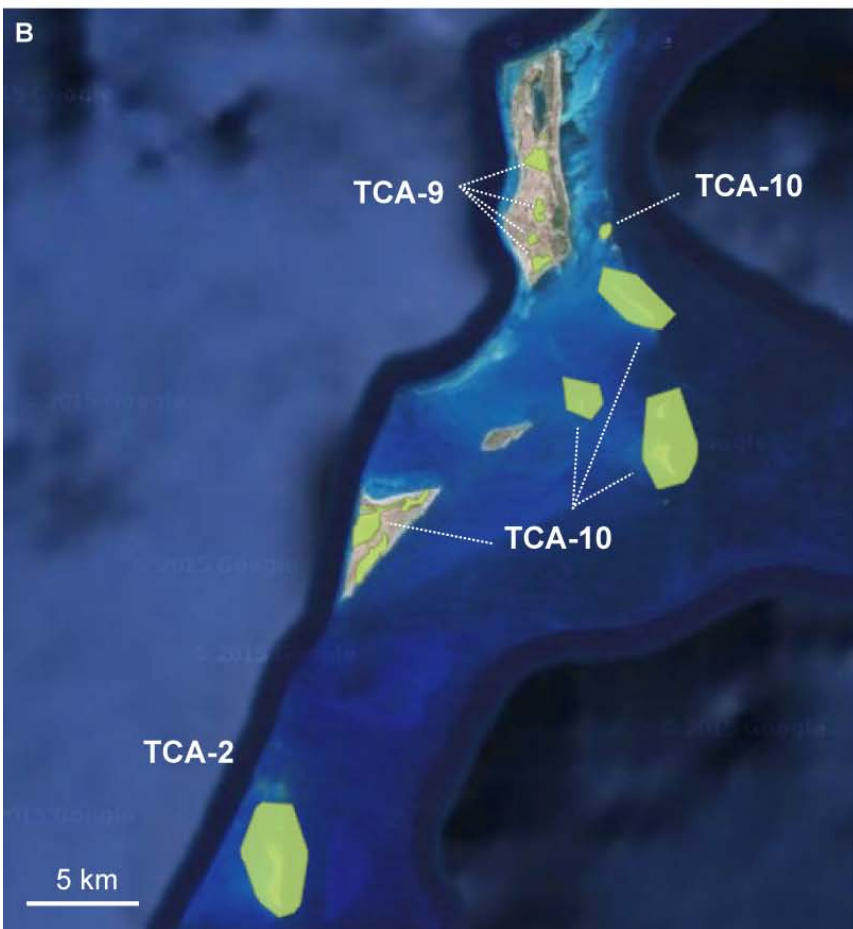
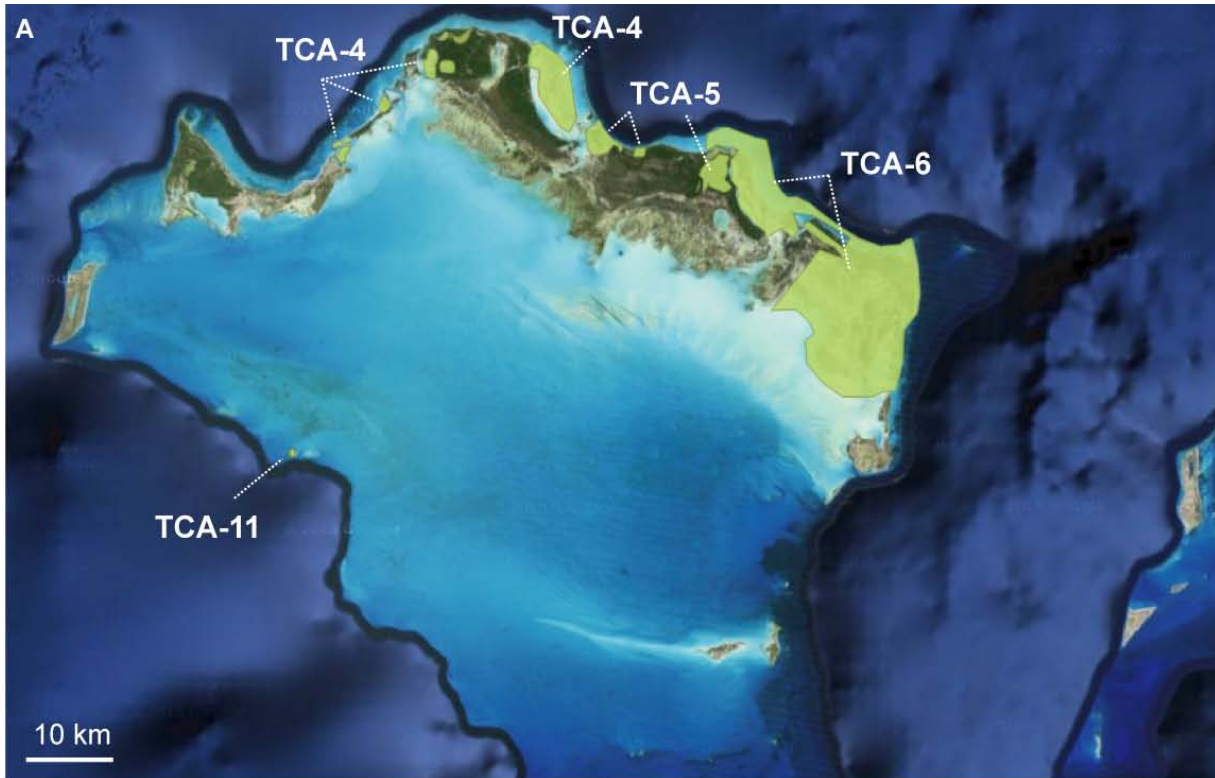
- Ramsar Convention on Wetlands of International Importance
- The Bonn Convention (or the Convention on Migratory Species of Wild Animals) (CMS)
- World Heritage Convention

National environmental strategies: Environmental policy framework (Reference: Pelembe and Cooper 2011)

- Turks and Caicos Islands Government (TCIG) signed its Environment Charter with the UK (2001).
- Strategy for Action to Implement the Environment Charter (approved by TCIG in 2003).
- Protection of natural areas: National Parks Ordinance (1998), National Trust Ordinance (1992)
- Species: Endangered Species Act (pending), Plant Protection Ordinance (1998), Wild Birds Protection Ordinance (1998)
- Coast Protection Ordinance (1998), Minerals (Exploration and Exploitation) Ordinance (1998)
- Encouragement of Development Ordinance (1998)
- Marine Pollution Ordinance (2010), Petroleum Ordinance (1998)
- Fisheries: Fisheries Limits Ordinance (1998), Fisheries Protection Ordinance (1998)
- Physical Planning Ordinance (1998)
- Salvage and Wreck Ordinance (1998)
- Environmental charters were signed in 2001 between UK and UK OTs, including all the OTs in the Caribbean region: Cayman islands, Montserrat, Anguilla, Virgin Islands, Turks and Caicos Islands.



Maps of KBAs in the TCI



Maps of KBAs in the TCI

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Socio-economic context , government and civil society with a role in biodiversity

➤ **Table 4 - Government, local institutions and organizations, private sector**

TURKS AND CAICOS ISLANDS	
Turks and Caicos Islands Government	
Ministry of Environment and Home Affairs (MEHA)	Departments, Institutions and Organisations related to environmental and biodiversity conservation.
Department of Environment and Maritime Affairs (DEMA)	DEMA is mandated to ensure sustainable utilization of the natural resources of the TCI, through biodiversity conservation, managing protected areas and maintaining economic prosperity through sustainable development approaches. DEMA is divided in three divisions: Protected Areas Division oversees the management of national parks, nature reserves, sanctuaries and historic areas; the Fisheries Division responsible for the management and conservation of fish populations and habitats; the Maritime Affairs Division mandated to protect and improve the fisheries
Planning Department	The role of the Turks and Caicos Islands Planning Department is to facilitate sustainable development of TCI through effective land use planning and regulation to ensure optimizing utilization of the countries limited land resources. It is also the Planning Departments roll to collaborate with other government agencies, private sector agencies and residents in respect of <u>environmental stewardship, economic development and social progress.</u>
Department of Agriculture (DOA)	The DOA is responsible for agricultural oversight and regulation, aquaculture, animal welfare, animal and plant health (APHIS), biosecurity.
Ministry of Health	
Department of Environmental Health	Is responsible for monitoring water supplies and solid waste collection and disposal. The Public Environmental Laboratory, the main laboratory within the National Public Health Laboratory System, monitors environmental quality.
Local NGOs and organisations	
Turks and Caicos National Trust (TCNT)	TCNT is a non-profit, non-governmental organization created by ordinance in 1992 and is governed by a Council which includes representatives from all the inhabited islands in the TCI. Its mandate is to safeguard the cultural, historical and natural heritage of TCI. The Trust is supported by membership fees, private sponsorship and project grants and fulfils its mission by implementing a range of sustainable projects and initiatives, some of which are revenue generating and used to finance new programs.
Turks and Caicos Reef Fund (TCRF)	The TCRF has been established to preserve and protect the marine and terrestrial environment of the TCI. Funds are generated by selling diving tags, wristbands.
Turks and Caicos National Museum	The National Museum focuses on the islands culture and history. It also manages a Botanical Garden with endemic and endangered plant species.
School of Field Studies	A study abroad organisation committed to study and preserve the ecological health and sustainability of terrestrial and marine ecosystems. The SFS is involved in field-based learning and research through educational programs adressed to students.

- The UK Joint Nature Conservation Committee (JNCC) is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. JNCC is led by the Joint Committee, which brings together members from the nature conservation bodies for England, Scotland, Wales and Northern Ireland and independent members appointed by the Secretary of State for the Environment, Food and Rural Affairs under an independent Chair.
- UK Overseas Territories Conservation Forum (UKOTCF) aims to promote the coordinated conservation of the diverse and threatened plant and animal species and natural habitats of the UK Territories Overseas. It provides assistance in the form of expertise, information and liaison between non-governmental organisations and governments, both in the UK and in the Overseas Territories.
- Several UK-based institutions, NGOs, organisations and researchers have been involved in biodiversity conservation in the TCI: e.g. Royal Society for the Protection of Birds (RSPB), Durrell Wildlife Conservation Trust (DWCT), Royal Botanic Gardens Kew, Marine Conservation Society (MCS), San Diego Zoo Conservation and Research of Endangered Species; Society for the Conservation and Study of Caribbean Birds (SCSCB), University of Greenwich (UK), University of Exeter (Biological aspects of the TCI Turtle Project).
- TCI Environmental Club aims to conduct environmental programs and public outreach events in order to raise awarness on environmental and local biodiversity outcomes. This programme is not officially registered as a NGO.

- **Funding resources dedicated to biodiversity and conservation** (European OCTs Environmental profile 2015)

The Department of Environment and Maritime Affairs (DEMA) has an annual budget of \$1,213,055 (2015).

Most funding for conservation work is received from European funding, international donor agencies, foundations, local government and UK government funds.

UK government and TCI government

- UK Dep. For Environment, Food and Rural Affairs (DEFRA)
- UK Foreign and Commonwealth Office for the Spiny Lobster Artificial Habitat - DEMA project
- The Darwin Initiative and Darwin Plus including the Caicos Pine Recovery project, Wetlands project and Millenium Seed Collection
- The Turks and Caicos Reef Fund (TCRF) aims to dedicate more than 85% of all funds raised to marine conservation projects in TCI.
- The Conservation Fund established by the TCI Government to provide funding to the operations of the Protected Areas Division of the Department, the operation of the National Environment Centre and the Community Conservation Projects (1% tax of hotels and restaurants) has been dissolved in 2012.

UK institutions and organisations

- Overseas Territories Environment Project (OTEP) - this fund is no longer available
- Royal Society for the Protection of Birds (RSPB)
- UK Joint Nature Conservation Committee (JNCC) (Nassau Grouper Project, Endemic plants project, Acropora Nursery project, Habitat mapping project)
- Royal Botanic Gardens Kew: projects on threatened and endemic plant species, conservation and restoration of the Caicos Pine (John Ellerman Foundation), Seed Bank Partnership
- UK Overseas Territories Conservation Forum (UKOTCF)

European funds

- European Development Fund (EDF)
- BEST initiative (open calls 2011-2012): project directed by RSPB in partnership with Turks and Caicos National Trust on the control and eradication of alien invasive species.
- The National Parks Trust of the Virgin Islands (NPTVI) partnered with the Turks & Caicos Islands National Trust, the National Trust for the Cayman Islands and the UK Overseas Territories Conservation Forum (UKOTCF) on an EU funded project entitled 'Management of Protected Areas to Support Sustainable Economies' (MPASSE). This project aims to provide consultancy services, capital infrastructure and purchase of equipment to the Trusts.

Other foundations and funding resources

- Mohamed bin Zayed Species projects on: the TCI Iguana (awarded in 2012 \$5,000 and in 2010 \$4,900); the Turks Island Boa (awarded in 2010, \$5,000).
- Fauna and Flora International - Flagship Species Fund project on spawning aggregations of Nassau Grouper (REEF project, awarded in 2014, £14,760).
- GCFI - NOAA fund.

➤ **Threat assessment for the Turks and Caicos**

Major threats affecting biodiversity (DEMA pers. com. 2015):

- Alien invasive species: such as scale insects attack on the native pine species, lionfish, rodents, feral cats etc... Dawson et al. () assessed and ranked the list of UK overseas islands regarding potential conservation value assuming AIS eradication. In the TCI these 5 islands concern: Cotton Cay, Gibb's Cay, Grand Turk, East Caicos, Big Ambergris.

- Threats from development planning/illegal developments/inappropriate developments
- Sand mining (legal and illegal sand mining)
- Terrestrial habitats fragmentation and destruction
- Pollution from domestic and industrial effluents, wastes.
- Biological resources exploitation (hunting, species collection)

- Threats from development planning: East Caicos is viewed as the final reservoir for Crown Land that can be used for major development. In its current natural state, it is viewed as economically not viable. Alternatives to conventional development are critical if the significant biodiversity and ecosystem service values associated with this KBA are to be maintained (Kathleen Wood pers. com. 2016).

- A link road is being proposed that will connect all the islands on the Caicos Bank. Such a development will open currently remote areas to legal and illegal development pressure, squatting, illegal charcoal manufacturing and other threats (Kathleen Wood pers. com. 2016).

➤ **Priorities of actions** in terms of conservation and biodiversity (Reference: European OCTs Environmental profiles for the Caribbean region 2015, UKOCTF, DEMA pers. com. 2015)

- preparation of National IAS Strategy - a legal instrument should be enacted into law (The (1) Endangered Specie Bill and (2) Wildlife and Biodiversity Protection Bill are ready for submission to the House of Assembly)

- prepare a Bio-security Plan for all KBAs and port of entries (airports and seaports)

- improve physical and natural resources planning: Develop and implement National Physical Development Plan, watershed plans and forest plans.

- mitigating negative impacts on biodiversity: climate change, habitat loss/fragmentation, alien invasive species...

- Strengthen or build local capacities in terms of biodiversity conservation

- Insufficient human and financial resources constitute significant hindrances for environmental management and by extension sustainable development.

- Promote Green and Blue growth in order to set sustainable tourism and fisheries.

- Capacity increase for NGOs

- Middle, North & East Caicos: conservation & education infrastructure repair, completion, implementation & management

- Planning and conservation for East Caicos, an important area for endemic and other species. This island is presently uninhabited (probably one of the largest uninhabited island in the Caribbean region).

- Empowering local persons and businesses dependent on the natural environment to become champions and stewards of the environment

- Management planning and implementation of salinas (i.e. Grand Turk, Salt Cay, South Caicos). These salinas constitute important bird habitats and play essential ecosystem services by mitigating flooding events during tropical storms.

- Promote effective enforcement, Environmental Impact Assessment (EIA) and planning system

- Sustainable development plan for each of the islands in the TCI.

- Promote and facilitate environmentally sustainable and culturally appropriate alternative livelihoods for socially and economically marginalized persons, such as fisherfolk and agriculturists on North, Middle and South Caicos.

BEST III - Working document - TCI

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Ce rapport est un **document de travail** dont les objectifs sont d'identifier et cartographier les **Zones Clés pour la Biodiversité (ZCB)** pour le territoire selon 3 critères: **(1) les espèces**, comprenant: les espèces menacées à l'échelle globale, les espèces endémiques et les espèces se regroupant en grand nombre pendant leur cycle biologique; **(2) les sites** hébergeant les espèces précédemment identifiées; **(3) les corridors écologiques** reliant les ZCB.

Ce document a été utilisé comme guide lors des consultations avec les acteurs locaux et a été modifié selon les retours et informations des acteurs.

PROFIL ECOSYSTEMIQUE - SYNTHÈSE - SAINT-MARTIN



Localisation

L'île de Saint-Martin (18°5'N, 63°5'O) est située au nord de l'arc des Petites-Antilles, entre Anguilla au nord, Saint-Barthélemy au sud-est. Ces 3 îles forment le Banc d'Anguilla, une plate-forme insulaire peu profonde (max. 30 m).

Carte des espaces naturels de Saint-Martin (Diaz et Cuzange 2009).

L'île de 93 km² (15 km de long, 13 km de large) se singularise par sa division administrative entre la partie française Saint-Martin au nord et la partie néerlandaise Sint-Maarten au sud.

Contextes politique et démographique

➤ **Statut politique**

Depuis la Loi Organique du 22 février 2007, Saint-Martin est une collectivité d'outre-mer (COM) régie par l'article 74 de la Constitution. La collectivité de St-Martin fait partie intégrante de l'Union Européenne dont elle est une région ultra-périphérique (RUP).

➤ **Contexte démographique et socio-économique**

Surface: 54 km² (partie Française), 93 km² (St-Martin et Sint-Maarten)

ZEE Antilles françaises: 143 000 km² - ZEE de St-Martin et St-Barthélemy: 5662 km²

Population: 36 992 hab., densité de 698 hab./km² (IEDOM 2014)

PIB par hab.: 14700 € (IEDOM 2014)

Principaux secteurs d'activité (IEDOM, INSEE): le secteur du tourisme (regroupant les activités touristiques, l'hôtellerie et la restauration) constitue l'un des principaux secteurs économiques de l'île. En 2013, la fréquentation touristique sur l'île a atteint le pic historique de 2,5 millions de visiteurs.

➤ **Espaces faisant l'objet d'une protection réglementaire**

- **Réserve Naturelle Nationale de St-Martin (RNSM)** créée en 1998 (Décret ministériel n°98-802 du 3 septembre 1998) sur une surface de 3054 ha, dont 2796 ha de partie marine, 154 ha terrestre et 104 ha d'étangs (Etang aux Poissons, Salines d'Orient).

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- **Arrêté de Protection du Biotope** (APPB n°2006-1294) sur les 16 étangs et mares de St-Martin (198 ha) destinés à assurer la conservation des biotopes nécessaires et indispensables au repos, à l'alimentation et à la reproduction des oiseaux protégés, migrateurs ou non". 14 étangs sont inscrits à la **Convention RAMSAR**.

- 360 ha sont protégés suite à l'acquisition foncière du **Conservatoire du Littoral et des Rivages Lacustres (CELRL)**, dont les étangs également protégés par APB. Le CELRL a confié la gestion de l'ensemble de ces sites à l'association de gestion de la RNSM (convention de gestion du 6 décembre 2006).

- Les étangs de St-Martin sont également protégés par la police de l'eau et de l'environnement dans le cadre des lois suivantes:

- Loi sur l'eau (n°92-3 du 3 janvier 1992),
- Loi sur l'eau et les milieux aquatiques (n°2006-1772 du 30 décembre 2006)
- Loi relative à la protection de la nature (n°76-629 du 10 juillet 1976)

- **Sanctuaire AGOA** établi sur l'ensemble de la ZEE des Antilles françaises (143 256 km²).

➤ **Reconnaissance nationale et internationale des habitats naturels et de la faune sauvage**

- 5 ZNIEFF:

- 4 ZNIEFF de Type 1: Ilet Tintamarre (119.7 ha), Pic Paradis (235.4 ha), Babit Point (5.7 ha), Red Rock (241.6 ha)

- 1 ZNIEFF-Mer de Type 1: Ilet Tintamarre (10 ha)

- 14 étangs et la partie marine de la RNSM sont inscrits à la **Convention RAMSAR** (2997 ha) qui vise à enrayer la dégradation et la perte des zones humides dont l'importance écologique est majeure.

- 3 aires protégées labellisées **SPAW**: RNSM (3054 ha), 14 étangs gérés par la RNSM, le Sanctuaire AGOA établi sur la ZEE des Antilles françaises (incluant la ZEE de St-Martin)

➤ **Liste des espaces sous protection réglementaire bénéficiant d'une équipe de gestion** (Références: Diaz et Cuzange 2009).

- L'Association de Gestion de la Réserve Naturelle Nationale de St-Martin (AGRNSM), régie par la loi du 1er juillet 2001, est gestionnaire de la RNSM.

- sites du Conservatoire du Littoral gérés par l'association de gestion de la RNSM

- 14 étangs (APB), 3 ZNIEFF (Ilet Tintamarre, Red Rock, Babit Point), sites RAMSAR (14 étangs et partie marine de la RNSM) et sites labellisés SPAW (RNSM, 14 étangs) gérés par l'AGRNSM.

- L'AGRNSM est pour l'instant le seul organisme compétent en matière de conservation de la biodiversité sur l'île. La compétence de l'environnement demeure du domaine de l'Etat (Loi Organique de 2007).

➤ **Plan de Gestion des aires protégées**

- L'AGRNSM met en œuvre depuis 2009 un Plan de gestion quinquennal (conformément au décret n°2005-491 du 18 mai 2005) définit en plusieurs objectifs qui permettent d'optimiser la protection et gestion des écosystèmes marins et terrestres (Diaz et Cuzange 2009). Le Plan de gestion a été approuvé en 2008 par le comité consultatif, par le Conseil Scientifique Régional du Patrimoine Naturel (CSRPN) et le Conseil National de Protection de la Nature (CNP).

- Le plan de gestion du Sanctuaire AGOA s'applique à l'ensemble du Sanctuaire dont la ZEE de Saint-Martin (AAMP 2012).

➤ **Plan de Restauration National des tortues marines**

- L'AGRNSM est le référent local du Plan de Restauration des tortues marines et coordonne le suivi des sites de ponte à Saint-Martin. Ce Plan de Restauration a été validé en 2006 par le Conseil National de Protection de la Nature et est coordonné dans les Antilles françaises par l'ONCFS.

- Depuis 2015, l'AGRNSM est identifiée comme point focal du Réseau National Echouages des mammifères marins à Saint-Martin.

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1 - Initiative BEST III - Identification des Zones Clés pour la Biodiversité (ZCB)

1.1 - Listes d'espèces retenues dans le cadre de la méthodologie BEST

Tableau 1 - Liste des espèces menacées à l'échelle mondiale (liste rouge UICN Globale, données de Juillet 2015), les statuts des espèces évaluées pour la liste IUCN régionale pour la Caraïbe sont indiqués entre parenthèses si ces statuts diffèrent de la liste rouge globale.

Taxon	Espèces menacées
Végétaux	
EN	Gaïac (<i>Guaiacum officinale</i>) Mahogani petites feuilles (<i>Swietenia mahagoni</i>)
VU	Bois noyer (<i>Picrasma excelsa</i>)
Coraux	
CR	Acropora cornes de cerf (<i>Acropora cervicornis</i>), Acropora cornes d'élan (<i>Acropora palmata</i>) (hybride <i>A. prolifera</i>)
EN	Coraux étoilés (<i>Orbicella annularis</i> , <i>Orbicella faveolata</i>)
VU	Corail cierge (<i>Dendrogyra cylindrus</i>), Corail étoilé elliptique (<i>Dichocoenia stokesii</i>), Agarice de Lamarck (<i>Agaricia lamarcki</i>), Corail étoilé (<i>Orbicella franksi</i>), Corail rugueux (<i>Mycetophyllia ferrox</i>)
Requins et raies	
EN	Requin marteau (<i>Sphyrna sp.</i> , espèce à confirmer)
VU	Requin baleine (<i>Rhincodon typus</i>)*, Raie Manta (<i>Manta birostris</i>)*
Poissons	
CR	Mérou géant (<i>Epinephelus itajara</i>)*
EN	Mérou de Nassau (<i>Epinephelus striatus</i>)
VU	Baliste royale (<i>Balistes vetula</i>), Capitaine (<i>Lachnolaimus maximus</i>), Pagre vivaneau (<i>Lutjanus analis</i>), Vivaneau Cubéra (<i>Lutjanus cyanopterus</i>), Tarpon (<i>Megalops atlanticus</i>), Mérou gueule jaune (<i>Mycteroperca interstitialis</i>)*, Thon obèse (<i>Thunnus obesus</i>)*, Marlin blanc de l'Atlantique (<i>Kajikia albida</i>), Makaïre bleu (<i>Makaira nigricans</i> , EN sur la liste rouge Caraïbe)
Reptiles	
CR	Tortue imbriquée (<i>Eretmochelys imbricata</i>)
EN	Tortue verte (<i>Chelonia mydas</i>), Tortue Caouanne (<i>Caretta caretta</i>) 2 esp. potentiellement disparues St-Martin/St-Maarten (statut RE): Iguane des Petites-Antilles (<i>Iguana delicatissima</i>) et la Couresse du Banc d'Anguilla (<i>Alsophis rijgersmaei</i>)
VU	Tortue luth (<i>Dermochelys coriacea</i>), Anolis de St-Martin (<i>Anolis pogus</i>), Tortue olivâtre (<i>Lepidochelys olivacea</i>)*
Mammifères	
VU	Cachalot (<i>Physeter macrocephalus</i>)* (esp. occasionnelle en raison de la faible profondeur du Banc d'Anguilla. Les cachalots sont néanmoins fréquemment observés autour de St-Martin/St-Maarten).

* Espèces occasionnellement présentes. Ces espèces ne qualifient pas, à elles seules, pour une ZCB.

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Tableau 2 - Liste des espèces endémiques* (Références: AEVA 2014, Breuil 2009, Collier et Brown 2008, Diaz et Cuzange 2009, Peck 2011, Sastre et Breuil 2007, UICN 2013, Fiches ZNIEFF-DEAL-INPN).

Groupes taxonomiques	Nombre d'espèces endémiques
Plantes	<ul style="list-style-type: none"> - 2 esp. endémiques de St-Martin (<i>Galactia nummularia</i>, <i>Calyptanthus boldingii</i>, ces espèces n'ont pas été observées depuis les années 1980) - au moins 10 esp. végétales endémiques des Petites-Antilles, dont les orchidées <i>Psychilis correllii</i> et <i>Tetramicra elegans</i> qui sont endémiques de quelques îles des PA. - 2 esp. de Cactacées endémique de la région des PA, des îles Vierge et de Puerto Rico: Cactus Tête à l'anglais (<i>Melocactus intortus</i>), Cactus raquette (<i>Consolea rubescens</i>), Cactus cierge (<i>Pilosocereus royerii</i>)
Invertébrés - Arthropodes (Insectes)	<ul style="list-style-type: none"> - 2 esp. de Coléoptères endémiques de St-Martin: <i>Solenoptera chalumeaui</i>, <i>Phyllophaga stehlei</i>. - 6 esp. d'insectes endémiques des Petites-Antilles: <i>Phyllophaga sanbarthensis</i>, <i>Blapstinus opacus</i>, <i>Diastolinus perforatus</i>, <i>Amniscus praemorsus</i>, <i>Urgleptes cobbeni</i>, <i>Electrostrymon angerona</i>
Amphibiens	<ul style="list-style-type: none"> - 2 esp. endémiques du sud des Petites Antilles sont considérées comme exotiques sur St-Martin: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>), Hylode de Johnstone (<i>E. johnstonei</i>)
Reptiles	<ul style="list-style-type: none"> - 3 esp. endémiques de St-Martin: Anolis de St-Martin (<i>Anolis pogus</i>), Scinque de Tintamarre (<i>Spondylurus cf. martiniae</i> - analyses génétiques en cours pour confirmer l'espèce), Técadactyle (<i>Thecadactylus oskrobapreinatorum</i>) - 3 esp. endémiques des îles du Banc d'Anguilla: Anolis d'Anguilla (<i>Anolis gingivinus</i>), Petit sphérodactyle à grosses écailles (<i>Sphaerodactylus parvus</i>), Ameive de Plée (<i>Ameiva plei</i>), dont 1 sous-esp. endémique de St Martin (<i>Ameiva plei analifera</i>). - 1 esp. endémiques des Petites Antilles: Sphérodactyle d'Anguilla (<i>Sphaerodactylus sputator</i>) - 3 esp. endémiques ont probablement disparu de St-Martin: Scinque du Banc d'Anguilla (<i>Spondylurus powelli</i>), Iguane des Petites-Antilles (<i>Iguana delicatissima</i>), Couresse du Banc d'Anguilla (<i>Alsophis rijgersmaei</i>)
Oiseaux	<ul style="list-style-type: none"> - 6 esp. endémiques de la région des Petites-Antilles et de Puerto-Rico: Colombe à croissant (<i>Geotrygon mystacea</i>), Moqueur grivotte (<i>Allenia fusca</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>).
Mammifères terrestres	<ul style="list-style-type: none"> - 1 esp. endémique des Petites-Antilles et de Puerto Rico (<i>Brachyphylla cavernarum</i>)
Total	<ul style="list-style-type: none"> - au moins 14 esp. de plantes à distribution restreinte - 7 esp. d'invertébrés et 15 esp. de vertébrés à distribution restreinte

* Critère d'endémicité déterminé dans l'état actuel des connaissances.

1.2 - Enjeux en termes d'habitats et d'écosystèmes

- **Habitats à fort intérêt écologique et patrimonial** (Références: Diaz et Cuzange 2009, Fiches ZNIEFF)
- **ZNIEFF** terrestres (602.4 ha) et marines de type I (10 ha)

- **Végétation forestière semi-décidue** : Ce type de végétation est particulièrement présent sur la ZNIEFF de Pic Paradis le point culminant de St-Martin (424 m). Cet habitat est caractérisé par une végétation semi-décidue pouvant atteindre 12 m de haut, des fourrés de 3 m de haut, et des prairies arbustives. Pic Paradis comprend une des unités sylvatiques de forêt sèche semi-décidue les mieux préservées de l'île avec une biodiversité floristique relativement importante (Fiches ZNIEFF).

- En 2008, la collectivité de St Martin a sollicité l'Office National des Forêts de Guadeloupe pour un appui technique concernant la conception d'un projet de création d'un Espace classé boisé sur les montagnes autour de Pic Paradis (ONF 2010).

- **Végétation arbustive à boisée à tendance xéromorphe** :

- ZNIEFF de Babit Point (acquisition foncière du CELRL) qui comprend l'espèce menacée *Guaicum officinale* (EN) ainsi que des populations importantes de xérophytes telles que des Cactacées à distribution restreinte: *Melocactus intortus*, *Consolea rubescens*, *Pilosocereus royenii*.

- ZNIEFF de Red Rock (incluant une bande littorale du CELRL gérée par la RNSM), un des derniers massifs boisés encore préservé de l'île. Une entité remarquable du point de vue du paysage (roches dioritiques et andésitiques, falaises, zone humide, massif boisé...). La flore est très diversifiée avec environ 180 espèces végétales xérophiles, comprenant des espèces à distribution restreinte (*Melocactus intortus*, l'orchidée *Psychilis correllii*). Plus de 25 espèces animales ont été recensées sur ce site qui constitue un habitat favorable pour des reptiles endémiques de l'île, du Banc d'Anguilla ou des PA (au moins 5 esp. observées, Fiche ZNIEFF).

- **Ilets** (Diaz et Cuzange 2009, Fiches ZNIEFF):

- Tintamarre (fait partie du périmètre de la RNSM, ZNIEFF terrestre et marine): plateau calcaire de 3 km² de superficie, présence de plages dunaires, côtes rocheuses, végétation sèche semi-décidue secondaire, végétation xéromorphe. Présence d'espèces à distribution restreinte et/ou menacées: *Guaicum officinale* (EN). L'ilet Tintamarre constitue une aire d'alimentation et un site importante de pontes de tortues marines, ainsi qu'une aire de nurserie pour les populations de requins, un reposoir et aire de nidification pour les populations d'oiseaux marins.

- Rocher Créole (partie terrestre et 250 m autour du rocher classés en Réserve Naturelle): reposoir et zone de nidification pour les oiseaux marins. Diversité marine relativement élevée sur les récifs coralliens et herbiers autour de l'ilet.

- Ilet Pinel - Petite Clé - Ilet Petit Pélican - Caye verte et ilets de l'Embouchure (RNSM et CELRL): récifs coralliens et herbiers développés autour de ces ilets.

- **Etangs et avifaune:**

Au total, **16 étangs** sont présents à Saint-Martin et sont constitués de 3 types d'écosystèmes: la végétation de mangrove, les vasières et le milieu aquatique. L'écosystème des étangs abrite une biodiversité particulière (oiseaux, crabes, insectes, poissons, larves...) et forme un abris, une aire d'alimentation et une nurserie pour de nombreuses espèces aquatiques et terrestres (Impact-Mer 2011, suivis RNSM de l'avifaune des étangs depuis 2012).

- L'avifaune des étangs est diversifiée avec près de 60 espèces d'oiseaux recensées autour et sur les étangs lors des suivis réalisés entre 2013 et 2015, dont 24 espèces nicheuses (Caroline Fleury, Julien Chalifour comm. pers. 2015, suivis RNSM).

- Ces zones humides ont des rôles écologiques importants: aires d'alimentation et habitats (reposoirs, nichoirs) pour de nombreuses espèces d'oiseaux qui sont résidentes ou migratrices (suivis RNSM). Les étangs agissent comme des zones tampon entre le milieu terrestre et marin: captage et épuration des eaux de ruissellement, sédimentation des apports alluvionnaires.

- Concernant la diversité spécifique, trois groupes d'étangs ont pu être mis en évidence suite aux suivis réalisés mensuellement par la RNSM (Caroline Fleury comm. pers. 2015, suivis RNSM):

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- des étangs avec une diversité spécifique de l'avifaune relativement faible (moins de 5 espèces en moyenne), qui serait potentiellement à relier avec la faible surface du plan d'eau: Pointe du Bluff, Etang du Cimetière, Etang Rouge.
 - des étangs présentant de fortes fluctuations de la diversité spécifique (entre 6 et 13 espèce en moyenne) liées probablement aux variations saisonnières de la hauteur d'eau: Etang Guichard, Grand Etang, Etang Barrière, Etang de la Savane.
 - des étangs caractérisés par une forte diversité spécifique (entre 14 et 19 espèces en moyenne), qui sont également les étangs présentant les plus grandes surfaces: Saline d'Orient, Etang de l'aéroport, Etang de Chevrise, Etang aux Poissons (à noter que cet étang n'est pas suivi mensuellement par la RNSM mais a fait l'objet d'une étude sur les étangs, Impact-Mer 2011).
- 6 étangs sont caractérisés par des populations d'oiseaux importantes en termes d'abondance et de diversité (Caroline Fleury, Julien Chalifour comm. pers. 2015, suivis RNSM 2014): Etang de Chevrise (32 esp. recensées sur l'année de suivi, 460 oiseaux en moyenne sur l'année), Etang de l'aéroport (34 esp., 410 oiseaux en moyenne), Etang Guichard (34 esp., 170 oiseaux en moy.), Salines d'Orient (38 esp., 138 oiseaux en moy.), Grand Etang (23 esp., 70 oiseaux en moy.) et Savane (26 esp., 53 oiseaux en moy.).
- Les fluctuations de la structure des populations d'oiseaux et de la fréquentation des étangs sont à relier avec les saisons de migration des espèces et l'influence saisonnière des conditions climatiques (variation de la hauteur d'eau).
- Présence d'importantes populations d'oiseaux nicheurs sur plusieurs étangs: Grand Etang héberge une population nicheuse de Petites Sternes et d'Echasses d'Amérique; les Etangs de Saline d'Orient (Petite Sterne), Chevrise (Petite Sterne, Canards des Bahamas), Etang de la Barrière (Echasse d'Amérique), Guichard et Aéroport (Echasse d'Amérique).
 - A noter que 3 espèces d'oiseaux sont présentes en abondance autour des étangs et que ces espèces sont relativement rares dans les autres îles des Petites-Antilles: l'Echasse d'Amérique est présente toute l'année (*Himantopus mexicanus*), le Pluvier Kildir (*Charadrius vociferus*), l'Erismature rousse (*Oxyura jamaicensis*).
- Les étangs sont fortement impactés par le défrichement des berges, le remblaiement, les pollutions. Les mangroves bordant ces étangs ont régressé de façon alarmante (de 17 à 87% des surfaces de mangroves) (Diaz et Cuzange 2009).
- En 2015, les étangs ont subi de grandes variations de hauteur d'eau en raison d'une période de sécheresse particulièrement marquée, plusieurs étangs sont asséchés (Etangs de Chevrise, Savane et Cimetière) et certains ne présentent qu'une très faible hauteur d'eau (Etangs de l'aéroport, Guichard, Grand Etang). Seuls les étangs de Saline d'Orient et de Baie Lucas restent en eau (Caroline Fleury comm. pers. 2015, suivis RNSM).
- **Zones d'Importance pour la Conservation des Oiseaux (ZICO / IBA Important Bird Areas)** (Références: Collier et Brown 2008)
- **3 ZICO** identifiées à St-Martin (888 ha, incluant les zones marines): Ilet Tintamarre, Grand Etang et forêts sèche de Pic Paradis.
- Une ZICO (Ilet Tintamarre) fait partie intégrante de la RNSM et la ZICO de Grand Etang (Terres-Basses) est une acquisition du CELRL gérée par la RNSM.
- Saint-Martin fait partie de la zone d'endémisme pour les oiseaux des Petites-Antilles (Lesser Antilles Endemic Bird Area EBA) et compte 7 espèces d'oiseaux à distribution restreinte (PA-Iles Vierges-Puerto Rico).
- 3 esp. d'oiseaux marins se réunissent en grand nombre (critère IBA: "Congregatory birds") et nichent autour de Grand Etang (*Sternula antillarum*) et de l'Ilet Tintamarre (*Phaeton aetherus*, *Anous stolidus*).
 - Les 16 étangs présents à St-Martin constituent une aire de repos, d'alimentation et de nidification pour de nombreuses espèces d'oiseaux, principalement des limicoles (cf paragraphe sur les Etangs).
- 6 espèces d'oiseaux marins nidifient sur les falaises et les zones littorales de St-Martin, dont 2 espèces nichant régulièrement sur les falaises nord de l'îlet Tintamarre (Grand Paille-en-queue

Phaethon aethereus, Noddi brun *Anous stolidus*). Les suivis des oiseaux marins réalisés par l'AGRNSM depuis 2009 recense d'autres oiseaux marins autour de Tintamarre et de Rocher Créole, tels que: la Sterne Royale (*Sterna maxima*), Sterne Caugek (*Sterna sandvicensis*), Pélican brun (*Pelecanus occidentalis*), Fous bruns (*Sula leucogaster*), Mouettes atricilles (*Larus atricilla*), plus occasionnellement l'Huitrier d'Amérique (*Haematopus palliatus*) (suivis RNSM).

- La situation géographique de Saint-Martin au nord des Petites-Antilles, le nombre et la superficie des étangs et la protection des zones humides (RNSM-CELRL-RAMSAR-SPAW) permettent d'expliquer cette grande biodiversité de l'avifaune (Impact-Mer 2011, suivis RNSM).

➤ Reptiles terrestres

- Le Scinque de Tintamarre, *Spondylurus martiniae*, est une espèce endémique de St-Martin qui était considérée jusqu'à récemment comme potentiellement éteinte (Hedges et Conn 2012). Cette espèce aurait été ré observée en 2013 sur l'îlet Tintamarre. Une mission d'étude des populations de scinques coordonnée par la RNSM en partenariat avec l'association AEVA de Guadeloupe et Blair Hedges de l'Université de Pennsylvanie a permis de collecter des spécimens pour des analyses morphométriques et génétiques permettant de confirmer l'espèce (AEVA 2014).

Ce scinque fréquente les murets de pierre de l'îlet Tintamarre mais n'a pas été observée sur d'autres îlets (Pinel, Caye Verte, Rocher Créole) (AEVA 2014).

➤ Sites de pontes des tortues marines

- Les plages couvrent près de 32% des côtes de la partie française et constituent des habitats importants pour la reproduction des tortues marines (Diaz et Cuzange 2009). Deux espèces viennent pondre régulièrement: la tortue imbriquée (*Eretmochelys imbricata* - CR) et la tortue verte (*Chelonia mydas*- EN). La tortue luth pond de façon occasionnelle. Les tortues olivâtre et caouane sont observées de manière anecdotique.

- Les suivis de la fréquentation des sites de pontes réalisés par l'AGRNSM depuis 2008 ont permis d'identifier l'existence de **28 sites de pontes** à St-Martin, dont **6 sites** présentant au moins 10 traces de ponte par espèce et par saison de ponte* (RNSM 2010, 2011, 2012ab, 2014, 2015): Baie Blanche (*E.imbricata*) et Lagon (*E.imbricata*) à Tintamarre, Baie Longue (*C.mydas* et de manière moins conséquente pour *E.imbricata*), Baie aux prunes (*C.mydas*), Baie Rouge (*C.mydas*), Petites Cayes (*E.imbricata*).

- La saison de ponte de 2014 est marquée par une prédominance de traces de tortues vertes (170 traces) et de tortues imbriquées (66 traces) (RNSM 2015). L'activité de ponte des tortues vertes est particulièrement élevée depuis 2012 alors que des études semblent indiquer des pics d'activités tous les 2 ans. Ces activités de ponte observées annuellement suggèrent une augmentation de la fréquentation des eaux par cette espèce mais pourraient être une conséquence de l'augmentation de l'effort d'échantillonnage (RNSM 2015).

- 4 plages sont identifiées depuis 2008 comme étant des sites de pontes majeurs pour les tortues marines: Baie Longue (107 traces en 2014) et Baie aux Prunes (49 traces en 2014) pour les tortues vertes et Baie Blanche (17 traces en 2014) et le Lagon (10 traces en 2014) à l'îlet Tintamarre pour les tortues imbriquées (RNSM 2014, 2015).

- Les variations spatiales observées dans la localisation des sites de pontes sont liées à l'écologie des espèces de tortues marines et aux profils des plages (larges étendues de sable nu, couvert végétal en haut de plage...) (RNSM 2014). L'atlas des sites de ponte de St-Martin réalisé en 2015 (Nouhaud et Daurès 2015) a mis en évidence une qualité des sites très hétérogène avec 50% des sites estimés en bon ou très bon état. Tous les sites en réserve sont qualifiés de bon ou très bon état (Nouhaud et Daurès 2015).

* méthodologie retenue dans le cadre de BEST pour identifier un site de ponte qualifiant pour une ZCB.

➤ Sites côtiers et marins

- Les **mangroves** sont principalement présentes aux abords de 9 étangs (Impact-Mer 2011): Etang de Chevrise, Etang aux Poissons, Etang de la Barrière, Salines d'Orient, Guichard, Etang du Cimetière, Etang de Grand-Case, Etang de l'Anse Marcel et Mare de l'Anse Heureuse. Ces formations végétales forment des habitats éparés et réduits pour les 6 étangs restants. L'Etang aux Poissons constitue l'une des plus grandes étendues lacustres de l'île (75.5 ha) et est entouré de la plus grande zone de mangrove (15 ha). Sur la berge de l'étang les mangroves s'étendent sur un linéaire d'environ 4500 m (Impact-Mer 2011).

- A St-Martin, les mangroves sont composées de palétuviers de petite taille qui forment des habitats disparates autour des étangs. Deux formations sont observées (Impact-Mer 2011):

- la mangrove arbustive: la plus fréquente, traduit l'impact de déboisements (cyclones, impact anthropique)
- la mangrove arborée, plus rare, qui est observée autour de l'Etang aux Poissons et de l'Etang de la Barrière.

- Les exutoires de l'Etang aux Poissons et de l'Etang de la Barrière et la partie sud-est de l'Etang de l'aéroport présentes des mangroves de plus de 10 m d'épaisseur.

- **Herbiers de Phanérogames marines:** Cet écosystème se développe principalement dans les secteurs relativement protégés de la houle, comme la Baie de Cul-de-Sac, la Baie Orientale, la Baie du Galion et l'ouest de l'île de Tintamarre. Baie Blanche (ouest de Tintamarre) constitue une aire d'alimentation importante pour les tortues vertes.

La cartographie des biocénoses marines réalisée dans le périmètre de la réserve naturelle indique une surface de près de 220 ha d'herbiers (de 80% à 25% de couverture en Phanérogames marines) (Diaz et Cuzange 2009).

- **Récifs coralliens:** les communautés coralliennes sont principalement réparties au nord-est et est de l'île et sont protégées au sein du territoire de la RNSM. La cartographie des biocénoses marines indique une surface d'environ 90 ha comprenant une couverture corallienne assez importante. Ces récifs en relativement bon état de conservation se retrouvent principalement autour de l'îlet Tintamarre, l'îlet Pinel, dans la baie de l'Embouchure dans le secteur de la passe de Grande Caye (Diaz et Cuzange 2009). La couverture corallienne est en moyenne plus élevée dans les sites situés dans le périmètre de la RNSM (Pareto 2013).

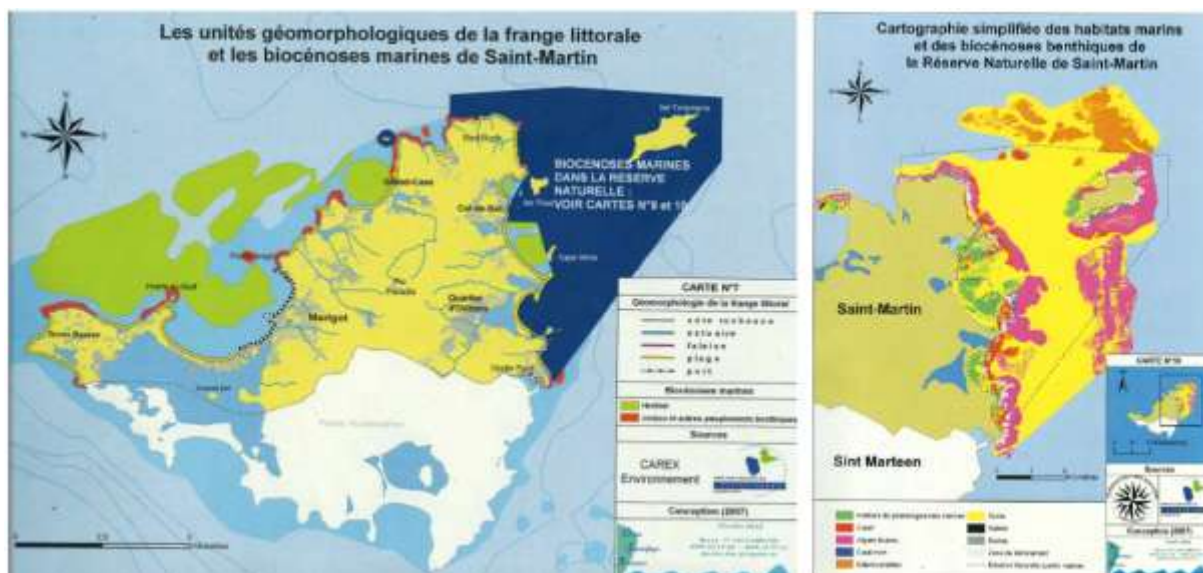


Figure 2 - Carte des biocénoses marines de St-Martin (Diaz et Cuzange 2009).

- Plusieurs sites constituent des aires de nurseries pour les peuplements de requins: Tintamarre, Baie de l'Embouchure, Anse Marcel, Petite-Caye et Grande Caye. Des études complémentaires sont nécessaires pour affiner les connaissances en termes de taille de population, de répartition, de survie et de croissance (RNSM 2015).

- Des juvéniles de raie léopard (*Aetobatus narinari*) ont été observés à la Pointe du Bluff et des juvéniles de requin bordé (*Carcharhinus limbatus*) auraient été observés dans la baie d'Anse Marcel (RNSM 2015).

- Un inventaire des invertébrés marins a été réalisé en 2012 dans le périmètre de la réserve naturelle coordonné par la RNSM en partenariat avec l'OMMM et le Florida Museum of Natural History de l'Université de Floride (Maréchal et Paulay 2013). L'objectif de cette mission était de réaliser un inventaire qualitatif exhaustif de la diversité des invertébrés marins dans des habitats variés (récifs coralliens, herbiers, mangroves, substrats meubles). L'inventaire de près de 118 stations dans le périmètre de la RNSM a permis d'identifier au moins 818 espèces d'invertébrés, dont 440 mollusques, 225 arthropodes et 67 échinodermes (plusieurs espèces sont en cours d'identification) (Maréchal et Paulay 2013).

Les sites des Ilets de l'Embouchure (300 espèces identifiées) et de la Basse Espagnole sont caractérisés par une biodiversité élevée en invertébrés marins (Maréchal et Paulay 2013).

➤ **Corridors écologiques**

- D'après la carte des biocénoses marines, 4 sites présentent une continuité écologique entre les écosystèmes d'herbiers et de récifs coralliens: Tintamarre, Rocher Créole, Secteur de la baie de Cul-de-Sac-Pinel-Baie Orientale-Caye Verte, Galion-Baie de l'Embouchure. La zone du Galion- Baie de l'Embouchure et de Cul-de-Sac est caractérisée par une continuité des écosystèmes de mangroves-herbiers-récifs (Diaz et Cuzange 2009).

- L'île de Saint-Martin est située sur la voie de migration des populations d'oiseaux entre les zones d'hivernage (Amérique du Sud) et les zones de reproduction (Amérique du Nord). Les ZICO de St Martin, associées aux ZICO des îles voisines, assurent une continuité écologique des zones importantes pour la conservation des oiseaux endémiques des Petites Antilles.

- Les baleines à bosse (*Megaptera novaeangliae*) migrent entre les eaux de l'Amérique du nord, de Norvège, d'Islande (aires d'alimentation) et les eaux tropicales des Antilles (aires de reproduction). Cette espèce est régulièrement observée dans les eaux peu profondes entre les îles d'Anguilla, St-Martin et St-Barthélemy. Les îles du Banc d'Anguilla et le canal d'Anguille constituent une probable aire de reproduction pour cette espèce (Fossette et al. 2014). Des populations de Grands Dauphins (*Tursiops truncatus*) sont fréquemment observées au nord-est de Saint-Martin et dans le canal d'Anguille.

- Le cachalot (*Physeter macrocephalus*, VU-RedList) est présent occasionnellement dans les eaux de Saint-Martin en raison de la faible profondeur. Cette espèce est fréquemment observée dans les eaux plus profondes entre St-Maarten et Saba.

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Tableau 3- Zones Clés pour la Biodiversité proposées pour Saint-Martin.

N. ZCB	Intitulé de la ZCB	Taxons présents - Habitats/ Ecosystèmes - Sites à enjeux - Justification de la désignation de ZCB
<p style="text-align: center;">ZCB 1 - Ecosystèmes marins et terrestres- Etangs (périmètre de la RNSM/CELRL)</p>	<p>Biocénoses marines et côtières incluses dans le périmètre de la RNSM/CELRL</p>	<p>Ecosystèmes et biocénoses</p> <ul style="list-style-type: none"> - Herbiers de Phanérogames marins relativement bien développés dans le périmètre de la RNSM (220 ha d'herbiers cartographiés). - Les communautés coralliennes sont principalement situées au nord-est de l'île. Près de 90 ha de cet écosystème ont été cartographié dans le périmètre de la RNSM. La couverture corallienne est en moyenne plus élevée dans les sites situés dans le périmètre de la RNSM. - Inter-connectivité entre les récifs coralliens et les herbiers. - Présence de mangroves autour des étangs et en connectivité avec les Baies du Galion et de Cul-de-Sac. <p>Invertébrés</p> <ul style="list-style-type: none"> - Présence d'esp. de coraux menacées : <i>Acropora cervicornis</i>, <i>Acropora palmata</i>, <i>A. prolifera</i>, <i>Orbicella annularis</i>, <i>Orbicella faveolata</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Agaricia lamarcki</i>, <i>Orbicella franksi</i>, <i>Mycetophyllia ferox</i>. - Diversité relativement importante d'invertébrés marins (au moins 818 esp. identifiées lors d'un inventaire de Mollusques, Crustacés et Echinodermes réalisé dans le périmètre de la RNSM). <p>Requins et poissons</p> <ul style="list-style-type: none"> - Présence de 8 esp. de poissons menacées à l'échelle globale et 5 esp. présentes de façon occasionnelle (*): <i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>, <i>Megalops atlanticus</i>, <i>Kajikia albida</i>, <i>Makaira nigricans</i>, <i>Mycteroperca interstitialis</i>*, <i>Thunnus obesus</i>*, <i>Epinephelus itajara</i>*, <i>Manta birostris</i>* - Présence de nurseries pour les populations de requins. <p>Tortues marines</p> <ul style="list-style-type: none"> - Présence de 2 tortues marines menacées qui s'alimentent et pondent sur les plages de l'île: Tortue verte (<i>Chelonia mydas</i> - EN), Tortue imbriquée (<i>Eretmochelys imbricata</i> - CR). - La tortue luth est observée plus occasionnellement et ses pontes sont plus rares. <p>Mammifères marins</p> <ul style="list-style-type: none"> - Les eaux peu profondes du Banc d'Anguilla et le canal d'Anguille constituent une aire de reproduction et de mise bas importante pour les baleines à bosse (<i>Megaptera novaeangliae</i>). - Populations de Grand Dauphins régulièrement observées dans le périmètre de la RNSM (Ilet Tintamarre, côte nord-est de Red Rock). - Le cachalot (<i>Physeter macrocephalus</i>, VU-RedList) est présent occasionnellement dans les eaux de Saint-Martin en raison de la faible profondeur du Banc d'Anguilla. Néanmoins cette espèce est régulièrement observée entre Sint-Maarten et Saba.
	<p>Ilet de Tintamarre</p>	<p>Milieu marin et côtier</p> <ul style="list-style-type: none"> - ZNIEFF Mer (10 ha) - Diversité récifale importante avec plus de 50 espèces récifales,

ZCB 1 - Ecosystème s marins et terrestres - périmètre de la RNSM/ CELRL		<p>dont des espèces de coraux, de poissons et de requins menacées.</p> <ul style="list-style-type: none"> - Inter-connectivité récifs coralliens - herbiers - Présence de poissons et coraux menacés à l'échelle globale, dont les espèces coralliennes <i>Acropora cervicornis</i>, <i>Acropora palmata</i> (CR). Mise en place de pépinières de coraux à North Cove avec ces 2 espèces (RNSM 2015) <p>Requins et poissons</p> <ul style="list-style-type: none"> - Zones de reproduction et nurseries pour les juvéniles de requins (<i>Negaprion brevirostris</i>, <i>Ginglymostoma cirratum</i>, <i>Carcharhinus acronotus</i>) <p>- Tortues marines</p> <ul style="list-style-type: none"> - Sites de pontes majeurs pour les tortues marines, principalement pour les tortues imbriquées (<i>Eretmochelys imbricata</i> - CR): Baie Blanche et Lagon. - Herbier de Baie Blanche: site d'alimentation des tortues marines (<i>C. mydas</i>) <p>Milieu terrestre</p> <p>Plantes et écosystème terrestre (Fiches ZNIEFF)</p> <ul style="list-style-type: none"> - ZNIEFF (119.7 ha): Diversité d'habitats terrestres - Présence d'une espèce menacée (EN): Gaiac (<i>Guaicum officinale</i>) <p>Reptiles</p> <ul style="list-style-type: none"> - Présence potentielle du Scinque de Tintamarre (<i>Spondylurus cf. martiniae</i>) endémique de St-Martin. Des analyses morphométriques et génétiques sont en cours pour confirmer l'espèce et sa distribution (AEVA 2014). - Espèces endémiques de St-Martin et du Banc d'Anguilla : Anolis de St-Martin (<i>Anolis pogus</i>), Anolis d'Anguilla (<i>Anolis gingivinus</i>), Petit sphérodactyle à grosses écailles (<i>Sphaerodactylus parvus</i>), Ameive de Plée (<i>Ameiva plei</i>). <p>Oiseaux</p> <p>ZICO (Collier et Brown 2008):</p> <ul style="list-style-type: none"> - Présence de 3 esp. à distribution restreinte: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>). - Populations d'oiseaux marins nichant sur l'ilet: <i>Phaeton aetherus</i>, <i>Anous stolidus</i>.
	Caye Verte - Baie du Galion et Ilets de l'Embouchure	<ul style="list-style-type: none"> - Diversité des biocénoses marines - Baie du Galion: inter-connectivité récifs-herbiers-mangroves. La Baie du Galion est en connexion avec l'étang aux Poissons. - Diversité importante d'invertébrés marins (Ilets de l'Embouchure). - Présence de poissons et coraux menacés à l'échelle globale, dont les espèces coralliennes <i>Acropora cervicornis</i>, <i>Acropora palmata</i> (CR). Mise en place de pépinières de coraux à Caye Verte avec ces 2 espèces (RNSM 2015) <p>Requins et poissons</p> <ul style="list-style-type: none"> - Zones de reproduction et nurseries pour les juvéniles de requins (<i>Negaprion brevirostris</i>, <i>Ginglymostoma cirratum</i>, <i>Carcharhinus acronotus</i>)

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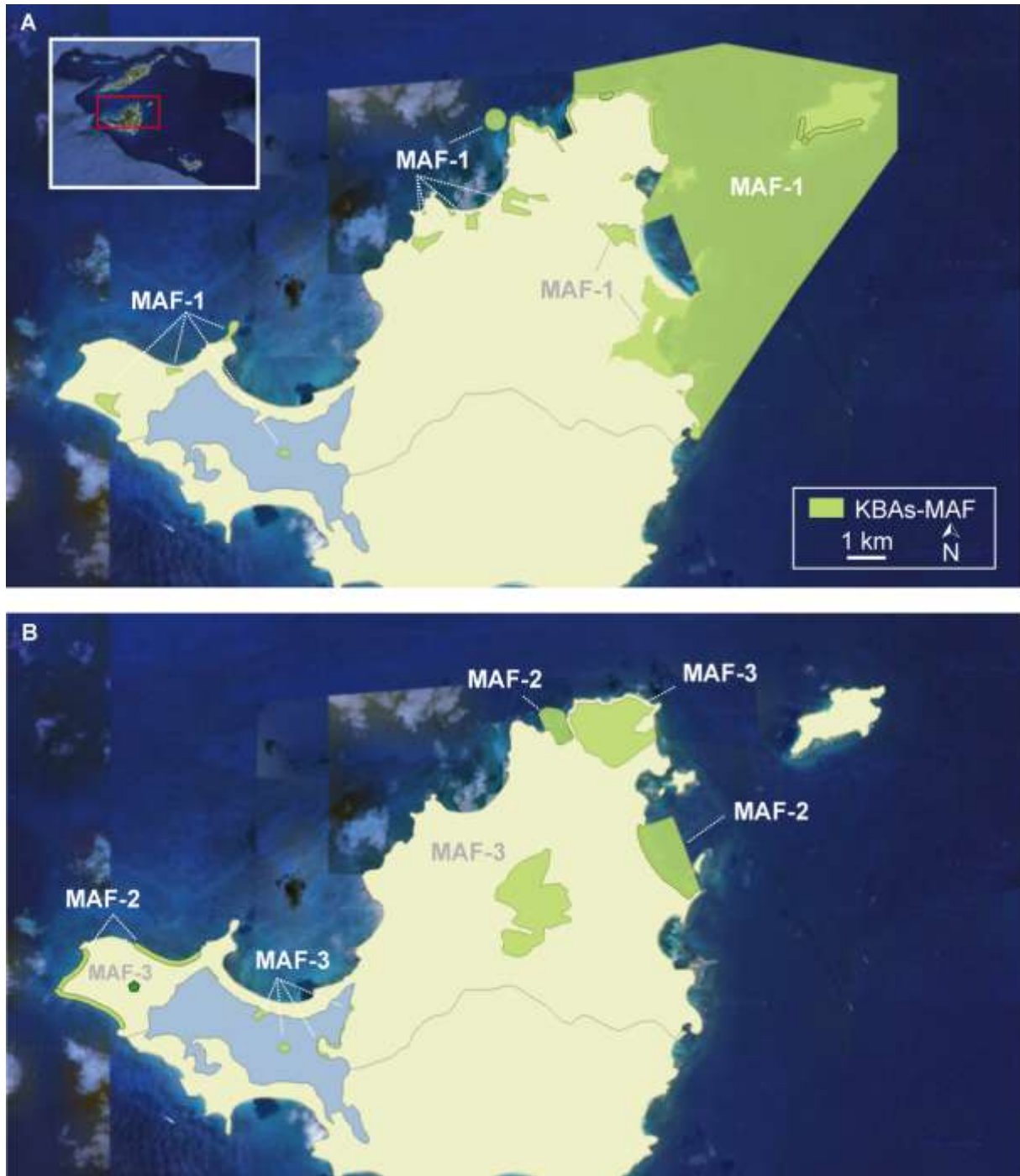
ZCB 1 - Ecosystèmes marins et terrestres - périmètre de la RNSM/ CELRL	Baie de Cul-de-Sac - Ilet de Petite Clé - Ilet Pinel	<ul style="list-style-type: none"> - Diversité des biocénoses marines - Inter-connectivité récifs-herbiers - Présence de mangroves autour de l'Etang de la Barrière relié à la Baie de Cul-de-Sac par un exutoire.
	Rocher Créole	<p>Milieu marin</p> <ul style="list-style-type: none"> - Diversité des biocénoses marines. Présence de coraux et poissons menacés - Inter-connectivité récifs-herbiers <p>Oiseaux</p> <ul style="list-style-type: none"> - Reposoir important pour les oiseaux marins, notamment pour le Grand Paille-en-queue (<i>Phaeton aethurus</i>).
	Baie de Petites et Grandes Cayes	<p>Requins et poissons</p> <ul style="list-style-type: none"> - Nurseries pour les juvéniles de requin citron (<i>Negaprion brevirostris</i>) <p>Tortues marines</p> <ul style="list-style-type: none"> - Baie de Petites Cayes: Sites de pontes de tortues marines principalement pour les tortues imbriquées (<i>Eretmochelys imbricata</i> - CR)
	14 étangs (CELRL/RNSM/ RAMSAR/SPAW)	<p>Ecosystème des étangs</p> <ul style="list-style-type: none"> - 14 étangs d'importance internationale (RAMSAR, labellisés sous SPAW) - Importance écologique de ces habitats: abris, nurserie, aire d'alimentation pour de nombreuses espèces (oiseaux, poissons, invertébrés). - Des mangroves sont présentes aux abords de 9 étangs: Etang de Chevrise, Etang aux Poissons, Etang de la Barrière, Salines d'Orient, Guichard, Etang du Cimetière, Etang de Grand-Case, Etang de l'Anse Marcel et Mare de l'Anse Heureuse. - L'Etang aux Poissons constitue l'une des plus grandes étendues lacustres de l'île (75.5 ha) et est entouré de la plus grande zone de mangrove (15 ha). Les mangroves s'étendent sur un linéaire d'environ 4500 m autour de l'étang. <p>Oiseaux</p> <ul style="list-style-type: none"> - ZICO de Grand Etang (Collier et Brown 2008): aire de nidification importante pour les populations de Petites Sternes (<i>Sternula antillarum</i>). - Présence d'espèces nicheuses autour des étangs des Salines d'Orient (Petite Sterne), Chevrise (Petite Sterne, Canards des Bahamas), Etang de la Barrière (Echasse d'Amérique), Guichard et Aéroport (Echasse d'Amérique). - Populations d'oiseaux diversifiées (environ 60 esp. d'oiseaux recensées autour des étangs) et abondantes autour des étangs. L'avifaune est principalement représentée par des limicoles et quelques oiseaux marins nicheurs telles que les Petites Sternes. Près de 24 espèces d'oiseaux nichent autour des étangs de Saint-Martin. - Autour des étangs: présence de 3 esp. à distribution restreinte: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri felle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>).
Pointe du Bluff	Requins et poissons	

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ZCB 1 - Ecosystèmes marins et côtiers - hors de la RNSM		<p>- Nurseries pour les juvéniles de requin citron (<i>Negaprion brevirostris</i>)</p> <p>Oiseaux</p> <p>- Présence d'environ 15 espèces d'oiseaux aux abords de la Pointe du Bluff (suivis RNSM 2014).</p> <p>- site du CELRL (276 ha)</p>
	Babit Point	<p>Plantes et écosystème terrestre (Fiches ZNIEFF)</p> <p>- Présence d'une espèce menacée (EN): Gaiac (<i>Guaicum officinale</i>)</p> <p>- Présence de plantes endémiques des PA-Iles Vierges-Puerto Rico: Cactus Tête à l'anglais (<i>Melocactus intortus</i>), Cactus raquette (<i>Consolea rubescens</i>), Cactus cierge (<i>Pilosocereus royenii</i>).</p> <p>-ZNIEFF (5.7 ha), site du CELRL (6.6 ha)</p>
ZCB 2 - Ecosystèmes marins et côtiers - hors de la RNSM	Plages des Terre-Basse	<p>Tortues marines</p> <p>- Sites de pontes majeurs pour les tortues marines, principalement pour les tortues vertes (<i>Chelonia mydas</i>- EN): Baie Longue (<i>C.mydas</i> et de manière moins conséquente pour <i>E.imbracata</i>), Baie aux prunes (<i>C.mydas</i>), Baie Rouge (<i>C.mydas</i>)</p>
	Baie d'Anse Marcel	<p>Requins</p> <p>- Nurserie pour les juvéniles de requins.</p>
	Baie Orientale	<p>Requins et poissons</p> <p>- Nurseries pour les juvéniles de requins.</p> <p>Tortues marines</p> <p>- Site de ponte de tortues marines, dont des pontes occasionnelles de tortue luth (<i>Dermochelys coriacea</i>-VU).</p>
ZCB 3 - Ecosystèmes terrestres (dont quelques sites classés en réserve/ CELRL)	Forêt sèche de Pic Paradis	<p>Plantes et écosystème terrestre</p> <p>Plantes et écosystème terrestre (Fiches ZNIEFF)</p> <p>- Présence d'espèces menacées: Mahogani petites feuilles (<i>Swietenia mahagoni</i>- EN) (Howard 2013), Bois noyer (<i>Picrasma excelsa</i>- VU)</p> <p>- Présence d'esp. endémique des PA: la Fabacée <i>Galactia longiflora</i></p> <p>- Unité sylvatique de forêt sèche semi-décidue avec une biodiversité floristique importante (171 esp recensées)</p> <p>- ZNIEFF (235.4 ha)</p> <p>- Etude ONF mandatée par la Collectivité de St-Martin sur Pic Paradis en vue d'un classement en espace classé boisé.</p> <p>Reptiles</p> <p>- Présence d'une espèce endémique de l'île: Anolis de St-Martin (<i>Anolis pogus</i>)</p> <p>- esp. endémiques du Banc d'Anguilla: Anolis d'Anguilla (<i>Anolis gingivinus</i>), Ameive de Plée (<i>Ameiva plei</i>)</p> <p>Oiseaux</p> <p>- Zone importante pour les oiseaux: IBA de Pic Paradis (Collier et Brown 2008)</p> <p>- Présence de 6 esp. à distribution restreinte: Colombe à croissant (<i>Geotrygon mystacea</i>), Moqueur grivotte (<i>Allenia fusca</i>), Colibri</p>

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		<p>huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>).</p> <p>Mammifères - présence de chauve-souris endémique des PA: Ardops des Petites Antilles (<i>Ardops nichollsi</i>), Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>)</p>
	<p>Forêt sèche et habitat xérotique de Red Rock</p>	<p>Plantes et écosystème terrestre (Fiches ZNIEFF, inventaire RNSM): - Présence d'une espèce menacée (EN): Gaiac (<i>Guaiaecum officinale</i>) - Présence de plantes endémiques: Orchidée <i>Psychilis correllii</i> (esp. endémique de quelques îles des PA (Anguilla-St.Martin-St.Barthélemy -Saba), Cactus Tête à l'anglais (<i>Melocactus intortus</i>), Cactus raquette (<i>Consolea rubescens</i>), Cactus cierge (<i>Pilosocereus royerii</i>). - Massif boisé d'environ comprenant une flore est très diversifiée avec environ 180 espèces végétales xérophiles.</p> <p>- ZNIEFF (241.6 ha), une frange littorale fait partie du périmètre du CELRL/RNSM (ZCB 1).</p> <p>Reptiles (Fiche ZNIEFF) - Présence d'une espèce endémique de l'île: Anolis de St-Martin (<i>Anolis pogus</i>) - 3 esp. endémiques du Banc d'Anguilla: Anolis d'Anguilla (<i>Anolis gingivinus</i>), Petit sphérodactyle à grosses écailles (<i>Sphaerodactylus parvus</i>), Ameive de Plée (<i>Ameiva plei</i>) - une esp. endémique des PA: Sphérodactyle d'Anguilla (<i>Sphaerodactylus sputator</i>).</p> <p>- Il est à noter que la Couresse du Banc d'Anguilla (<i>Alsophis rijgersmaei</i>) a été observée pour la dernière fois sur ce site (1951).</p> <p>Oiseaux - présence de 3 espèces à distribution restreinte (Fiche ZNIEFF): Colibri falle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>)</p>
	<p>Lagon de Simpson Bay (partie française)</p>	<p>- Présence de mangroves bordant le lagon et d'herbiers de Phanérogames marines bien développés.</p> <p>- Site du CELRL: Grand Ilet (4,5 ha) - ZCB1</p>
	<p>Grotte du Puits (Terres-Basses)</p>	<p>- Habitat pour des populations de chauves-souris, dont des espèces endémiques des PA: Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>), Monophylle des Petites-Antilles (<i>Monophyllus plethodon</i>)</p>



Carte des Zones Clés pour la Biodiversité identifiées à Saint-Martin.

Enjeux transfrontaliers Saint-Martin / Sint-Maarten.

Dans le cadre de l'initiative BEST, les Profils d'écosystèmes sont réalisés dans les 15 entités Européennes de la Caraïbe dont St-Martin et Sint-Maarten. Par l'identification de Zones Clés pour la Biodiversité ces profils permettent de mettre en évidence des enjeux transfrontaliers en termes de conservation de la biodiversité.

Carte des corridors écologiques pour Saint-Martin et Sint-Maarten



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Contexte socio-économique et société civile

- Gouvernement, institutions et organisations locales en lien avec l'environnement et la conservation de la biodiversité.

SAINT-MARTIN	
Collectivité de St-Martin	
Pôle Développement Durable	Direction de l'environnement et du cadre de vie. Service environnement: suivi de la politique d'élimination des déchets (collecte et traitement) ; gestion des espaces verts ; salubrité et police de l'environnement
	Direction de l'aménagement du territoire et de l'urbanisme
	Direction des routes, des constructions scolaires et bâtiments publics
Cellule des Affaires Européennes et de Coopération Régionale	Ce pôle de la Collectivité de St-Martin est en charge de la coopération régionale et des affaires européennes concernant la RUP de St-Martin.
Etablissement des Eaux et de l'Assainissement de Saint-Martin (EEASM)	L'EEASM est un Etablissement Public à Caractère Industriel et Commercial (EPIC) de la Collectivité Territoriale de Saint-Martin.
Ministère de l'Ecologie, du Développement durable et de l'Energie	
DEAL Guadeloupe	Direction de l'Environnement, de l'Aménagement et du Logement. Elaboration et mise en œuvre localement des politiques de l'Etat en matière d'environnement, de développement et d'aménagement durables et de
Associations de gestion & associations	
Association de Gestion de la Réserve Naturelle Nationale de St Martin (AGRNSM)	L'Association de Gestion de la RNSM a pour objectifs de gérer, protéger et faire découvrir les milieux marins, terrestres et lacustres du périmètre de la réserve naturelle. Le plan de gestion validé en 2010 décrit les 7 objectifs à long terme. L'AGRNSM réalise des missions d'étude et de suivi des communautés marines et terrestres.
AGRNSM - Référénts CAR-SPAW / Sanctuaire AGOA	L'AGRNSM est le référent pour le CAR-SPAW et le Sanctuaire AGOA (Agence des Aires Marines Protégées) à St-Martin.
AGRNSM - Projet de création de l'Institut Caribbéen de la Biodiversité Insulaire (ICBI)	Ce projet porté par l'AGRNSM a pour objectif de créer un Institut de la Biodiversité Caribbéenne insulaire qui hébergera 5 pôles: Pôle administratif, Pôle technique (RNSM, Conservatoire du Littoral), Pôle Recherche et Développement, Pôle Universitaire et Pôle scénographique.
Association "Mon Ecole, Ma Baleine", Antenne de St-Martin	Sensibilisation et activités pédagogiques liées aux mammifères marins et au milieu marin en général.
Association "Les Fruits de Mer"	Sensibilisation et activités pédagogiques sur la faune et les écosystèmes terrestres de l'île.
Etablissements publics	
Conservatoire de l'Espace Littoral et des Espaces Lacustres (CELRL)	Etablissement public chargé de mener une politique foncière de protection des espaces naturels littoraux, de respect des sites naturels et de leur équilibre écologique. Les acquisitions foncières du CELRL sont gérées par l'Association de Gestion de la RNSM. A St-Martin, le CELRL est hébergé dans les locaux de la RNSM.
Office National des Forêts (ONF)	L'ONF est un établissement public à caractère industriel et commercial qui a pour principales missions la gestion des forêts domaniales et des forêts publiques relevant du Régime forestier ainsi que la réalisation de missions d'intérêt général confiées par l'Etat. Les agents de l'ONF sont basés en Guadeloupe et interviennent ponctuellement sur St-Martin.
Organismes de recherche et Secteur privé (non basés à St-Martin)	
PARETO Ecoconsult	Bureau d'étude basé en Guadeloupe. Réalisation de suivis à St-Martin (communautés marines, étangs).
Lurel Environnement	Bureau d'étude basé en Guadeloupe. Réalisation de suivis à St-Martin (suivis floristiques, faunistiques, description de ZNIEFF)
Océan Scientifique Assistance	Bureau d'étude basé en Guadeloupe. Rédaction du Plan de gestion de la RNSM.
CAREX Environnement et TBM	Cartographie de la frange littorale du milieu marin peu profond et des biocénoses marines.
BIOS	Bureau d'étude basé en Guadeloupe. Evaluation scientifique des vertébrés terrestres (avifaune, reptiles, amphibiens, mammifères).
Impact Mer	Bureau d'étude basé en Martinique. Réalisation de suivis à Saint-Martin (études sur les étangs)
OMMM	Observatoire basé en Martinique. Réalisation d'inventaires à Saint-Martin.
IRD-CNRS	Réalisation d'inventaires de la faune sous-marines (coraux, éponges) en collaboration avec l'AGRNSM.
Université des Antilles de Guadeloupe	Etudes scientifiques ponctuelles, description de la ZNIEFF-Mer de l'île Tintamarre.

➤ Financements dédiés à la conservation de la biodiversité

- L'essentiel du budget de L'AGRNSM provient du Ministère de l'Ecologie, du Développement durable et de l'Energie via la DEAL Guadeloupe (budget de fonctionnement et d'investissement).
- Les redevances sur les activités commerciales réalisées au sein de la RNSM et les Autorisations d'occupation temporaire du Domaine public maritime sont versées à la RNSM et permettent d'entretenir les infrastructures présentes sur l'aire protégée (mouillages, aires de pic-nic, panneaux d'information...).

Les AOT sont reversées à l'AGRNSM pour la gestion des sites affectés au Conservatoire du Littoral.

- L'AGRNSM réalise des demandes de financements (CAR-SPAW, TEMEUM, IFRECOR,...) pour des projets spécifiques, l'organisation de colloques, des rencontres avec les gestionnaires des aires protégées des îles voisines: suivis des requins, suivis des cétacés, mise en place de récifs artificiels, colloque sur les espèces exotiques envahissantes, colloque sur la résilience des aires marines protégées face au changement climatique, colloque sur le tourisme durable...

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- Depuis 2014, l'AGRNSM fait partie du Hub Caraïbe avec le CAR-SPAW dans le cadre de l'initiative Européenne BEST dédiée à la conservation de la biodiversité dans les territoires de l'outre-mer Européen.

- A noter que le Programme Opérationnel du FEDER pour la Collectivité d'Outre-Mer de St Martin (2014-2020) ne contient pas de ligne budgétaire dédiée à la conservation de la biodiversité sur le territoire.

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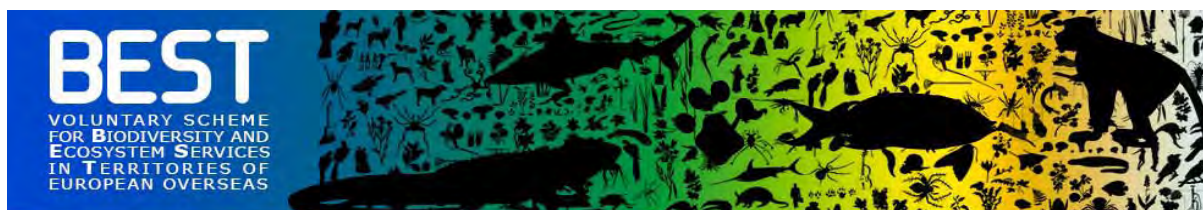
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Ce rapport est un **document de travail** dont les objectifs sont d'identifier et cartographier les **Zones Clés pour la Biodiversité (ZCB)** pour le territoire selon 3 critères: **(1) les espèces**, comprenant: les espèces menacées à l'échelle globale, les espèces endémiques et les espèces se regroupant en grand nombre pendant leur cycle biologique; **(2) les sites** hébergeant les espèces précédemment identifiées; **(3) les corridors écologiques** reliant les ZCB.

Ce document a été utilisé comme guide lors des consultations avec les acteurs locaux et a été modifié selon les retours et informations des acteurs.

PROFIL ECOSYSTEMIQUE - SYNTHÈSE - SAINT-BARTHELEMY

Localisation

L'île de Saint-Barthélemy (18°5'N, 63°5'O) est située au nord de l'arc des Petites-Antilles et est proche des îles de Saint-Martin (20 km), d'Anguilla, et de Saba. Les îles de Saint-Martin, Saint-Barthélemy et d'Anguilla forment le Banc d'Anguilla, une plate-forme insulaire peu profonde (max. 30 m) couvrant une surface de près de 4600 km².

Contextes politique et démographique

➤ **Statut politique**



Depuis le 15 juillet 2007, Saint-Barthélemy a adopté le statut de Collectivité d'Outre-Mer régie par l'article 74 de la Constitution. La collectivité de St-Barthélemy est régie par la loi organique du 21 février 2007 et est compétente notamment dans les domaines de l'environnement, l'urbanisme, la construction, l'habitat et le logement. L'île de St-Barthélemy fait partie intégrante de l'Union Européenne dont elle est, depuis 2012, un Territoire d'Outre-Mer (PTOM, European Overseas Territories) (IEDOM 2013).

➤ **Contexte démographique et socio-économique**

Surface: 25 km² (avec les îlets); point culminant: Morne de Vitet (286 m)

ZEE Antilles françaises: 143 000 km² - ZEE de St-Martin et St-Barthélemy: 5088 km²

Population: 8 938 hab., densité de 370 hab./km² (recensement de 2010, IEDOM 2013)

PIB par hab.: 26 000 € (IEDOM 2013)

Principaux secteurs d'activité (IEDOM, INSEE): le secteur du tourisme (regroupant les activités touristiques, l'hôtellerie et la restauration) représente la première activité économique de l'île. En 2012, la fréquentation touristique était estimée à 321 000 visiteurs bénéficiant de l'essor de l'activité de plaisance et de la croissance du trafic de passagers par ferry (IEDOM 2013).

➤ **Espaces faisant l'objet d'une protection réglementaire**

- Réserve Naturelle Nationale de St-Barthélemy créée en 1996 (Décret ministériel n°96-885 du 10 octobre 1996) est exclusivement marine et s'étend sur une surface de 1200 ha. La RNSB s'étend sur 5 zones, dont 2 zones adjacentes de l'île principale et 3 zones situées autour d'îlets. Le domaine maritime de la Réserve Naturelle comprend le Domaine Public Maritime (de la haute mer à 300 m du large) et une partie des Eaux Territoriales.

La RNSB comprend 2 zones de protection renforcée dans lesquelles il est interdit de pêcher, mouiller et plonger en scaphandre autonome.

- Arrêté de Protection du Biotope (APB n°94-1056 du 3 octobre 1994): Etang Saint-Jean (5.4 ha).

- Les APB du 27 juillet 1992 portant sur les Etangs de Grand et Petit cul-de-sac (15.94 ha) ont été annulés en 2006.

Initiative BEST III - Document de travail - St. Barthélemy

- 1.3 ha sur le site du Fort Karl sont protégés suite à l'acquisition foncière du Conservatoire du Littoral (CELRL). Le CELRL a confié la gestion de ce site à l'Agence de l'Environnement.
- Sanctuaire AGOA établi sur la ZEE des Antilles françaises (143 256 km²)

➤ **Reconnaissance nationale et internationale des habitats naturels et de la faune sauvage**

- 2 ZNIEFF (78.3 ha):
 - 1 ZNIEFF de type I: Pointe à Toiny (42.3 ha)
 - 1 ZNIEFF de Type II: 5 étangs et salines (36 ha)

- ZNIEFF proposées non validées officiellement: 22 îlets de Saint-Barthélemy (147.4 ha), Plateau Lurin (10,2 ha), Morne Grand Fond-Morne Rouge (173.1 ha). ZNIEFF Mer de Type I: Sud de l'îlet Petit-Jean (3.7 ha)

- Le Sanctuaire AGOA établi sur la ZEE des Antilles françaises (incluant la ZEE de St- Barthélemy) est labellisé SPAW.

➤ **Liste des espaces sous protection réglementaire bénéficiant d'une équipe de gestion**

- La Réserve Naturelle Nationale de St-Barthélemy (RNSB) est gérée depuis 2013 par l'Agence Territoriale de l'Environnement (précédemment la gestion était confiée à l'Association de Gestion GREMAT). L'Agence Territoriale de l'Environnement est un établissement public territorial à caractère industriel et commercial placé sous la tutelle de la Collectivité de St-Barthélemy. L'agence exerce des fonctions consultatives, éducatives et de gestion dans le domaine de l'environnement et représente la Collectivité de St-Barthélemy dans le sanctuaire AGOA.
- La gestion du site de Fort Karl, acquisition foncière du Conservatoire du Littoral, est transférée à l'Agence de l'Environnement.

➤ **Plan de Gestion - Plan de Restauration**

- Plan de Gestion de la RNSB 2010-2014. Evaluation PG 2004-2008.
- La RNSB est le coordinateur local du Plan National de Restauration des tortues marines.

Espèces et sites retenus dans le cadre de l'initiative BEST - identification des ZCB

Enjeux en termes d'espèces

Tableau 1 - Espèces menacées inscrites sur la liste rouge UICN globale (les statuts entre parenthèses font référence à la liste rouge Caraïbe et sont indiqués s'ils diffèrent avec la liste rouge globale). Références: liste rouge UICN - données de Juillet 2014, AAMP 2013, Breuil 2002, Questel 2014, RNSB 2010, Karl Questel, com.pers. 2015.

Taxon	Espèces menacées
Végétaux	
EN	<i>Guaiacum officinale</i> , <i>Swietenia mahagoni</i>
Coraux	Espèces à confirmer: <i>Montastraea franksi</i> , <i>Oculina varicosa</i>
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Agaricia lamarcki</i> , <i>Mycetophyllia ferox</i>
Requins et raies	
EN	<i>Sphyrna mokarran</i> , <i>Sphyrna lewini</i> , <i>Carcharhinus obscurus</i>
VU	<i>Rhincodon typus</i> *, <i>Manta birostris</i> *, <i>Carcharhinus longimanus</i>
Poissons	
CR	<i>Epinephelus itajara</i> *
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i> *
VU	<i>Balistes vetula</i> , <i>Hippocampus erectus</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Mycteroperca interstitialis</i> *, <i>Kajikia</i>

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	<i>albida</i> , <i>Makaira nigricans</i> , <i>Hyorthodus flavolimbatus</i> *, <i>Hyorthodus niveatus</i> *, <i>Thunnus obesus</i> *
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Chelonia mydas</i> , <i>Caretta caretta</i> *, <i>Alsophis rijgersmaei</i> , <i>Iguana delicatissima</i>
VU	<i>Dermochelys coriacea</i> *
Mammifères	
VU	<i>Physeter macrocephalus</i> *

* Les espèces occasionnelles à elles seules ne permettent pas d'identifier une ZCB.

Tableau 2 - Liste des espèces endémiques présentes à St-Barthélemy (Références: Breuil 2002, Larsen 2006, Levesque et al. 2008ab, Lourenço 1984, Martinet 2010, Peck 2011, Questel 2012, Questel 2013ab, Questel 2014, Questel et Le Quellec 2011, Quintero 1981, Teruel et Questel 2011)

Groupes taxonomiques	Nombre d'espèces endémiques
Plantes	- au moins 10 esp. végétales endémiques des Petites-Antilles et de Puerto-Rico: <i>Chamaecrista obcordata</i> , <i>Psychilis correllii</i> , <i>Tolumnia urophylla</i> , <i>Eugenia cordata</i> , <i>Furcraea tuberosa</i> , <i>Melocactus intortus</i> , <i>Jacquemontia solanifolia</i> , <i>Tetramicra elegans</i> , <i>Consolea rubescens</i> , <i>Ipomoea sphenophylla</i> (cette dernière espèce est considérée comme endémique stricte de St Eustache et aurait également été observée sur 2 stations à St-Barthélemy. L'identification de l'espèce est en cours).
Invertébrés - Arthropodes	- esp. endémiques de St-Barthélemy- <u>Arachnides</u> : <i>Ammotrechella beatriceae</i> , <i>Oiclus questeli</i> , <i>Charinus bruneti</i> ; <u>Insectes</u> : <i>Cratomorphus dorsalis</i> , <i>Anthonomus aestuans</i> , <i>Lachnopus memnonius</i> , - 1 esp. d'insecte endémique de St-Barthélemy/ St-Martin: <i>Phyllophaga sanbarthensis</i> . - esp. d'insectes endémiques de quelques îles des Petites-Antilles (St-Barth/St-Martin/Saba/ St-Eustache/Guadeloupe/Îles Vierges): <i>Caribacusta saba</i> , <i>Nesonotus tricornis</i> , <i>Carylla proalbifrons</i> , <i>Antillicharis fulvescens</i> , <i>Orocharis angustus</i> . - esp. endémiques des Petites Antilles. <u>Arachnides</u> : <i>Centruroides barbudensis</i> , <i>Phrynus goesii</i> ; <u>Insectes</u> : <i>Anthonomus homunculus</i> , <i>Tylocerus crassicornis</i> , <i>Blapstinus opacus</i> , <i>Diastolinus perforatus</i> , <i>Amniscus praemorsus</i> , <i>Styloleptus posticalis</i> , <i>Urgleptes cobbeni</i> , <i>Artipus corycaeus</i> , <i>Litostylus pudens</i> , <i>Turpilia punctata</i> .
Amphibiens	- 2 esp. endémiques du sud des Petites Antilles (exotiques à St-Barthélemy) (<i>Eleutherodactylus martinicensis</i> , <i>E. johnstonei</i>)
Reptiles	- 1 esp. endémique de St-Barthélemy: Typhlops de St Barth (<i>Antillotyphlops annae</i>) - 6 esp. endémiques des îles du Banc d'Anguilla: Iguane des PA (<i>Iguana delicatissima</i>), Anolis d'Anguilla (<i>Ctenonotus gingivinus</i>), Ameive de Plé (<i>Ameiva plei</i>), Petit sphérodactyle (<i>Sphaerodactylus parvus</i>), Scinque du Banc d'Anguilla (<i>Spondylurus powelli</i>), Couresse du Banc d'Anguilla (<i>Alsophis rijgersmaei</i>) - 1 esp. endémique des Petites Antilles: Sphérodactyle d'Anguilla (<i>Sphaerodactylus sputator</i>)
Oiseaux	- 4 esp. endémiques des Petites Antilles et de Puerto-Rico (<i>Loxigilla noctis</i> , <i>Eulampis holosericeus</i> , <i>E. jugularis</i> , <i>Orthorhynchus cristatus</i>)
Mammifères terrestres	- 2 esp. endémiques des Petites Antilles: Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>), Monophylle des Petites-Antilles (<i>Monophyllus plethodon</i>)

➤ **Méthodologie retenue pour BEST: Habitats à fort intérêt écologique et patrimonial**

- **ZNIEFF et inventaires de type ZNIEFF:**

- 2 ZNIEFF terrestres: Pointe à Toiny et les 5 étangs et salines (ZNIEFF Type II)

- Etudes sur 4 sites proposés en tant que ZNIEFF (sites non validés): Morne Grand Fond - Morne Rouge, plateau Lurin, les 22 ilets autour de l'île principale de St Barthélemy, zone sud de l'ilet Petit-Jean (ZNIEFF mer).

- Etangs:

- 5 Etangs et salines (ZNIEFF II, APB sur l' Etang St-Jean): présence des dernières mangroves de l'île, biotope d'intérêt majeur pour le repos et le nourrissage d'oiseaux migrateurs, site de reproduction de poissons et crustacés (RNSB 2010).

- Présence d'espèces végétales, de reptiles et d'oiseaux menacées et/ou à distribution restreinte autour des étangs.

A noter que le Gaïac (*Guaiacum officinale*), qui est une espèce menacée (EN), est présente sur l'ensemble du territoire et n'est donc pas considérée comme une espèce à enjeux.

- Grottes et cavités:

- Grotte à chauve-souris (proche de Gouverneur): habitat pour 2 esp de chauve-souris, dont une espèce endémique des Petites-Antilles et Puerto-Rico (*Brachyphylla cavernarum*)

- Inventaires flore et faune:

- Inventaire des espèces végétales - Inventaire réalisé par l'Association St Barth Essentiel en partenariat avec l'Agence Territoriale de l'Environnement de St Barthélemy:

- Observation et cartographie de 9 espèces de végétaux endémiques des Petites-Antilles, des îles Vierges et de Puerto-Rico: *Chamaecrista obcordata*, *Psychilis correllii*, *Tolumnia urophylla*, *Eugenia cordata*, *Furcraea tuberosa*, *Melocactus intortus*, *Jacquemontia solanifolia*, *Tetramicra elegans*, *Consolea rubescens*.

- L'espèce *Ipomoea sphenophylla* (confirmation de l'espèce en cours) considérée comme endémique stricte de St Eustache a été observée sur 2 stations sauvages à Morne Grand Fond et à Colombier.

- Les Cactacées (notamment *Melocactus intortus*) sont épars et particulièrement menacées sur les sites de Pointe Milou (urbanisation) et de Chauvette (pression des élevages caprins) (Sébastien Gréaux comm. pers. 2015).

- Inventaire faunistique de certains taxons d'invertébrés (fourmis, termites, araignées) réalisé par l'Association St Barth Essentiel en partenariat avec le MNHN.

➤ Reptiles

Iguane des Petites Antilles

- Près de 453 iguanes des Petites-Antilles (*Iguana delicatissima*) ont été pucés par l'Agence Territoriale de l'Environnement. Cette population est présente essentiellement sur l'île principale ainsi que sur les ilets Fourchue (programme de renforcement de la population d'iguane) et Frégate (programme de ré introduction) (Agence Territoriale de l'Environnement, com. pers. 2015, Knapp et al. 2014).

- L' Agence Territoriale de l'Environnement a contribué à la préservation de la population de cette espèce menacée en mettant en place les programmes de renforcement et de ré introduction de l'iguane des Petites-Antilles sur les ilets de Fourchue et Frégate.

- L'espèce exotique *Iguana iguana* est présente sur l'île principale (Gustavia, St Jean, Saline, Grand Fond, Anse des Cayes, Lorient) et des hybridations avec l'espèce native peut entraîner la disparation de l'espèce endémique *I.delicatissima* (Breuil 2011; Agence Territoriale de l'Environnement, com. pers. 2015). L' Agence Territoriale de l'Environnement est habilitée à capturer et euthanasier les individus de l'espèce exotique *I. iguana* ainsi que les hybrides entre les deux espèces.

Couresse du Banc d'Anguilla

- L'espèce *Alsophis rijgersma* est endémique des îles du Banc d'Anguilla et probablement éteinte de l'île de St.Martin-St.Maarten (Questel 2012). A St-Barthélemy la couresse du Banc d'Anguilla est présente sur toute l'île principale et a été également observée sur l'ilet Tortue. Sa présence aurait

été signalée dans les années 1980 sur les îlets Bonhomme et Fourchue mais l'espèce n'a pas été observée lors des dernières projections (Questel 2012).

Reptiles à distribution restreinte (Breuil 2002, Questel 2012bc, Agence Territoriale de l'Environnement, com. pers. 2015):

Trois espèces de reptiles à distribution restreinte et sont observées sur l'île principale et les îlets de St-Barthélemy:

- l'anolis d'Anguilla (*Ctenonotus gingivinus*) - endémique du Banc d'Anguilla: île principale, îlets Fourchue - Petite Islette - Îlet au Vent et Îlet Tortue - Gros îlet - Îlet Petit-Jean et les îlets avec de la végétation.
- l'ameive de Plé (*Ameiva plei*) - endémique du Banc d'Anguilla: île principale, îlets Fourchue - Petite Islette - Îlet au Vent
- Sphérodactyle d'Anguilla (*Sphaerodactylus sputator*) - endémique des Petites-Antilles: île principale, îlets Fourchue - Petite Islette - Îlet au Vent et Îlet Tortue - Gros îlet - Îlet Petit-Jean - Île Frégate - Îlet Bonhomme - Îlet Coco - Îlet Toc Vers

- Sites de pontes des tortues marines

- la tortue imbriquée et la tortue verte sont fréquemment observées dans les eaux de St-Barthélemy, la tortue luth et la tortue caouanne sont observées de façon très occasionnelle (RNSB 2010).
- le suivi des sites de ponte mis en place depuis 1999 indique quelques activités de ponte des tortues imbriquées à Lorient et des tortues vertes à Anse des Cayes, Lorient et Flamands (RNSB 2010). Des pontes de tortue luth ont été observées sur la plage de Flamands (1982) et à saline (2009) (RNSB 2010). Les 22 plages de l'île sont peu fréquentées par les tortues marines et aucun site de ponte ne présente plus de 10 traces par saison de ponte (RNSB 2010, Franciane Le Quéllec, communication personnelle 2015).

➤ Îlets

- 22 îlets non habités regroupés en 17 toponymes: l'isolement de ces îlets en fait des zones de nidification importantes pour 12 espèces d'oiseaux marins, un habitat pour des espèces de reptiles menacées et/ou à distribution restreinte (*Iguana delicatissima*, *Ctenonotus gingivinus*, *Ameiva plei*). Les îlets ont fait l'objet de suivis de type ZNIEFF (sites non validés en tant que ZNIEFF).

- 9 îlets ont une végétation relativement développée, avec les Îlets Frégate et Tortue qui sont caractérisés par une grande diversité floristique (suivis de type ZNIEFF, Levesque et al. 2008).
- Présence d'espèces végétales endémiques des Petites Antilles et de Puerto Rico (*Melocactus intortus*, *Consolea rubescens*, *Agave karatto*, *Tetramicra elegans*, *Tolumnia urophylla*)

- 11 îlets sont situés dans le périmètre de la RNSB : Îlets Fourchue-Îlet au vent-Petite Islette, Îlets Frégate-Toc Vers, Îlet Petit-Jean, Îlets Tortue-Grenadins, Îlets Pain de sucre-Baleine-Gros îlets.

- L'îlet la Poule et les Poussins (ou îlet Mancel) présente des espèces de coraux menacées (*Acropora palmata*, *A. cervicornis*, *A. prolifera*) ainsi que des populations de requins fréquemment observées (requins gris de récif *Carcharhinus perezi*, requins nourrices *Ginglymostoma cirratum*, requins tigres *Galeocerdo cuvier*) (Sébastien Gréaux, comm. pers. 2015).

➤ Écosystèmes marins et côtiers

- Les mangroves bordent les étangs et salines (ZNIEFF Type II): Etang de St Jean, Grande Saline, Grand Etang et Petite Saline (Martinet 2010).

Cet écosystème est menacé sur le territoire et les dernières surfaces de mangroves sont observées autour des étangs et salines.

- Herbiers

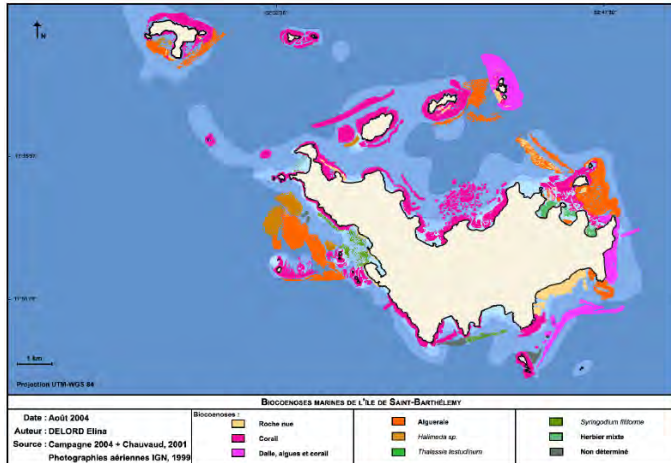
- Les herbiers, essentiellement à *Thalassia testudinum*, à *Syringodium filiforme* et les herbiers mixtes, occupent les substrats meubles et peuvent être observés dans les fonds de baies. Des espèces d'*Halodule* sp. sont présentes dans les lagunes côtières (Hily et al. 2011).

- Les herbiers sont plus localisés que les communautés coralliennes et sont, pour la plupart, situés dans les baies de l'Anse Marigot, du Grand et Petit Cul-de-Sac, de Saline et du Gouverneur (Delord 2004).

- L'herbier situé dans la Baie de Marigot est relativement dense (1435 plants/m²) mais sa structure est déséquilibrée en raison de la dominance de plants de *S. filiforme* (86% des plants) (Pareto 2013).

- Récifs coralliens

- Les récifs comprennent des récifs coralliens frangeants et des formations coralliennes non bioconstructrices (Bouchon et al. 2008). Les communautés coralliennes sont présentes tout autour de l'île, le long des côtes ou plus au large (Delord 2004).



Carte de biocénoses marines (Delord 2004, Agence Territoriale de l'Environnement)

- En 2001, les coraux colonisaient 48% des substrats durs, soit 275 ha (30% de la superficie de la RN) (Chauvaud 2001). La cartographie des biocénoses marines dans les 5 zones en réserve indique des surfaces coralliennes variant entre 42.5 ha (Colombier) et 65 ha (Frégate Toc-Vers) (Chauvaud 2001). Les sites de Frégate Toc-Vers et Gros Ilet-Pain de Sucre ont respectivement 6.5 ha et 11.7 ha avec plus de 25% de couverture corallienne (Chauvaud 2001).

- De 2002 à 2004, le taux de recouvrement corallien est resté relativement stable avec un recouvrement plus important dans les sites en réserve (20% de recouvrement corallien à la Baleine du Pain de Sucre (en réserve) et 16% à l'Îlet Coco (hors réserve) (Bouchon et al. 2006).

- Les communautés benthiques récifales ont subi un lent phénomène de dégradation au cours des 25 à 30 dernières années se traduisant par l'invasion progressive par les macro-algues brunes et les cyanobactéries. Une diminution de la couverture corallienne de près de 30% a été observée en 2006 suite au phénomène de blanchissement de 2005 lié à l'augmentation de la température de l'eau sur les Petites-Antilles (Bouchon et al. 2006, RNSB 2010). Les récifs coralliens caractérisés en "très bon état écologique" sont situés au Sec de Colombier et entre l'Anse Gascon et l'anse de reine (zone d'étude de Corossol). Des récifs coralliens "en bon état" sont présent sur les sites de Corossol, Gros Islets et Pain de Sucre (Delord 2004). De 2009 à 2012, la couverture corallienne est en moyenne plus élevée en réserve (Colombier: 14%) par rapport aux sites hors réserve (Le Boeuf: 10%) (Pareto 2013).

- Le long de la côte nord, un gradient croissant est-ouest de l'état de santé des biocénoses marines est observé avec des communautés coralliennes très dégradées vers Lorient - St Jean, impactées par les phénomènes d'hypersédimentation, et des communautés marines en meilleur état de santé vers les îlets du nord-est (Fourchue, Bonhomme, Frégate, Toc Vers, Anse des Flamands, Petite Anse) (Delord 2004).

- L'association The Coral Association Project Saint-Barth a pour objectif de restaurer les communautés coralliennes en mettant en place des pépinière de coraux autour de l'île. Cette action, menée en partenariat avec l'Agence territoriale de l'environnement, a conduit à l'installation de nurseries de coraux implantées sur différents sites en et hors réserve (Saline, Petite Anse, Gros Ilet) (Didier Laplace pers. com. 2015).

- **Peuplement ichtyologique** (Bouchon et al. 2006, RNSB 2010):

- Les richesses spécifiques et biomasses sont plus élevées dans le périmètre de la RN (Bouchon et al. 2006, Pareto 2013). Le suivi réalisé en 2012 indique une augmentation de la biomasse moyenne de près de 50% et de la densité moyenne d'environ 78% dans les sites en réserve (Colombier) (Pareto 2013).

- Le site côtier situé en réserve (Colombier) présente une abondance de poissons juvéniles (LT < 10 cm) (Pareto 2013).

- **Zones importantes pour l'avifaune:** Important Bird Areas (IBA) / Zones d'Importance pour la Conservation des Oiseaux (ZICO) (Références: Levesque et al. 2008; Levesque, Mathurin et Le Quellec 2008)

- La variété d'habitats (ilets, falaises, salines et étangs) explique la diversité de l'avifaune observée sur l'île, avec près de 110 espèces recensées en 2011 (Questel et Le Quellec 2011).

- 4 espèces d'oiseaux ont une distribution restreinte aux Petites-Antilles et Puerto-Rico (Lesser Antilles Endemic Bird Area EBA): Sporophile rouge-gorge (*Loxigilla noctis*), Colibri falle-vert (*Eulampis holosericeus*), Colibri Madère (*Eulampis jugularis*), Colibri huppé (*Orthorhynchus cristatus*). Ces espèces sont observées sur l'île principale mais ne qualifient pas pour l'identification des ZICO.

- **3 ZICO** identifiées à St-Barthélemy (1055 ha, dont 0.4% de partie terrestre): Petite Islette, Îlet Tortue et Îlets les Petits Saints-Gros Ilets. Les ZICO de Petite Islette et de l'Îlet Tortue font partie intégrante du périmètre de la RNSB. Une partie ouest de la ZICO Petits Saints-Gros Ilets est intégrée à la zone de réserve de Pain de Sucre-Gros Ilet.

A St-Barthélemy, les ZICO ont été identifiées par les populations nicheuses d'oiseaux marins. 4 esp. d'oiseaux marins se réunissent en grand nombre (critère IBA: "Aggrégation d'espèces"):

- Les ZICO de l'Îlet Tortue, Les Petits Saints et Les Gros Ilets abritent plus de 1% de la population biogéographique d'oiseaux marins (critère A4i): fous bruns (*Sula leucogaster*), mouette atricille (*Leucophaeus atricilla*), sterne royale (*Thalasseus maximus*), sterne pierregarin (*Sterna hirundo*).

- La ZICO de Petite Islette est caractérisée par la présence de fous bruns nicheurs (*Sula leucogaster*) (plus de 60 couples, critère B4ii).

- **Unités écologiques** - Inventaires réalisés par l'Association St Barth Essentiel en partenariat avec l'Agence Territoriale de l'Environnement de St Barthélemy.

- Plusieurs unités écologiques ont été identifiées sur l'île principale et les ilets en raison de leur diversité faunistiques et floristiques et de la présence d'espèces protégées, endémiques et/ou menacées.

- **Corridors écologiques**

- L'île de Saint-Barthélemy est située sur la voie de migration des populations d'oiseaux entre les zones d'hivernage (Amérique du Sud) et les zones de reproduction (Amérique du Nord). Les ZICO de St Barthélemy, associées aux ZICO des îles voisines, assurent une continuité écologique des zones importantes pour la conservation des oiseaux endémiques des Petites Antilles et de Puerto Rico.

- Les baleines à bosse (*Megaptera novaeangliae*) migrent entre les eaux de l'Amérique du nord (aires d'alimentation) et les eaux tropicales de la Caraïbe (aires de reproduction). Cette espèce est particulièrement observée dans les eaux peu profondes entre les îles d'Anguilla, St-Martin et St-Barthélemy. Le suivi d'individus marqués à l'aide de balises satellite révèle des migrations journalières entre ces îles (Fossette et al. 2014).

- La cartographie des biocénoses marines indique une continuité entre les écosystèmes récifaux et d'herbiers sur les sites de 3 Anses à l'Îlet Tortue - Ilet Coco, Anse La Saline et entre l'Îlet Pain de Sucre Gros Ilet et l'île principale (Delord 2004, RNSB 2010).

Conventions internationales ratifiées par la France

- Convention de Washington (CITES), concernant le commerce international des espèces de faune et de flore menacées d'extinction.

- Convention de Berne: convention relative à la vie sauvage et du milieu naturel de l'Europe

- Convention de Bonn: convention concernant la conservation des espèces migratrices (terrestres, aériennes ou marines) appartenant à la faune sauvage, sur l'ensemble de leur aire de répartition.

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- Convention de Carthagène: protection et mise en valeur de la mer des Caraïbes sur l'initiative des Nations Unies. Le protocole SPAW relatif aux zones et à la vie sauvage spécialement protégés découle de cette convention.
- Convention sur la Diversité Biologique
- Convention RAMSAR sur les zones humides

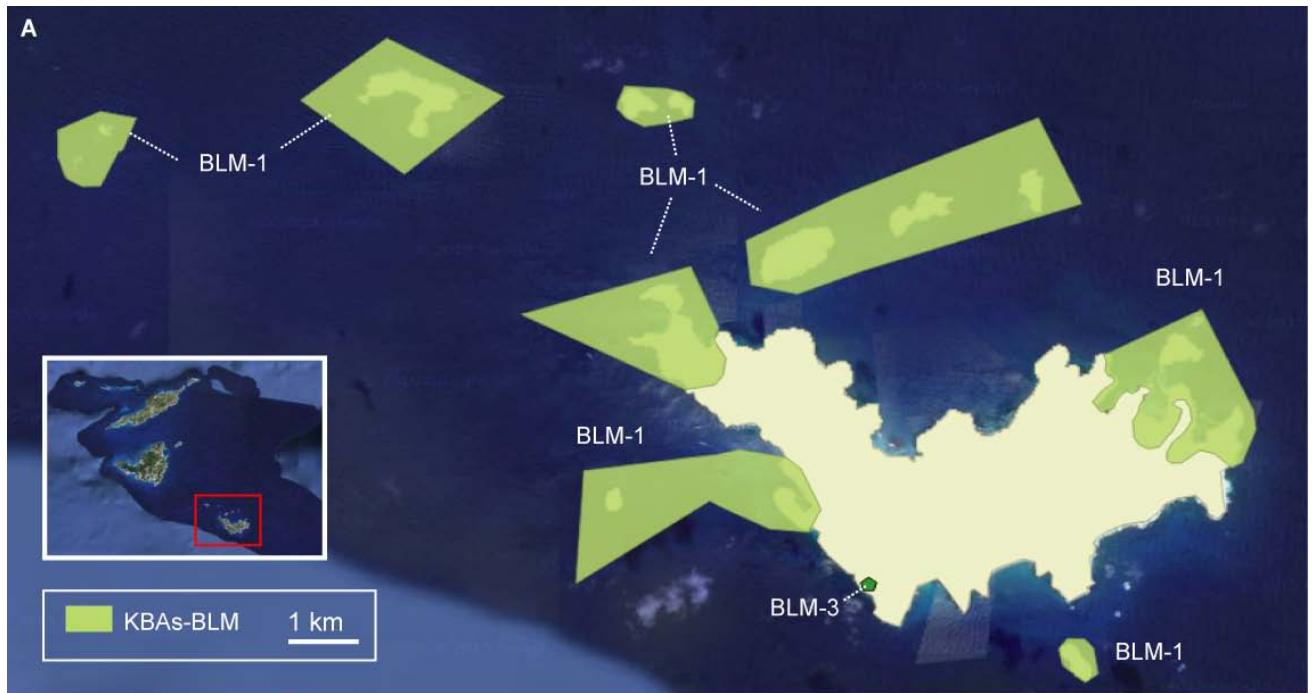
Tableau 3. Zones Clés pour la Biodiversité (ZCB) identifiées à St-Barthélemy.

N. ZCB	ZCB	Taxons présents - Habitats/ Ecosystèmes - Sites à enjeux - Justification de la désignation de ZCB
ZCB 1 - Zones marines et ilets	Réserve Naturelle (RN) de St-Barthélemy	<p>- 5 zones marines classées en RNN: 2 sites adjacents à l'île principale (secteur de l'îlet Tortue- 3 Anses, secteur colombier-Petite Anse) et 3 zones situées autour d'îlets (Fourchue, Ilets Frégate et Toc Vers, Ilets Pain de Sucre et Gros Ilet).</p> <p>- Biocénoses marines:</p> <ul style="list-style-type: none"> - Présence de 8 espèces de coraux menacées à l'échelle globale: <i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Agaricia lamarcki</i>, <i>Mycetophyllia ferox</i> - Présence d'au moins 7 espèces de poissons récifaux menacées: <i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>, <i>Megalops atlanticus</i> - La diversité et la biomasse des populations de poissons sont plus importantes dans les sites classés en réserve. <p>- Les récifs coralliens frangeants sont observés autour des îlets et de l'île principale.</p> <p>- Couverture corallienne relativement importante dans les sites en réserve (> 25%) (Gros Ilets-Pain de Sucre-Baleine du Pain de Sucre, Ilets Frégate-Toc Vers)</p> <p>- Herbiers bien développés dans le secteur des Trois Anses - Ilet Tortue: sur les 25 ha d'herbiers présents dans le périmètre de la RN 90% sont situés dans le secteur des 3 Anses et de l'îlet Tortue.</p> <p>- Connectivité entre les écosystèmes de récifs et d'herbiers: Trois Anses - Ilet Tortue, site de Pain de Sucre Gros Ilet</p>
	Ilets	<p>- 22 îlets dont 11 situés dans le périmètre de la RN (suivis de type ZNIEFF, sites non validés en tant que ZNIEFF)</p> <p>- 7 zones comprenant 14 îlets sont considérées comme des unités floristique et faunistique importantes: Ilet Fouchue / Ilets Pelé et Boulanger / Ilets Bonhomme, Frégate, Toc Vers / Ilet Tortue / Ilet Coco / Pain de Sucre / Baleine des Gros îlets, Gros îlets, Petits Saints</p> <p>Biocénoses marines</p> <ul style="list-style-type: none"> - des récifs coralliens frangeants bordent les îlets - connectivité entre les écosystèmes d'herbiers et de récifs: Ilet Coco-Anse La Saline - Présence d'espèces de coraux menacées: <i>Acropora cervicornis</i>, <i>A. palmata</i>, <i>A. prolifera</i>, <i>Dendrogyra cylindrus</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Dichocoenia stokesii</i>

		<p>Végétaux</p> <ul style="list-style-type: none"> - Présence d'espèces végétales à distribution restreinte: <i>Melocactus intortus</i> (Ilets Fourchue, Bonhomme, Tortue, Baleine des Gros ilets), <i>Tetramicra elegans</i> (Ilet Fourchue, Ile Coco), <i>Tolumnia urophylla</i> (Ilet Fourchue), <i>Agave karatto</i> (Petite Islette, Fourchue), <i>Consolea rubescens</i> (Ilet Fourchue) <p>Invertébrés</p> <ul style="list-style-type: none"> - Présence d'1 esp. d'Arachnide endémique des Petites Antilles (<i>Phrynus goesii</i>) (Fourchue, Ilet Petit-Jean, Gros Ilet) - Présence d'1 espèce d'Arachnide endémique de St Barth (<i>Oiclus questeli</i>) (Gros Ilet) - Présence d'Arthropode endémique de St Barth (<i>Turpilia punctata</i>) (St-Jean) - Présence d'1 esp. Arachnide endémique des PA (<i>Centruroides barbudensis</i>) (Ilets Tortue, Frégate, Bonhomme) <p>Reptiles</p> <ul style="list-style-type: none"> - Présence de l'iguane des PA (<i>Iguana delicatissima</i>) sur les ilets Frégate et Fourchue - Présence de reptiles à distribution restreinte: <i>Ctenonotus gingivinus</i>, <i>Ameiva plei</i>, <i>Sphaerodactylus sputator</i> - Ilet Tortue: présence de l'espèce menacée et endémique du Banc d'Aguilla <i>Alsophis rijgersmaei</i>. L'espèce n'a pas observée lors des dernières prospections sur les ilets Bonhomme et Fourchue. <p>Oiseaux</p> <ul style="list-style-type: none"> - 2 ilets identifiés comme IBA sont inclus dans le périmètre de la RN et sont des sites d'agrégation d'oiseaux marins: Petite Islette et l'Ilet Tortue - 13 ilets comprennent des zones de nidification pour les oiseaux marins: Ilet Fourchue, Petite Islette, Ilet au vent, Ile Pelé, Ile le Boulanger, Ilet Bonhomme, Ilet Frégate, Ilet Toc Vers, Ilet Tortue, Ilet Pain de Sucre, Gros Ilet, Ilet Petits Saints, Ile Coco.
	<p>Zone marine hors réserve</p>	<ul style="list-style-type: none"> - Anse Grand Fond à Anse Toiny, Anse de Chauvette, Anse du Gouverneur, Anse de Grande Saline, Anse de Lorient - - Présence d'espèces de coraux menacées: <i>Acropora palmata</i>, <i>Dendrogyra cylindrus</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>Dichocoenia stokesii</i> - Biocénoses marines: connectivité entre les écosystèmes d'herbiers et de récifs coralliens - Anse de Grande Saline, de Anse Grand Galet à Ilet Petit-Jean - Présence de récifs frangeants autour des ilets et de l'île principale. - L'ilet La Poule et les poussins (ou Ilet Mancel) présente des espèces de coraux menacées (<i>A. palmata</i>, <i>A. cervicornis</i>, <i>A. prolifera</i>).
	<p>5 Etangs et Salines</p>	<ul style="list-style-type: none"> - sites classés ZNIEFF (Type II, 36 ha): Etang de St Jean, Grande Saline, Grand cul-de-sac (ou Grand Etang), Petit cul-de-sac (ou Saline), Etang de Toiny. - l'Etang St-Jean est protégé par APB. - les 5 étangs et salines sont identifiés comme des zones floristique et faunistique d'intérêt majeur.

<p>ZCB 2 - Étangs et zones humides</p>		<ul style="list-style-type: none"> - Les étangs et salines constituent un biotope d'intérêt majeur comme aire de repos et d'alimentation pour l'avifaune, dont des populations d'oiseaux migrateurs. - La Grande Saline héberge une colonie nicheuse de Petites sternes. - présence de mangroves autour des étangs et salines (les seules mangroves de l'île): Etang de St Jean, Grande Saline, Grand Etang et Saline. Les mangroves constituent un écosystème d'intérêt majeur en tant qu'abris, nurserie et aire d'alimentation pour une faune diversifiée (poissons, crustacés, oiseaux...). Le palétuvier rouge (<i>Rhizophora mangle</i>) borde les étangs du Grand Cul-de-Sac. - présence d'espèces végétales menacées : Gaïac (<i>Guaiacum officinale</i>) - espèces végétales à distribution restreinte autour des étangs: Cactus cierge (<i>Pilosocereus royenii</i>), cactus tête à l'anglais (<i>Melocactus intortus</i>) - présence d'oiseaux endémiques des Petites-Antilles et de Puerto-Rico: Colibri huppé (<i>Orthorhynchus cristatus</i>), Elénie siffleuse (<i>Elaenia martinica</i>). - Connectivité avec le milieu marin: le Grand étang communique avec la mer et la Grande Saline possède une communication intermittente avec la mer qui dépend des précipitations. - Les menaces sur ces sites sont fortes: déchets, défrichements, remblais, pollutions,...
<p>ZCB3 - Terrestrial areas</p>	<p>Sites terrestres de l'île principale</p>	<ul style="list-style-type: none"> - Pointe à Toiny: ZNIEFF Type I - 9 zones considérées comme des unités floristique et faunistique d'intérêt majeur : Grand cul-de-sac / Petit cul-de-sac / Pointe Toiny / Morne Vitet / Secteur de St Jean / Anse des Cayes - Anse Flamands / Secteur Colombier Petit Jean / Morne Grand Fond-Morne Rouge / Secteur Gouverneur -Grande Pointe. Végétaux - présence du Gaïac (<i>Guaiacum officinale</i>), espèce végétale menacée (EN) observée sur toute l'île principale. - présence d'espèces végétales endémiques des Petites-Antilles et de Puerto Rico: <i>Chamaecrista obcordata</i>, <i>Eugenia cordata</i>, <i>Furcraea tuberosa</i>, <i>Melocactus intortus</i>, <i>Jacquemontia solanifolia</i>, <i>Psychilis correllii</i>, <i>Tetramicra elegans</i>, <i>Tolumnia urophylla</i>, <i>Consolea rubescens</i>, <i>Ipomoea sphenophylla</i> (espèce à confirmer) Invertébrés - Présence d'arachnides et d'insectes endémiques de St Barth (dans l'état actuel des connaissances): <u>Arachnides</u>: <i>Ammotrechella beatriceae</i>, <i>Oiclus questeli</i>, <i>Charinus bruneti</i>; <u>Insectes</u>: <i>Cratomorphus dorsalis</i>, <i>Anthonomus aestuans</i>, <i>Lachnopus memnonius</i> - Présence d'arachnides et d'insectes endémiques des Petites-Antilles (dans l'état actuel des connaissances): <u>Arachnides</u>: <i>Phyllophaga sanbarthensis</i>, <i>Centruroides barbudensis</i>, <i>Phrynus goesii</i>. <u>Insectes</u>: <i>Caribacusta saba</i>, <i>Nesonotus tricornis</i>, <i>Carylla proalbifrons</i>, <i>Antillicharis fulvescens</i>, <i>Orocharis</i>

		<p><i>angustus, Anthonomus homunculus, Tylocerus crassicornis, Blapstinus opacus, Diastolinus perforatus, Amniscus praemorsus, Styloleptus posticalis, Urgleptes cobbeni, Artipus corycaeus, Litostylus pudens, Turpilia punctata..</i></p> <p>Oiseaux</p> <ul style="list-style-type: none"> - Les 2 IBA de l'Îlet Tortue et des Îlets les Petits Saints-Gros Ilets comprennent une zone côtière située sur l'île principale. En dehors de ces IBA, les zones identifiées sur l'île principale comme unités floristique et faunistique importantes incluent des sites de nidification de limicoles et d'oiseaux marins. - présence de 4 espèces d'oiseaux endémiques des Petites Antilles et de Puerto Rico: Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Colibri fable-vert (<i>Eulampis holosericeus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri huppé (<i>Orthorynchus cristatus</i>). <p>Reptiles</p> <ul style="list-style-type: none"> - Population d'iguane des PA (395 spécimens pucés): secteur nord-ouest de l'île (entre St Jean-Gustavia et Colombier-Petite Anse), secteur nord-est de l'île (entre Lorient-Marigot et Petit-Grand Cul de Sac) - Présence de l'espèce menacée et endémique du Banc d'Aguilla <i>Alsophis rijgersmaei</i> sur toute l'île principale. - Présence de reptiles à distribution restreinte: <i>Ctenonotus gingivinus, Ameiva plei, Sphaerodactylus sputator</i> - Présence du typhlops endémique de St Barth: <i>Antillotyphlops annae</i> (Morne Vitet)
ZCB4 - Cave	Grotte à chauve-souris	<ul style="list-style-type: none"> - présence d'une espèce de chauve-souris endémique des Petites-Antilles et de Puerto Rico: Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>)



Cartes des ZCB identifiées à St-Barthélemy.

Initiative BEST III - Document de travail - St. Barthélemy

Contexte socio-économique et société civile

- **Tableau 4** - Institutions et organisations impliquées dans l'environnement et la conservation de la biodiversité.

SAINT-BARTHELEMY	
Collectivité d'Outre-Mer	
Collectivité de St-Barthélemy: Commissions et Services impliqués dans l'environnement et la coopération régionale	Commission et Service Urbanisme - Aménagement du territoire Commission Environnement, qualité de vie, développement durable Délégation à la Coopération régionale et aux Affaires Européennes Services Techniques (Assainissement, Infrastructures)
Agence Territoriale de l'Environnement de St-Barthélemy	Etablissement public territorial à caractère industriel et commercial placé sous la tutelle de la COM de St-Barthélemy. L'Agence de l'Environnement exerce des fonctions de gestion dans le domaine de la protection de l'environnement, de consultation, d'éducation et est en charge de la gestion de la Réserve Naturelle Nationale de St-Barthélemy.
Associations	
Association ALSOPHIS	Association qui œuvre à l'acquisition de connaissances et la préservation des milieux naturels sur l'île (inventaires floristiques et faunistiques).
Association pour la Protection des Oiseaux (APO)	L'APO a pour vocation la protection des oiseaux et de leurs habitats. L'APO réalise des actions de sensibilisation des scolaires et du grand public axées sur l'avifaune et les écosystèmes de l'île.
Coral Restoration Project St Barth	Association qui œuvre pour la préservation et la restauration des écosystèmes coralliens, la mise en place de pépinières de coraux, la sensibilisation du grand public.
St-Barth Essentiel	Les missions de l'association sont axées sur la préservation et la défense des milieux naturels et culturels. L'association développe des collaborations avec des bureaux d'études, experts, centres de recherche dans le cadre d'inventaires floristiques et faunistiques (termites, fourmis, araignées). Création d'un herbier conservé à St Barthélemy, réalisation d'actions de sensibilisation auprès du public et des scolaires, publications d'articles.
St-Barth Environnement et Développement Durable	Association qui agit sur les thématiques liées à l'énergie et la préservation des espaces naturels.
Etablissement public	
Conservatoire de l'Espace Littoral et des Espaces Lacustres (CELRL)	Etablissement public chargé de mener une politique foncière de protection des espaces naturels littoraux, de respect des sites naturels et de leur équilibre écologique. Sous l'autorité du délégué Outre-Mer, l'antenne du Conservatoire met en oeuvre au niveau local (pour St-Martin et St-Barth) les programmes et les actions qui ont été définis. L'antenne du CELRL pour St-Martin et St-Barthélemy est basée à St-Martin.
Organismes de recherche (Missions ponctuelles à St-Barthélemy)	
Université Antilles-Guyane	Etudes scientifiques ponctuelles: suivi et cartographie des biocénoses marines
Muséum National Histoire Naturel	Contribution aux inventaires floristiques (Sastre C.) et faunistique (Breuil M., Maréchal P.)
Centre National de la Recherche Scientifique	Le CNRS participe avec les institutions et organisations locales à des études sur les espèces et écosystèmes terrestres et marins.
Secteur privé (Bureaux d'études basés en Guadeloupe ou en métropole)	
CAREX Environnement et TBM	Cartographie de la frange littorale du milieu marin peu profond et des biocénoses marines.
Lurel Environnement	Bureau d'étude basé en Guadeloupe. Réalisation de suivis à St-Barthélemy (suivis floristiques, faunistiques, description de ZNIEFF)
BIOS	Bureau d'étude basé en Guadeloupe. Inventaire des oiseaux marins nicheurs.

➤ Mécanismes de financement existants

Tableau 5 - Sources de financement dédiées à la biodiversité et la conservation.

Source de financement	Thématique
Collectivité de St Barthélemy	- Subvention pour le fonctionnement de l'Agence de l'Environnement de St Barthélemy dont la mission est la gestion de la Réserve Naturelle Nationale de St-Barthélemy.
	- Subvention annuelle pour l'Association St Barth Essentiel
	- Financement pour l'Agence de l'Environnement de St Barthélemy permettant la maintenance des balises délimitant la Réserve Naturelle.
Redevance des prestations commerciales au sein de la Réserve Naturelle Nationale de St-Barthélemy	- Financement permettant de réaliser et entretenir les aménagements de la Réserve Naturelle Nationale de St-Barthélemy.
Adhésion, Dons	Financement pour le fonctionnement de l'Association St Barth Essentiel

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Ce rapport est un *document de travail* dont les objectifs sont d'identifier et cartographier les Zones Clés pour la Biodiversité (ZCB) pour le territoire selon 3 critères: **(1) les espèces**, comprenant: les espèces menacées à l'échelle globale, les espèces endémiques et les espèces se regroupant en grand nombre pendant leur cycle biologique; **(2) les sites** hébergeant les espèces précédemment identifiées; **(3) les corridors écologiques** reliant les ZCB.

Ce document a été utilisé comme guide lors des consultations avec les acteurs locaux et a été modifié selon les retours et informations des acteurs.

PROFIL ECOSYSTEMIQUE - SYNTHÈSE - MARTINIQUE

➤ Contextes politique et démographique

- La Martinique est un Département/Région d'Outre-Mer constituée de 34 communes et fait partie intégrante de l'Union Européenne dont elle est une Région Ultrapériphérique (RUP, European Overseas Region).
- Surface: 1128 km²
- ZEE Antilles françaises: 143 256 km² - ZEE Martinique: 47 640 km²
- Population: 386 486 hab., densité de 343 hab./km² (IEDOM 2014)
- PIB par hab.: 21 527 € (IEDOM 2013)
- Principaux secteurs d'activité (IEDOM 2013, INSEE): agriculture (banane, filière canne-sucre-rhum), élevage et pêche, industrie et artisanat, énergie, bâtiments et travaux publics, secteur tertiaire (commerce, tourisme (650 000 touristes/an), secteur non-marchand).

➤ Aires protégées, gérées et sites d'intérêt patrimonial (DEAL Chiffres clés environnement 2014, DEAL Martinique 2009)



- Parc Naturel Régional de la Martinique (PNRM) (79 613 ha): dont 16167 ha de zones naturelles d'intérêt majeur qui sont les coeurs de nature du PNRM (réglementation ou interdiction des activités humaines)
- Réserves Naturelles Nationales (RNN) de la presqu'île de la Caravelle (387 ha) et des îlets de Sainte-Anne (5,8 ha)
- Réserve Marine Régionale du Prêcheur (603 ha hors zone tampon) - en cours de création
- 3 Réserves Biologiques Domaniales Intégrales (RBI): RBI de la Montagne Pelée (2285 ha), RBI du Prêcheur-Grand'Rivière (758 ha), RBI des Pitons du Carbet (3842 ha)
- 23 Arrêtés de Protection du Biotope (427 ha)
- 3300 ha sont protégés suite à l'acquisition foncière du Conservatoire du Littoral (CELRL 2015)
- 15 forêts bénéficiant du Régime Forestier (16 466 ha): Forêt départementalo-domaniale, Forêt domaniale du littoral, Forêt départementale
- 4 sites classés (9632 ha) et 12 sites inscrits (3301 ha)
- 5 cantonnements de pêche (1244 ha)
- 10 réserves de chasse, dont 8 réserves (4052 ha) faisant l'objet d'un Arrêté Préfectoral
- Sanctuaire AGOA établi sur la ZEE des Antilles françaises (143 256 km²), dont 47640 km² pour la ZEE de Martinique

BEST III - Document de travail - Martinique

➤ **Reconnaissance internationale des habitats naturels et de la faune sauvage**

- 1 site inscrit à la Convention RAMSAR: Etang des Salines (207 ha)
- 3 sites labellisés SPAW: Sanctuaire AGOA (ZEE de Martinique), Etang des Salines (Commune de Ste Anne), Versant nord-ouest de la Montagne Pelée (Communes du Prêcheur et Grand'Rivière)

➤ **Projets en cours**

- Démarche REDOM: identification et cartographie d'espèces et d'habitats à fort intérêt éco-régional.
- Création de l'Observatoire Martiniquais de la Biodiversité (OMB) le 27 mai 2015. L'OMB est un dispositif multi-partenarial animé par le PNR de Martinique et regroupant des institutions, collectivités, associations de protection de l'environnement.
- Schéma Régional de Cohérence Ecologique (SRCE - Martinique): identification de corridors écologiques et de réservoirs biologiques.
- Création de la Réserve Naturelle Régionale de la Baie de Génipa (3019 ha hors zone tampon)
- Projet d'extension de la RNN de la Presqu'île de la Caravelle (incluant la Baie du Trésor et les plages au nord de la presqu'île)
- Projet d'extension de la RNN des îlets de Ste Anne (littoral Atlantique de la commune de Ste Anne: de la pointe Sud à la limite nord de la commune de Ste Anne)
- Mission d'étude pour la création d'un Parc Naturel Marin en Martinique (Agence des Aires Marines Protégées Antenne Antilles, Secteur d'étude: ZEE de Martinique)
- Projet d'Opération Grand Site de France pour le site "Salines-Baie des Anglais"
- Proposition d'inscription des massifs forestiers et espaces sommitaux des volcans de Martinique pour le classement au patrimoine mondial de l'UNESCO: Montagne Pelée, massif du Piton Mont Conil et les mornes et pitons adjacents (communes du Prêcheur et Grand-Rivière), massif du Morne Jacob et des Pitons du Carbet, Presqu'île de la Caravelle, Presqu'île des Trois-Îlets, 6 ZNIEFF (au centre et au sud de l'île).

1 - Initiative BEST III - Identification des Zones Clés pour la Biodiversité (ZCB)

1.1 - Listes d'espèces retenues dans le cadre de la méthodologie BEST

Tableau 1 - Liste des espèces menacées à l'échelle mondiale (liste rouge UICN Globale, données de Juillet 2014), les statuts des espèces évaluées pour la liste IUCN régionale pour la Caraïbe sont indiqués entre parenthèses si ces statuts diffèrent de la liste rouge globale. Les listes rouges régionales et locales sont considérées pour les espèces endémiques strictes de la Martinique: * liste rouge locale de la flore vasculaire de Martinique (2013), ** liste rouge régionale des Odonates des Antilles françaises (Meurgey 2012).

Taxon	Espèces menacées
<i>Végétaux</i>	
CR - 10 esp.	<i>Aechmea reclinata*</i> , <i>Aechmea serrata*</i> , <i>Byrsonima martinicensis*</i> , <i>Erithalis acuminata*</i> , <i>Eugenia gryposperma*</i> , <i>Polygala antillensis*</i> , <i>Schefflera urbaniana*</i> , <i>Stylogyne canaliculata*</i> , <i>Wallenia lamarckiana*</i> , <i>Tanaecium crucigerum</i> (endémique de Martinique et Ste Lucie)
EN - 7 esp.	<i>Nectandra krugii</i> , <i>Swietenia mahagoni</i> , <i>Pouteria pallida</i> , <i>Guaiacum officinale</i> , <i>Clidemia latifolia*</i> , <i>Cybianthus dussii*</i> , <i>Drypetes dussii*</i>
VU - 9 esp.	<i>Magnolia dodecapetala</i> , <i>Guarea macrophylla ssp. macrophylla</i> , <i>Swietenia macrophylla</i> , <i>Pouteria semecarpifolia</i> , <i>Freziera cordata</i> , <i>Arthrostylidium obtusatum*</i> , <i>Lobelia conglobata*</i> , <i>Inga martinicensis</i> , <i>Zanthoxylum flavum</i>
<i>Coraux</i>	
CR - 2 esp.	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN - 2 esp.	<i>Orbicella annularis</i> , <i>Orbicella faveolata</i> ,

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VU - 5 esp.	<i>Agaricia lamarcki, Dendrogyra cylindrus, Dichocoenia stokesii, Orbicella franksi, Mycetophyllia ferox</i>
Mollusques	
VU - 2 esp.	<i>Amphicyclotulus liratus, Conus hennequini</i>
Insectes**	
VU - 4 esp.	<i>Brechmorhoga archboldi (local Redlist), Protoneura ailsa (local redlist), ,</i>
Raies et requins	
EN - 1 esp.	<i>Sphyrna mokarran#</i>
VU - 1 esp.	<i>Rhincodon typus#</i>
Poissons	
CR - 1 esp.	<i>Epinephelus itajara#</i>
EN - 2 esp.	<i>Epinephelus striatus#, Thunnus thynnus (CR sur la liste rouge Caraïbe)</i>
VU - 10 esp.	<i>Balistes vetula, Hippocampus erectus#, Lachnolaimus maximus, Lutjanus analis, Lutjanus cyanopterus#, Megalops atlanticus, Mycteroperca interstitialis#, Scarus guacamaia#, Thunnus obesus, Makaira nigricans (EN sur la liste rouge Caraïbe)</i>
Amphibiens	
VU - 1 esp.	<i>Allobates chalcopis</i>
Reptiles	
CR - 2 esp.	<i>Erythrolamprus cursor (pot. extinct), Eretmochelys imbricata</i>
EN - 4 esp.	<i>Iguana delicatissima, Gymnophthalmus pleii, Chelonia mydas, Caretta caretta</i>
VU - 2 esp.	<i>Dermochelys coriacea, Lepidochelys olivacea</i>
Oiseaux	
EN - 2 esp.	<i>Pterodroma hasitata#, Ramphocinclus brachyurus</i>
VU - 2 esp.	<i>Dendrocygna arborea#, Icterus bonana (Dewynter et al. 2014 préconisent d'élever le statut de conservation à "En danger")</i>
Mammifères	
VU - 2 esp.	<i>Myotis martiniquensis, Phryseter macrocephalus</i>

Espèces rares

Tableau 2 - Liste des espèces endémiques¹ (Références: AAMP-DEAL Martinique 2010, Breuil 2009, Conservatoire Botanique de Martinique, DEAL 2008, Fournet 2002, Hedge 2012, Issartel et Leblanc 2004, Lamy D. com. pers. 2010, Lourenço 2013, Maréchal 2011, Meurgey 2005, Rollet 2010, Sastre et Breuil 2007, Tabouret 2012, UICN 2013, Fiches ZNIEFF-DEAL-INPN, Liste rouge flore Martinique 2013, Liste rouge des odonates des Antilles françaises (Meurgey 2012), Démarche REDOM Martinique 2015)

Groupes taxonomiques	Nombre d'espèces endémiques
Plantes	- 98 espèces arborescentes et 26 espèces de Ptéridophytes endémiques des Petites-Antilles. Des espèces sont endémiques de quelques îles des Petites-Antilles, comme la liane à barrique (<i>Tanaecium crucigerum</i>) endémique de Martinique et Ste Lucie. - 40 esp. endémiques strictes de Martinique dont certaines inscrites sur la liste rouge locale (9 CR, 3 EN, 2 VU)
Invertébrés - Mollusques	- 20 esp. de Mollusques terrestres endémiques de Martinique. L'espèce <i>Discolepis desidens</i> a été redécouverte et était jusqu'alors considérée comme disparue. lister les esp cf ouvrage R. Delannoye & al.
- Arachnides	- 4 esp. de Mollusques marins endémiques de Martinique: <i>Conus norai, C. hennequini,</i>

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<p>- Insectes</p> <p>- Crustacés</p>	<p><i>C.riosi</i>, <i>C. burryae</i></p> <ul style="list-style-type: none"> - 1 esp. d'araignée endémique de Martinique: Matoutou falaise (<i>Avicularia versicolor</i>) - 1 esp. de scorpion endémique de Martinique: <i>Tityus marechali</i> - 1 mygale endémique de quelques îles des Petites-Antilles: <i>Acanthoscurria antillensis</i> - 23 esp. coléoptères et 1 esp. de phasme (<i>Diapherodes martinicensis</i>) endémiques de Martinique - 1 papillon endémique strict de Martinique: Castnide de Pinchon (<i>Castnia pinchoni</i>) - 3 esp. libellules endémiques de quelques îles des PA (Guadeloupe, Dominique, Martinique): <i>Argia concinna</i>, <i>Protoneura ailsa</i>, <i>Brechmorhoga archboldi</i> - crabe cirrique endémique des Petites-Antilles: cirrique de rivière (<i>Guinotia dentata</i>)
Poissons d'eau douce	<ul style="list-style-type: none"> - 1 esp. endémique de Martinique (<i>Anablepsoides cryptocallus</i> (previous genus name <i>Rivulus</i>)) - 1 espèce de poisson dulçaquicole endémique des Petites-Antilles (Trinidad à St-Martin): Petit-dormeur (<i>Eleotris perniger</i>)
Amphibiens	<ul style="list-style-type: none"> - 1 esp. endémique de Martinique (<i>Allobates chalcopis</i>) - 1 esp. endémique de quelques îles des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>), Hylode de Johnstone (<i>Eleutherodactylus johnstonei</i>)
Reptiles	<ul style="list-style-type: none"> - 4 esp. endémiques de Martinique: Trigonocéphale (<i>Bothrops lanceolatus</i>), Couresse de la Martinique (<i>Erythrolamprus cursor</i>-potentiellement disparue), Anolis roquet (<i>Dactyloa roquet</i>), Sténostome à deux raies (<i>Tetracheilostoma bilineatum</i>) - le Scinque de la Martinique (<i>Capitellum metallicum</i>) est potentiellement éteint (Hedges and Conn 2012) - 4 esp. endémiques des Petites Antilles: Iguane des Petites-Antilles (<i>Iguana delicatissima</i>), Gymnophthalme de Plée (<i>Gymnophthalmus pleii</i>), Sphérodactyle de Saint-Vincent (<i>Sphaerodactylus vincenti</i>), <i>Sphaerodactylus festus</i> (endémique du Nord de la Martinique et de la Dominique)
Oiseaux	<ul style="list-style-type: none"> - 1 esp. endémique de Martinique: Oriole de Martinique (<i>Icterus bonana</i>) - 15 esp. endémiques des Petites-Antilles et de Puerto-Rico: <ul style="list-style-type: none"> # 1 esp. endémique de Martinique et Dominique: Colibri à tête bleue (<i>Cyanophaia bicolor</i>). Dewynter et al. 2014b préconisent de considérer cette espèce "en danger d'extinction (EN)" # 2 esp. endémiques de Martinique et Ste Lucie: Trembleur gris (<i>Cinlocerthia gutturalis</i>), le Moqueur à gorge blanche (<i>Ramphocynclus brachyurus</i>). Une sous-espèce du Moqueur à gorge blanche (<i>R. brachyurus brachyurus</i>) est endémique stricte de Martinique. # 11 esp. endémiques des Petites-Antilles et de Puerto-Rico: Tyran janeau (<i>Myiarchus oberi</i>), Martinet chiquesol (<i>Chaetura martinica</i>), Trembleur brun (<i>Cinlocerthia ruficauda</i>), Moqueur grivotte (<i>Allenia fusca</i>), Colombe à croissant (<i>Geotrygon mystacea</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>E. holosericeus</i>), Saltator gros-bec (<i>Saltator albicollis</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Elénie siffleuse (<i>Elaenia martinica</i>).
Mammifères terrestres	<ul style="list-style-type: none"> - 5 esp. de chauves-souris endémiques des Petites-Antilles: <ul style="list-style-type: none"> # 1 esp. endémique de la Martinique: Murin martiniquais (<i>Myotis martiniquensis</i>) (Larsen et al. 2012) # 4 esp. endémiques des Petites-Antilles: Ardops des Petites Antilles (<i>Ardops nichollsi</i>), Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>- endémique des Petites Antilles, îles Vierges et Puerto Rico), Monophylle des Petites-Antilles

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(*Monophyllus plethodon*), Natalide paillé (*Natalus stramineus*).
La sous-esp. *Ardops nicholli koopmani* est endémique stricte de l'île.

¹ Critère d'endémicité déterminé dans l'état actuel des connaissances.

1.2 - Sites - Ecosystèmes retenus dans le cadre de la méthodologie BEST

- Aires protégées et sites d'intérêt patrimonial (cf. liste et cartographie des sites p.1)
- Cartographies de sites remarquables et d'importance patrimoniale

ZNIEFF terrestres (11 906 ha DPM exclu) et marines (4160 ha).



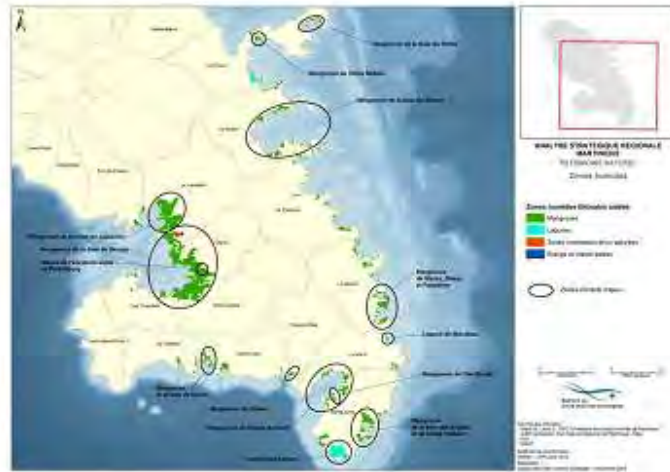
Espaces botaniques remarquables cartographiés par le Conservatoire Botanique de Martinique et Laval 2006, Impact mer 2009)



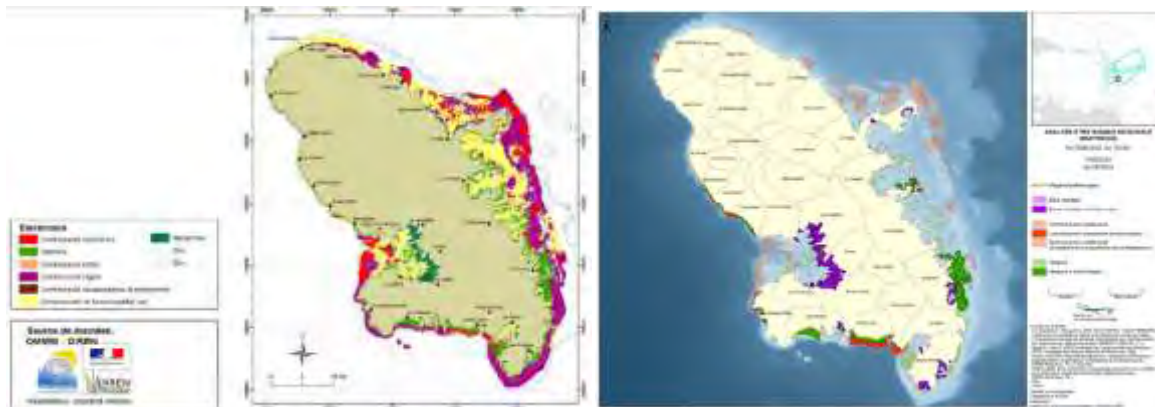
Cartographies des formations végétales (IFN 2008)



Cartographie des zones humides (AAMP-DEAL Martinique 2010, Gayot et Laval 2006, Impact mer 2009)

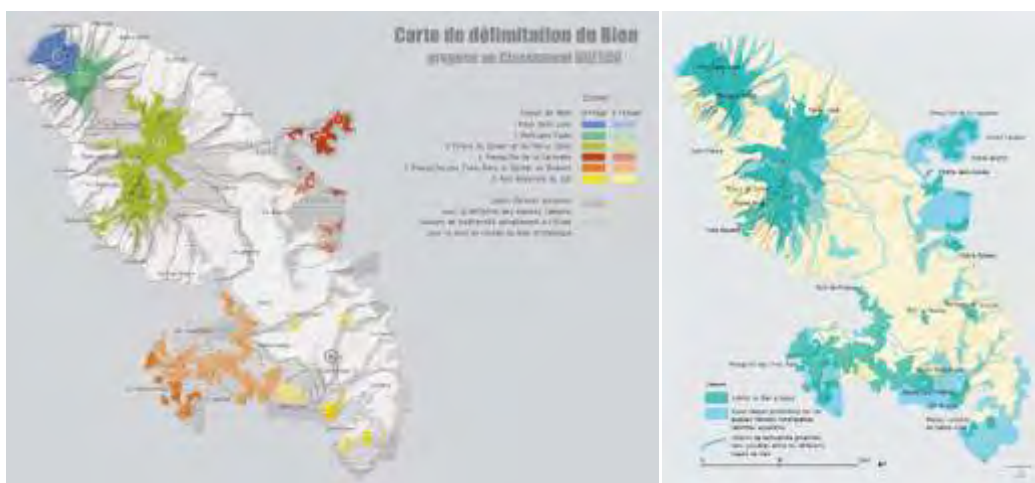


Cartographies des biocénoses marines de la Martinique (Legrand 2009,2010, OMMM, DEAL Martinique).





Cartographies des sites proposés à l'inscription au patrimoine mondial de l'UNESCO (sites, zones tampon et couloirs de biodiversité).



➤ **Populations d'oiseaux et IBA - Important Bird Areas** (Aires importantes pour la Conservation des Oiseaux - "ZICO") (Références: Lemoine et al. 2008, BirdLife International)



- **10 ZICO** identifiées en Martinique (54512 ha). La plupart de ces zones sont intégrées dans des aires protégées et bénéficient de ce fait d'un statut de protection : RNN, Arrêté de Protection du Biotope, sites classés et inscrits, sites acquis par le CELRL, Réserves de chasse.
- Environ 200 espèces d'oiseaux sont observées en Martinique, dont 65 espèces nicheuses et 110 espèces migratrices.
- La Martinique fait partie de la **zone d'endémisme pour les oiseaux des Petites-Antilles** (Lesser Antilles Endemic Bird Area *EBA*) et compte 16 espèces d'oiseaux à distribution restreinte des Petites-Antilles à Puerto-Rico. Une espèce est endémique stricte de la Martinique (Oriole de Martinique, *Icterus bonana*) et trois espèces ont une distribution restreinte: Martinique et Dominique pour le Colibri à tête bleue (*Cyanophaia bicolor*), Martinique et Ste Lucie pour le

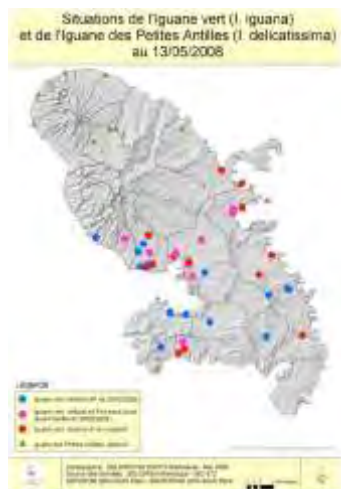
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Trembleur gris (*Cinlocerthia gutturalis*) et le Moqueur à gorge blanche (*Ramphocynclus brachyurus*). Une sous-espèce du Moqueur à gorge blanche (*R. brachyurus brachyurus*) est endémique de la Martinique.

- 7 esp. d'oiseaux marins se réunissent en grand nombre sur des îlets et falaises (critère IBA: "Congregatory birds")

- La presqu'île de la Caravelle (RNN) abrite plus de la moitié de la population mondiale du Moqueur à Gorge Blanche (*Ramphocinclus brachyurus*).

- Le Phaéon à bec jaune (*Phaethon lepturus*), espèce relativement rare en Martinique, nidifie sur l'îlet du Diamant, les falaises entre Bellefontaine et Le Carbet, la RNN de la Presqu'île de la Caravelle (Nadine Vénunière comm.pers. 2015).



➤ Reptiles et Amphibiens:

- **Plan national d'actions en faveur de l'iguane des Petites-Antilles** (Legouez 2010)

- Présence d'une population importante d'iguanes des Petites Antilles (*Iguana delicatissima*) sur l'îlet Chancel (900 individus recensés en 2007, potentiellement plus de 1000 individus).

- Le secteur au nord de la Martinique (communes du Prêcheur et de Grande Rivière) représenterait un habitat important pour des populations d'iguanes des PA (Angin et al. 2015): Anse la Celle, Anse Dufour, Anse Couleuvre, Anse Lévrier, Anse à Voile, Anse Capot, Anse La Table. Des individus ont été observés sur les communes de Morne Rouge, Le Lorrain, Sainte-Marie et Basse Pointe. Le littoral de la commune Prêcheur Grand'Rivière constitue un site de ponte privilégié pour cette espèce en danger et endémique de quelques îles des Petites Antilles (Angin et al. 2015).

- **Atlas des Amphibiens et Reptiles en cours** (Biotope 2015, étude commanditée par le PNRM).

Sites de ponte des tortues marines

- Le **Plan d'action pour les tortues marines de la Martinique (2008-2012)** s'inscrit dans le cadre du Plan de restauration des tortues marines aux Antilles françaises et définit la stratégie mise en œuvre pour la protection et la restauration des populations de tortues marines (DEAL Martinique 2008). La mise en œuvre de ce plan de restauration s'appuie sur le Réseau Tortues Marines, qui regroupe des institutionnels, associations et collectivités, et est animé par la cellule technique de l'ONCFS.

- 5 espèces de tortues marines sont observées dans les eaux martiniquaise, les tortues olivâtre et carette étant plus occasionnelles. La tortue imbriquée et la tortue Luth pondent en Martinique. Les pontes de tortues vertes sont plus rare (AAMP-DEAL Martinique 2010, SEPANMAR 2004). La plupart des plages de Martinique sont des sites de pontes (entre 130 et 175 plages). Les tortues Luth pondent préférentiellement sur les plages nord atlantique (Le Lorrain, Le Marigot, Ste Marie) et dans le sud (Macabou, Grande anse des Salines). Les principales plages fréquentées par les tortues imbriquées sont Grande anse des Salines, Le Diamant, Case Pilote, plages de la commune du Prêcheur). Quelques tortues vertes pondent sur la plage de Grande Anse des Salines (AAMP-DEAL Martinique 2010, suivis des traces de ponte données 2008).

➤ Mammifères

Mammifères terrestres

- 4 des 5 espèces de chauves-souris endémiques des Petites-Antilles sont considérées de "très sensibles" du point de vue de leur écologie et distribution (Barataud et al. 2013): *Myotis martiniquensis* (espèce considérée comme

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- Les corridors et réservoirs biologiques identifiés dans le cadre du SRCE de Martinique seront pris en considération.

Milieu marin

- Continuum écologique entre les trois écosystèmes marins et connectivité entre les milieux dulçaquicoles et marins.
- Schéma migratoire des baleines à bosse fréquentant les eaux de la Caraïbe en période de reproduction: migration entre les eaux froides du nord (Canada, Islande, Norvège...) et les eaux chaudes de la région Caraïbe.
- Les données sur les déplacements des populations de cétacés étudiés lors des suivis dans le sanctuaire AGOA (2010-2014) seront intégrées dans la présente étude (données en cours d'analyse).

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Tableau 3- Zones Clés pour la Biodiversité (ZCB) identifiées pour l'archipel martiniquais.

N. ZCB	Intitulé de la ZCB	Taxons présents - Habitats/ Ecosystèmes - Sites à enjeux - Justification de la désignation de ZCB
ZCB 1	Baie de Fort de France	<p>Ecosystèmes terrestres et marins</p> <ul style="list-style-type: none"> - La baie de Fort-de-France comprend environ 370 ha d'herbiers dont près de 80% sont qualifiés de dégradés à très dégradés (AAMP-DEAL Martinique 2010, Legrand 2009). - Les communautés coralliennes sont discontinues et très dégradées dans la baie (62% de la biocénose). Les communautés les moins dégradées sont observées en sortie de baie au niveau du Banc du Gros Ilet et de l'îlet à Ramiers (Legrand 2010). Des communautés coralliennes développées sont présentes au niveau des cayes dans la baie de Fort de France: "zone de la Grande Sèche". - Continuum écologique entre les 3 écosystèmes marins: mangroves, herbiers, récifs coralliens - Les mangroves, situées dans le secteur Cohé du Lamentin et la Baie de Génipa, sont en bon état écologique avec des peuplements matures et diversifiés (Gaulejac et al. 2009). Zone naturelle d'intérêt majeur du PNRM. - La Baie de Génipa dans la baie de Fort de France comprend 65% des mangroves de l'île (1200 ha) (AAMP-DEAL Martinique 2010, DEAL Martinique 2014, Gaulejac et al. 2009). - Cette zone de mangroves est associée à des herbiers qui abritent une espèce de corail remarquable, <i>Oculina diffusa</i>, qui est très rare en Martinique (AAMP-DEAL Martinique 2010, OCEANvironnement 2014). <p>-Flore</p> <ul style="list-style-type: none"> - Présence d'espèces végétales endémiques de Martinique (<i>Aechmea reclinata</i>-CR) - Esp. menacées: <i>Swietenia mahagoni</i> (EN), <i>S. macrophylla</i> (VU) <p>- Invertébrés</p> <ul style="list-style-type: none"> - Présence de mollusque marin endémique de l'île (AAMP-DEAL Martinique 2010, Lamy D. com. pers. 2010): <i>Conus riosi</i> <p>- Oiseaux</p> <ul style="list-style-type: none"> - IBA des mangroves de Fort de France (Lemoine et al. 2008): présence de l'Oriole de la Martinique (<i>Icterus bonana</i> - qui affectionne particulièrement les zones de mangroves) et de 9 esp. endémiques des Petites-Antilles: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>E. holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Tyran janeau (<i>Myiarchus oberi</i>), Moqueur grivotte (<i>Alenia fusca</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Saltator gros-bec (<i>Saltator albicollis</i>). <p>Protection réglementaire et importance patrimoniale</p> <ul style="list-style-type: none"> - RNR de la Baie de Génipa en projet: zone de réserve, zone de protection

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		renforcée, zone tampon (site inscrit du Village de la Poterie, intérêt historique et culturel)
		Les iguanes ne sont plus présents sur l'îlet à Ramiers.
ZCB 2	RNR Prêcheur - Ilet La Perle	<p>- Biocénoses marines (AAMP-DEAL Martinique 2010, Impact mer et al. 2011, Legrand 2010)</p> <ul style="list-style-type: none"> - Inter connectivité entre les herbiers (denses, en bon état de santé) et récifs coralliens (jusqu'à 35% de couverture corallienne). Les communautés coralliennes entourant l'îlet de La Perle sont en bon état de santé (13 ha). - Esp. menacées: <i>Acropora palmata</i> (au moins 70 colonies), <i>Dendrogyra cylindrus</i> - Diversité importante de Mollusques (AAMP-DEAL Martinique 2010, Lamy D. com. pers. 2010) - Diversité ichthyologique (jusqu'à 90 esp.), présence d'esp. menacées: <i>Balistes vetula</i>, <i>Lutjanus analis</i>, <i>Lutjanus cyanopterus</i>, <i>Lachnolaimus maximus</i>, <i>Mycteroperca interstitialis</i> <p>- Reptiles</p> <ul style="list-style-type: none"> - présence de l'iguane des Petites-Antilles au nord de la Martinique (Angin et al. 2015): Anse la Celle, Anse Dufour, Anse Couleuvre, Anse Lévrier, Anse à Voile, Anse Capot, Anse La Table. - sites de ponte pour les tortues, imbriquées et tortues luth: Anses Couleuvre, Lévrier, Voile (Impact mer et al. 2011) - site d'alimentation des tortues marines (Impact mer et al. 2011) <p>- Oiseaux</p> <ul style="list-style-type: none"> - falaises et îlet la Perle: site de nidification d'oiseaux marins (<i>Sterna dougallii</i>, <i>Phaethon lepturus</i>) (Impact mer et al. 2011) - Anse Couleuvre-Anse Céron-Ilet la Perle: identification d'une zone à enjeux prioritaires pour l'avifaune (Impact mer et al. 2011) <p><i>Protection réglementaire et importance patrimoniale</i></p> <ul style="list-style-type: none"> - RNR du Prêcheur (en cours de création) - site intégré au site classé du versant NO de la Montagne Pelée - ZNIEFF marine: îlet La Perle, fonds marins et îlet Anse Céron à Anse Couleuvre
ZCB 3	Montagne Pelée - Prêcheur Grande Rivière et Pitons du Carbet	<p>RBI Montagne Pelée-Prêcheur Grande Rivière (ONF 2006)</p> <ul style="list-style-type: none"> - Ecosystèmes de forêts sempervirentes saisonnières tropicales (descendant sans discontinuité jusqu'au rivage) et de forêts ombrophiles submontagnardes et montagnardes (Fiard 1994) - 69 esp. arborescentes endémiques de Martinique (dont <i>Sloanea dussii</i>, <i>Charianthus nodosus</i>, <i>Pitcairnia spicata</i>, <i>Inga martinicensis</i>, <i>Clidemia latifolia</i>, <i>Myrcia martinicensis</i>) et des Petites-Antilles (<i>Sloanea dentata</i>, <i>Licaria sericea</i>, <i>Pouteria pallida</i>...) - présence d'esp. menacées: <i>Swietenia macrophylla</i>, <i>Guarea macrophylla</i>, <i>Freziera cordata</i>, <i>Pouteria pallida</i>, <i>Inga martinicensis</i>, <i>Clidemia latifolia</i>

<p>ZCB 3</p>	<p>- Invertébrés</p> <ul style="list-style-type: none"> - RBI de la Montagne Pelée et des Pitons du Carbet: Présence de la mygale Matoutou falaise endémique de l'île (<i>Avicularia versicolor</i>) et de la mygale <i>Acanthoscurria antillensis</i> endémique des PA (Conde 2010, ONF 2006, REDOM) - présence de coléoptères (au moins 23 esp. identifiées) et libellules (<i>Argia concinna</i>, <i>Brechmorhoga archboldi</i>, <i>Macrothemis meurgeyi</i>) endémiques de Martinique ou des Petites Antilles (ONF 2006, REDOM, Touroult et Poirier 2012). - présence de l'escargot terrestre <i>Amphicyclotulus liratus</i> (VU), endémique du massif de la montagne Pelée et des Pitons du Carbet (ONF 2006) <p>- Amphibiens</p> <ul style="list-style-type: none"> - Présence de l'amphibien endémique de Martinique (<i>Allobates chalcopis-VU</i>) dont l'aire de répartition est limitée à 2 zones montagneuses de l'île (ZNIEFF de Morne Rouge -Montagne Pelée et Pitons du Carbet, 700 ha) (Dewynter et al. 2012, ONF 2006). - RBI de la Montagne Pelée: présence de l'hylode endémique de quelques îles des PA (<i>Eleutherodactylus martinicensis</i>) <p>- Reptiles</p> <ul style="list-style-type: none"> - Présence du Trigonocéphale (<i>Bothrops lanceolatus</i>), endémique de la Martinique. Les massifs forestiers de la Montagne Pelée-Mont Conil et des Pitons du Carbet constituent des habitats favorables à cette espèce (Dewynter et Rufroy 2012). - Présence d'esp. endémiques des PA (ONF 2006): Sphérodactyle de Saint-Vincent (<i>Sphaerodactylus vincenti</i>), dont 2 sous-esp. sont endémiques de la Montagne Pelée et du Mont Conil; Anolis roquet (<i>Dactyloa roquet</i>) - Présence d'iguanes des PA (<i>I. delicatissima</i>) - Anse Céron (Grand'Rivière), Morne Rouge, massifs boisés des communes Le Lorrain et Ste Marie (Legouez 2010). <p>- Oiseaux</p> <ul style="list-style-type: none"> - 2 IBA - forêts tropicales au nord de la Montagne Pelée et les Pitons du Carbet (Conde 2010, Lemoine et al. 2008): <ul style="list-style-type: none"> - présence de l'esp. endémique de Martinique: Oriole de Martinique (<i>Icterus bonana</i>) - présence de 14 esp. endémiques des Petites-Antilles dont certaines limitées à quelques îles: Colombe à croissant (<i>Geotrygon mystacea</i>), Martinet chiquesol (<i>Chaetura martinica</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>E. holosericeus</i>), Colibri à tête bleue (<i>Cyanophaia bicolor</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Tyran janeau (<i>Myiarchus oberi</i>), Moqueur grivotte (<i>Allenia fusca</i>), Trembleur brun (<i>Cinlocerthia ruficauda</i>), Trembleur gris (<i>Cinlocerthia gutturalis</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Saltator gros-bec (<i>Saltator albicollis</i>) <p>- Mammifères</p> <ul style="list-style-type: none"> - Présence d'esp. endémique de Martinique (<i>Myotis martiniquensis</i>) et des PA (<i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i>, <i>Monophyllus plethodon</i>,
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		<p><i>Natalus stramineus</i>)</p> <ul style="list-style-type: none"> - le Murin martiniquais (<i>Myotis martiniquensis</i>) est très rare sur l'île et n'a été observée que sur 2 sites: un site dans la RBI de la Montagne Pelée (1 seul ind. observé) et le tunnel de Beauséjour (plus de 2000 ind.) (Issartel 2000, ONF 2006). - La Brachyphylle des cavernes est présente dans une dizaine de sites sur l'île dont le tunnel de Beauséjour qui constitue l'un des gîte les plus importants pour cette espèce aux Antilles (ONF 2006, Issartel et Leblanc 2004) - Les forêts humides constituent le lieu de reproduction et de chasse préférentiel de l'Ardops endémique des PA (<i>Ardops nicholli</i>). L'espèce serait présente dans la RBI de la Montagne Pelée, des Pitons du Carbet et à Morne Rouge (Issartel et Leblanc 2004, ONF 2006) <p>Protection réglementaire et importance patrimoniale</p> <ul style="list-style-type: none"> - Forêts départementalo-domaniales - 2 RBI (Montagne Pelée - Prêcheur et Pitons du Carbet) - ZNIEFF terrestres : Piton Mont Conil-Cap St Martin, Anse Couleuvre-Anse Céron - site classé du Piton Mont Conil - APB canal Habitation Beauséjour - Secteur nord du PNRM - Réseau hydrographique dense - 679 ha acquis par le CELRL: site adjacent à la RBI de la Montagne Pelée - Massifs du Piton Mont Conil, de la Montagne Pelée, les massifs forestiers de Prêcheur-Grand Rivière et de morne Jacob-Pitons du Carbet sont étudiés pour l'inscription au patrimoine mondial de l'UNESCO.
	<p>Secteur Bellefontaine - Case Pilote - Le Lorrain (hors RBI)</p>	<ul style="list-style-type: none"> - Flore et écosystème terrestre (Fiche ZNIEFF, Conservatoire Botanique 2005) - Massifs boisés, forêts xérophiles et ombrophiles (ZNIEFF terrestres) - Esp. menacées: <i>Zanthoxylum flavum</i>, <i>Tanaecium crucigerum</i> - Esp. endémiques de Martinique (<i>Sloanea dussii</i>, <i>Myrcia martinicensis</i>, <i>Schefflera urbaniana</i>, <i>Rondeletia martinicensis</i>) et de quelques îles des PA (<i>Calliandra slanaeae</i>, <i>Pouteria semecarpifolia</i>, <i>Euterpe dominicana</i>, <i>Protium attenuatum</i>, <i>Talauma dodecapetala</i>, <i>Tanaecium crucigerum</i>) - Biocénoses marines (ZCB 1) - le secteur de la pointe des Nègres à Belle Fontaine présente une continuité d'herbiers (226 ha) et de communautés coralliennes (67 ha). Ces biocénoses sont en assez bon état de santé et présentes des diversité en coraux et poissons relativement élevées (AAMP-DEAL Martinique 2010, Legrand 2010). - Reptiles - Présence de quelques populations d'iguanes des PA - Sites de pontes de tortues marines à Case Pilote et Schoelcher (données à actualiser)

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		<p>Protection réglementaire et importance patrimoniale</p> <ul style="list-style-type: none"> - Site inscrit: Vallée de la Rivière Blanche - 15 ZNIEFF terrestres - APB de Bellefontaine - APB Cap Enragé, Morne Rose et Fond Richard (communes de Case Pilote et Bellefontaine) <p>Un corridor écologique relie les 2 zones de la ZCB 4.</p>
ZCB 4	<p>Secteur Anse Dufour - Anses d'Arlet - Diamant -Pointe Borgnèse</p>	<p>Flore et écosystème terrestre</p> <ul style="list-style-type: none"> - Forêts sèches et mésophiles des mornes du sud (ZNIEFF terrestres) - esp. endémiques des PA: <i>Pisonia suborbiculata</i>, <i>Calypttranthes elegans</i> (La Bertrand seule station connue en Martinique pour cette esp. endémique de Martinique et de Ste Lucie) - esp. menacées: <i>Picrasma excelsa</i>, <i>Zanthoxylum flavum</i> (VU) <p>Biocénoses marines - zones humides</p> <ul style="list-style-type: none"> - Présence de zones humides: Baie de Céron, mangroves de Poirier, mangroves de Ste Luce, mangroves du marigot du Diamant (AAMP-DEAL Martinique 2010) - Près de 750 ha d'herbiers dont 273 ha sont situés dans la Grande Anse du Diamant et constituent une vaste surface continue en bon état de santé. Les surfaces d'herbiers sont davantage morcelées dans le secteur de Ste Luce (AAMP-DEAL Martinique 2010, Legrand 2009, 2010) - le secteur de l'anse Noire aux Anses d'Arlet et de Ste Luce présente les diversités d'espèces coralliennes et de poissons les plus élevées de l'île (AAMP-DEAL Martinique 2010). - le récif de la Caye d'Olbian possède des formations constructrices remarquables et une diversité ichtyologique importante. - La connectivité entre les récifs et les herbiers est particulièrement observée dans le secteur de Ste Luce. - Diversité importante de Mollusques et présence d'esp. endémiques (AAMP-DEAL Martinique 2010, Lamy D. com. pers. 2010): <ul style="list-style-type: none"> - <i>Timbellus phyllopterus</i> (end. de Guadeloupe et Martinique), <i>Conus norai</i> (endémique de Martinique) <p>Invertébrés</p> <ul style="list-style-type: none"> - Présence du scorpion (<i>Tityus marechali</i>) endémique stricte de Martinique (Lourenço 2013) <p>- Oiseaux</p> <p>- 1 IBA des forêts du Diamant-Trois Ilets</p> <ul style="list-style-type: none"> - présence de l'esp. endémique de Martinique: Oriole de Martinique (<i>Icterus bonana</i>) - présence de 9 esp. endémiques des Petites-Antilles: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri felle-vert (<i>E. holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Tyran janeau (<i>Myiarchus oberi</i>), Moqueur grivotte (<i>Allenia fusca</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Saltator gros-bec (<i>Saltator albicollis</i>)

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ZCB 4		<p>- Reptiles</p> <p>- Site de pontes des tortues marines : Grande Anse du Diamant (données à actualiser)</p> <p>Protection réglementaire et importance patrimoniale</p> <p>- Le site des Trois Ilets et le Rocher du Diamant sont proposés pour l'inscription au patrimoine mondial de l'UNESCO.</p> <p>- APB sur l'îlet du Diamant</p> <p>- 1 site classé des Mornes de la Pointe du Diamant et de l'îlet du Diamant</p> <p>- 3 sites inscrits: Anse Cafard, Morne Champagne et Anses d'Arlet, Petite Anse</p> <p>- 4 ZNIEFF marine: Cap Salomon, Ilet du Diamant, caye d'Obian, Caye de Ste Luce</p> <p>- 10 ZNIEFF terrestres</p> <p>- cantonnement de pêche de Ste Luce</p>
	Ilet du Diamant	<p>- Reptiles</p> <p>- La Couresse de la Martinique (<i>Erythrolamprus cursor</i>) serait uniquement présente sur le Rocher du Diamant. La présence actuelle de l'espèce serait à confirmer car elle n'a pas été observée lors des derniers inventaires.</p> <p>- Oiseaux</p> <p>- 1 IBA Ilet du Diamant: reposoirs et aires de nidification pour des oiseaux marins (<i>Sterna dougallii</i>, <i>Sula leucogaster</i>, <i>Onychoprion anaethetus</i>, <i>Anous stolidus</i>, <i>Puffinus lherminieri</i>).</p> <p>- l'îlet est un dortoir important pour les oiseaux marins (AAMP-DEAL Martinique 2010)</p> <p>-</p>
ZCB 5	Secteur de La Pointe Borgnèse à Macabou	<p>- Ecosystèmes marins</p> <p>- Secteur de Ste Anne: 375 ha d'herbiers dont 67% sont en bon et très bon état de santé (Legrand 2009, 2010)</p> <p>- continuum écologique entre les mangroves, herbiers (en bon et très bon état de santé vers le sud-est de la pointe) et récifs coralliens</p> <p>- présence de mangroves globalement en bon état écologique (plus de 150 ha): baie du Marin, lagune des Salines, Baie des Anglais, Pte Baham, Anse Trabaud, Cul-de-Sac Ferré, zone humide de l'étang St Jean (AAMP-DEAL Martinique 2010, Impact mer 2013)</p> <p>- L'espèce <i>Avicennia shaueriana</i> est restreinte à la baie des Anglais.</p> <p>- esp. marines rares et menacées: <i>Acropora palmata</i> (îlet Chevalier, îlet Percé et Hardy) (Impact mer 2013)</p> <p>- Flore et habitats terrestres</p> <p>- Mornes calcaires (les seules formations de ce type en Martinique) qui hébergent des communautés végétales particulières à ce type de sol: Mornes Caritan, Manioc, Malgrétout, Diabliesse et Beauregrad.</p> <p>- 7 esp. endémiques des PA (<i>Cordia nesophila</i>, <i>Croton bixoides</i>, <i>Croton guildingii</i>, <i>Tabebuia pallida</i>) dont certaines endémiques seulement de</p>

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ZCB 5		<p>quelques îles (<i>Calliandra slaneae</i>, <i>Euphorbia balbisii</i>, <i>Cordia martinicensis</i>) (Impact mer 2013)</p> <ul style="list-style-type: none"> - esp. menacées: <i>Guaiacum officinale</i>, <i>Zanthoxylum flavum</i>, <i>Cedrela odorata</i>, <i>Swietenia mahagoni</i> (plantations) - ZNIEFF Morne Caritan, Morne Belfond (CBM 2005, DEAL 2011 Fiches ZNIEFF): dernières populations naturelles de Gaïac, <i>Guaiacum officinale</i> (EN), stade climacique de la forêt tropicale xéro-mésophile <p>- identification de 8 aires remarquables sur le plan floristique (présence d'esp. végétales endémiques) et écologique: Anse à Prunes, Pte Baham, zone sud-est de la baie des Anglais, îlet Chevalier, morne Anse La Balle, Cap Ferré, Pte La Rose, cul de sac Ferré (Impact mer 2013)</p> <p>- Reptiles</p> <ul style="list-style-type: none"> - Présence de <i>Bothrops lanceolatus</i> dans les forêts sèches (Fiches ZNIEFF) - sites de ponte de tortues marines: Grande Anse des Salines (données à actualiser) - présence d'une espèce de Sphérodactyle potentiellement endémique de l'île. <p>- Oiseaux</p> <ul style="list-style-type: none"> - IBA de l'îlet Cabrits au Cap Ferret (incluant la RNN des îlets de Ste Anne) - 7 aires remarquables pour l'avifaune identifiées le long du littoral et aux îlets de Ste Anne (Impact mer 2013) <p><i>Protection réglementaire et importance patrimoniale</i></p> <ul style="list-style-type: none"> - Projet d'extension de la RNN des îlets de Ste Anne - 7 ZNIEFF terrestres - 5 sites inscrits - 1 site classé des Salines - Baie des Anglais - 2 APB: Morne Belfond et Morne Caritan - site RAMSAR de l'Étang des Salines - cantonnement de pêche de la baie des Anglais jusqu'à Cap Ferré
	Étang des Salines	<p>- Site RAMSAR de l'Étang des Salines (Fiche RAMSAR, Godefroid et al. 2013):</p> <ul style="list-style-type: none"> - l'Étang des Salines est une lagune littorale qui communique de façon permanente avec l'Océan Atlantique et le mer des Caraïbes à partir de 2 canaux. - Présence de vasières, marais et mangroves autour de l'étang; 4 esp. de palétuviers composent les mangroves. - Forêt sempervirente saisonnière en arrière plage. - Présence d'espèces végétales endémiques des PA: <i>Tabebuia pallida</i>, <i>Croton bixoides</i> <p>- Oiseaux</p> <ul style="list-style-type: none"> - Grande diversité de l'avifaune (41 esp.) et présence de 6 espèces endémiques des Petites-Antilles et de Puerto-Rico (Godefroid et al.

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ZCB 5		<p>2013): Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>E. holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Tyran janeau (<i>Myiarchus oberi</i>).</p> <p>- Les zones humides de l'étang des Salines constituent des aires d'alimentation importantes pour l'avifaune.</p>
	RNN des ilets de Ste Anne (RNNISA)	<p>- Flore et habitats terrestres (Lurel Environnement 2008)</p> <p>- Végétation caractérisée par la présence d'espèces héliophiles et halophiles, végétation herbacée diversifiée</p> <p>- Présence de plantes endémiques de Martinique (<i>Lithophila muscoides ssp macrantha</i>)-nom d'espèce à actualiser et des des PA (<i>Tabebuia pallida</i>, <i>Euphorbia balbisii</i>)</p> <p>- Biocénoses marines (Impact mer 2013, Maréchal et Trégarot 2012)</p> <p>- 10.3 ha d'herbiers dans la zone des 300 m autour des ilets qui sont dans un bon état écologique</p> <p>- présence d'espèces menacées: <i>Acropora palmata</i> (est de l'ilet Hardy, ilet Percé)</p> <p>- Reptiles</p> <p>- esp. endémiques des PA: Gymnophthalme de Plée (<i>Gymnophthalmus pleii</i>) (plan de gestion 2007-2012)</p> <p>- Oiseaux (Bretagnolle et Precheur 2012, Le Carouge 2008, Lemoine et al. 2008, plan de gestion 2007-2012)</p> <p>- IBA des ilets et falaises de Ste Anne (incluant la <u>RNN des ilets de Ste Anne</u>):</p> <p>- repositoir et site de nidification pour 5 esp. d'oiseaux marins (<i>Puffinus lherminieri</i>, <i>Onychoprion anaethetus</i>, <i>Onychoprion fuscatus</i>, <i>Anous stolidus</i>, <i>Phaeton aethereus</i>).</p> <p>- Colonie nicheuse importante de Puffin d'Audubon (<i>Puffinus lherminieri</i>): environ 100 couples reproducteurs, soit et 48% de l'effectif connu de ce taxon dans les PA et 4% de l'effectif mondial connu (Bretagnolle et Precheur 2012).</p> <p>- Colonie nicheuse de Sterne fuligineuse (<i>Onychoprion fuscatus</i>): environ 14000 individus recensés en 2014. Des variations inter-annuelles dans les effectifs de cette espèce sont observées (suivis de la RNN des Ilets de Ste Anne, Nadine Vénumière comm. pers. 2015). Il s'agit de l'espèce d'oiseau marin la plus abondante sur la RN (Bretagnolle et Precheur 2012).</p> <p><u>Projet d'extension de la RNNISA:</u></p> <p>⇒ 4 secteurs côtiers identifiés comme ayant un intérêt en termes de biodiversité et de fonctionnalités écologiques (Impact mer 2013): Cap Ferré, Ilet Chevalier, Baie des Anglais-RNNISA-Anse Trabaud, Pte d'Enfer à Pte Braham</p> <p>Protection réglementaire et importance patrimoniale</p> <p>- la RNN fait partie du territoire du PNRM et est administrée par le PNRM qui en assure la gestion scientifique et l'ONF qui est responsable de la surveillance et l'aménagement.</p>

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<p>ZCB 6 - Baie du Robert - Ilets Boiseau et Petit Piton - Ilet Chancel</p>	<p>Milieux côtiers - Ilets</p>	<ul style="list-style-type: none"> - La Martinique compte 48 îlets qui constituent des réservoirs pour la flore et la faune, notamment pour l'avifaune. - Zones humides - Mangroves: Baie du Robert, Massy, cul de sac Paquemar, lagune de Macabou (AAMP-DEAL Martinique 2010) - Biocénoses marines - Un des herbiers les plus développés de Martinique dans le secteur du Vauclin (1300 ha) - Continuum écologique entre les herbiers et les récifs coralliens - Esp. marines menacées: <i>Acropora palmata</i> - Présence de mollusque marin endémique de Martinique (AAMP-DEAL Martinique 2010, Lamy D. com. pers. 2010): <i>Conus burryae</i> (secteur du Vauclin) - Les biocénoses marines situées au nord-est de l'île restent méconnues en raison des difficultés d'accès. Le récif frangeant au nord-est paraît relativement bien développé avec des espèces de coraux menacées. - Oiseaux - IBA Ilet Boiseau et Petit Piton - reposoir important pour la Sterne de Dougall (<i>Sterna dougallii</i>)(Lemoine et al. 2008) - Les sites de la Pointe Pain de Sucre et des îlets Boiseau - Petit Piton (2 IBA) sont les seuls sites de nidification de <i>Sterna dougallii</i> en Martinique et hébergent 50% des effectifs connu de <i>Sterna dougallii</i> dans les Petites-Antilles et 1,3 % des effectifs connu au niveau global (Quenette 2014, Raigné 2012). Avec plus de 438 couples de Sternes de Dougall, ce site est le 1er site de nidification de cette espèce dans les Antilles françaises (AAMP-DEAL Martinique 2010). - IBA de Macabou (Lemoine et al. 2008): présence de l'esp. endémique de Martinique (<i>Icterus bonana</i>) et de 9 esp. endémiques des Petites-Antilles dont certaines limitées à quelques îles: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri fâle-vert (<i>E. holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Tyran janeau (<i>Myiarchus oberi</i>), Moqueur grivotte (<i>Allenia fusca</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Saltator gros-bec (<i>Saltator albicollis</i>) - Plusieurs sites côtiers sont des aires importantes pour les limicoles: Pointe à Bibi (Presqu'île de la Caravelle), secteur de l'Etang des Salines-Baie des Anglais, Grand Macabou, zone humide du secteur de Ducos (AAMP-DEAL Martinique 2010) - Reptiles - sites de ponte de tortues luth: Macabou (données à actualiser) Mammifères - un des gîtes les plus important des Antilles pour la Brachyphylle des
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		<p>cavernes (<i>Brachyphylla cavernarum</i>- endémique des Petites Antilles, îles Vierges et Puerto Rico) avec 250 000 individus (Julien Mailles, DEAL Martinique, com. pers. 2016).</p> <p>Protection réglementaire et importance patrimoniale</p> <ul style="list-style-type: none"> - 3 ZNIEFF marine: Baie du Robert, Ilet Petite Martinique, Ilet Madame - 12 APB sur les îlets de la Baie du Robert au nord à l'îlet Frégate au sud - 14 sites inscrits sur les îlets
	Ilet Chancel	<ul style="list-style-type: none"> - Végétaux - Présence de mangroves (<i>Rhizophora mangle</i>, <i>Avicennia germinans</i>) (Legouez 2007). - Présence de plantes endémiques des PA: <i>Tabebuia pallida</i> - Reptiles - Présence d'une population importante d'iguanes des Petites Antilles (<i>Iguana delicatissima</i>) sur l'îlet Chancel (900 individus recensés en 2007, potentiellement plus de 1000 individus) (Legouez 2010, 2007; ONCFS Elisa Curot-Lodeon, comm. pers. 2015). <p>APB, ZNIEFF terrestre Site inscrit</p>
<p>ZCB 7 - Presqu'île de la Caravelle - Pointe Pain de Sucre</p>	<p>Presqu'île de la Caravelle</p>	<p><u>RNN de la Presqu'île de la Caravelle</u></p> <ul style="list-style-type: none"> - Flore et écosystèmes terrestres - ce site est représentatif de la forêt côtière xéro-mésophile semi-sempervirente, un écosystème rare et menacé aux Petites-Antilles (Vennetier et al 2001) - 13 unités écologiques: formations boisées littorales, savanes herbeuses, végétation ligneuse des versants, formations de rochers et de sols érodés (RNN plan de gestion 2013-2017) - Présence de mangroves composées de 5 esp. de palétuviers et d'étangs bois-sec (18 ha) - Esp. endémiques de Martinique: Ananas bois (<i>Aechmea serrata</i>), raisinier de la Caravelle (<i>Coccoloba caravellae</i>), <i>Malpighia martinicensis</i> - Présence d'espèces end. des PA: <i>Tabebuia pallida</i> (une des principale esp. arborescente observée sur la RNN - Inventaire floristique RNN, Plan de gestion 2013-2017) - continuité écologique avec les habitats forestiers des ZNIEFF hors RNN - Reptiles - esp. endémiques de Martinique (<i>Dactyloa roquet</i>) et des PA: Gymnophthalme de Plée (<i>Gymnophthalmus pleii</i>), Sphérodactyle de Saint-Vincent (<i>Sphaerodactylus vincenti</i>) - Oiseaux - IBA de la Pointe Caravelle (Lemoine et al. 2008, Raigné 2012) - Présence de l'Oriole de la Martinique (<i>Icterus bonana</i>), esp. endémique stricte de Martinique - Présence de 11 esp. endémiques des Petites-Antilles: Colombe à croissant (<i>Geotrygon mystacea</i>), Martinet chiquesol (<i>Chaetura martinica</i>), Colibri huppé

<p>ZCB 7</p>	<p>(<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>E. holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Tyran janeau (<i>Myiarchus oberi</i>), Moqueur grivotte (<i>Alenia fusca</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Moqueur à gorge blanche (<i>Ramphocynclus brachyurus</i>).</p> <p>- La RN abrite environ 200 individus de Moqueur à Gorge Blanche (<i>Ramphocinclus brachyurus</i>) dont la sous-espèce <i>R. brachyurus brachyurus</i> est endémique stricte de Martinique (AOMA 2007). L'espèce endémique de Martinique et de Ste Lucie nidifie sur le site de la RN et est, en Martinique, uniquement observée sur la Presqu'île (AOMA 2007, Lesales et al. 2012). Près de 900 ind. auraient été recensés à Ste-Lucie, la Presqu'île de la Caravelle hébergerait donc environ 18% de la population mondiale de Moqueur à Gorge Blanche. Il est à souligner que cette espèce est observée sur toute la Presqu'île de la Caravelle, sur des sites hors du périmètre de la RNN (Nadine Vénumière, comm. pers. 2015, suivis réalisés par le PNRM).</p> <p>- Présence d'oiseaux marins nidifiant sur la RN (Raigné 2012): <i>Phaeton aetherus</i>, <i>Onychoprion anaethetus</i>, <i>O. fuscatus</i>, <i>Anous stolidus</i>,</p> <p><u>Sites d'intérêt sur la Presqu'île et aux alentours (hors RNN):</u></p> <p>- Mangroves de l'anse Bélune</p> <p>- ZNIEFF de la Baie du Galion: forêt marécageuse à <i>Pterocarpus officinalis</i> (15 ha, seul site de la Martinique) (RNN plan de gestion 2013-2017)</p> <p>- 6 zones d'enjeux identifiées de la Pointe Brunel à Pte Bonneville suite à la cartographie des biocénoses marines (Impact mer 2012, Legrand 2009): interconnectivité entre les 3 écosystèmes marins, présence d'<i>Acropora palmata</i></p> <p><u>- Intérêt écologique des sites compris dans le projet d'extension de la RNN (Impact mer 2012, 2013):</u></p> <p>- Baie du Trésor: cantonnement de pêche dans la Baie (225 ha), zone marine à protéger (SMVM-SAR)</p> <p>- Effet réserve des zones cantonnements sur la diversité et la structure des peuplements de poissons, notamment pour les poissons herbivores (Criquet 2009, OMMM 2010)</p> <p>- 2 plages au nord de la presqu'île considérées comme des sites de ponte importants pour les tortues imbriquées.</p> <p>- Intérêt écologique et biodiversité des milieux côtiers. Continuité écologique et fonctionnelle entre les habitats aquatiques du bassin versant et les écosystèmes marins: mangroves (10 ha), herbiers (25 ha) en général bon état de santé sauf pour l'herbier en fond de baie qui est envasé (suivis DCE), récifs coralliens (1 ha, 40% de corail vivant)</p> <p>- présence d'espèces menacées: <i>Acropora palmata</i>, <i>Montastraea faveolata</i>, <i>Lachnolaimus maximus</i> (Impact mer 2012, Legrand 2009)</p> <p><i>Protection réglementaire et importance patrimoniale</i></p>
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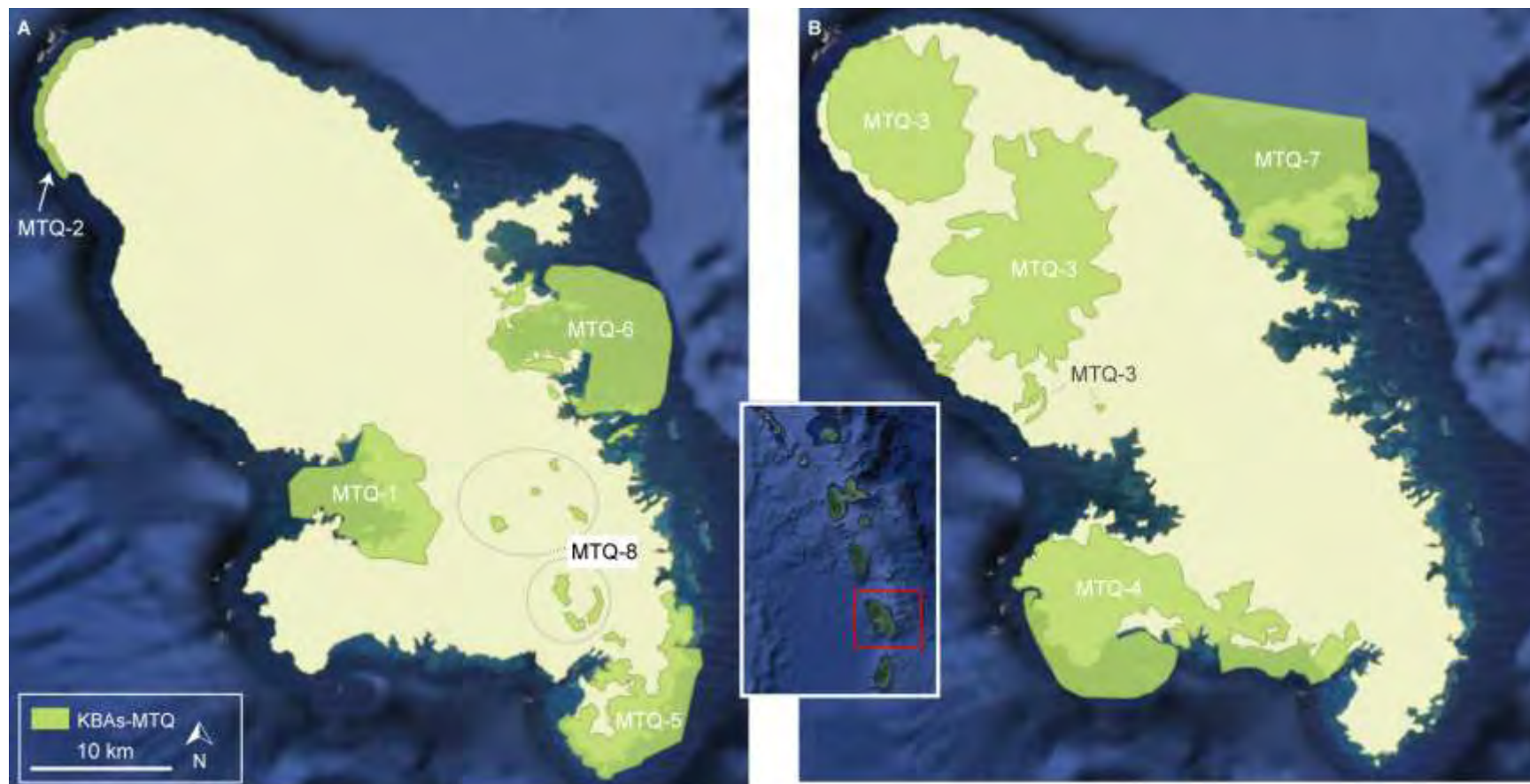
		<ul style="list-style-type: none"> - la RNN fait partie du territoire du PNRM - Site classé de la Presqu'île de la Caravelle (3100 ha) - 5 sites inscrits - 5 ZNIEFF répertoriées sur la presqu'île de la Caravelle et à proximité: ZNIEFF terrestre (Morne la Régale, Pointe Rouge, Pte Jean-Claude, Forêt du Galion), 1 ZNIEFF marine (Baie du Trésor) - 2 APB: Forêt du Galion, Pte Jean-Claude - Sites du CELRL - Le site de la presqu'île de la Caravelle à la Trinité sont proposés pour l'inscription au patrimoine mondial de l'UNESCO.
	Côte nord Atlantique	<p>- Oiseaux</p> <ul style="list-style-type: none"> - IBA de la Pointe Pain de Sucre: reposoir important pour les oiseaux marins (<i>Fregata magnificens</i>, <i>Sterna dougallii</i>) (Lemoine et al. 2008). - Ilet de Ste Marie: site important de nidification d'oiseaux marins (Belfan 2009): <i>Sterna dougallii</i> (plus de 200 couples - second site de nidification pour la Martinique), <i>Onychoprion anaethetus</i>, <i>Thalasseus sandvicensis</i>. - Ilet St Aubin: site de nidification important pour la Sterne de Dougall (<i>Sterna dougallii</i>). <p>- Reptiles</p> <ul style="list-style-type: none"> - sites de pontes importants pour les tortues luth: Le Lorrain, Marigot, Ste Marie (données à actualiser) <p>Protection réglementaire et importance patrimoniale 2 APB</p>
ZCB 8	Massifs boisés du centre de l'île et côte Atlantique	<p>Flore et écosystèmes terrestres</p> <ul style="list-style-type: none"> - Massifs boisés (ZNIEFF terrestres), diversité d'habitats (vallons, petites ravines, crêtes et pentes rocheuses, baies protégées, mares). - A part les ZNIEFF, la biodiversité de ce secteur reste assez peu connue. - corridor écologique pour les populations d'oiseaux et de chauves-souris. - diversité floristique dont: <ul style="list-style-type: none"> - des esp. menacées: <i>Guarea macrophylla</i> (EN) - des esp. endémiques de Martinique (<i>Anthurium lanceolatum</i>) et des PA (<i>Sloanea dentata</i>, <i>Tapura latifolia</i>, <i>Acrocomia aculeata</i>, <i>Exostema sanctae-luciae</i>, <i>Pouteria semecarpifolia</i>) <p>Protection réglementaire et importance patrimoniale</p> <ul style="list-style-type: none"> - ZNIEFF terrestres - 1 APB sur le massif boisé Bois La Charles
ZCB - Ecosystèmes marins et zones	Biocénoses marines	<p>- Herbiers de Magnoliophytes marines</p> <ul style="list-style-type: none"> - Près de 5000 ha d'herbiers, dont la majeure partie se situe dans la moitié sud de l'île entre les anses d'Arlet et la baie du Robert (4636 ha) (Legrand 2009, 2010). - Les herbiers de l'Anse du Diamant et de la région du Vauclin présentent un bon état de santé général et une vaste surface continue (AAMP-DEAL Martinique 2010, Legrand 2009)

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<p>humides</p> <p>Inclus dans les ZCB 1-2-4-5-6-7</p>	<p>- les herbiers des fonds de baies sont relativement dégradés. L'état de santé de cet écosystème d'herbiers s'améliore à mesure qu'ils sont éloignés de la côte (Legrand 2009, 2010).</p> <p>- Récifs coralliens</p> <p>- 47 esp. de coraux dont 9 esp. menacées. L'espèce menacée <i>Acropora cervicornis</i> a été redécouverte en 2013 au nord de la Presqu'île de la Caravelle (Impactmer 2013c). Des colonies sont présentes dans la Baie de Tartane (Presqu'île de la Caravelle).</p> <p>- 5612 ha de communautés coralliennes cartographiées autour de la Martinique (Legrand 2009, 2010).</p> <p>- Les communautés coralliennes sont principalement présentes dans le sud de l'île, au nord-est de l'île (La Perle, Prêcheur, Case Pilote) et dans la baie de Fort de France (Legrand 2009).</p> <p>- La façade Atlantique de l'île comporte dans sa partie médiane (entre Ste Marie et la pointe sud de l'île) une barrière récifale externe entrecoupée de passes ainsi que des récifs frangeants. Trois secteurs présentent une forte biodiversité corallienne de substrat dur: entre Trois Rivières et Pointe Borgnèse, entre l'Anse Noire et cap Salomon et entre Cap Enragé et Case Pilote.</p> <p>- 9 esp. de coraux menacées dont 2 esp. devenues rares et en situation critique à l'échelle du bassin caribéen: <i>Acropora palmata</i>, <i>A. cervicornis</i> (esp. très rare en Martinique, présence à confirmer)</p> <p>- 3 esp. menacées bioconstructrices des matrices récifales des récifs actuels: <i>Orbicella annularis</i>, <i>O. faveolata</i>, <i>O. franksi</i>. Ces espèces sont présentes sous forme de petites colonies et ne construisent des matrices récifales que dans quelques sites dans le secteur du Diamant-Pointe Borgnèse (AAMP-DEAL Martinique 2010).</p> <p><u>Connectivité entre les écosystèmes marins</u> (AAMP-DEAL Martinique 2010, Legrand 2009, 2010):</p> <p>- Les herbiers et récifs coralliens présentent une inter connectivité importante sur 5 secteurs: baie du François-Vauclin, secteur du Robert - baie du Galion, Sainte Luce-le Marin, anses d'Arlet, Case Pilote</p> <p>- Peuplements de poissons (AAMP-DEAL Martinique 2010, Rousseau 2010)</p> <p>- 327 esp. recensées, dont 6 esp. menacées (hors espèces rares)</p> <p>- Les inventaires font état de 3 secteurs à forte diversité spécifique: côte nord Caraïbe (113 esp.), côte sud Caraïbe (104 esp.), secteur de Ste Luce (111 esp.).</p> <p>- La baie de Fort-de-France présente un peuplement de poissons diversifié (78 esp.) avec une communauté caractéristique des mangroves et herbiers.</p>
<p>ZCB</p>	<p>Zones humides</p> <p>- 2330 ha de zones humides dont 2100 ha de mangroves (AAMP-DEAL Martinique 2010, DEAL Martinique 2014, Gayot et Laval 2006, Impact mer 2009).</p> <p>- Les mangroves sont composées de 5 esp. de palétuviers: <i>Rhizophora mangle</i>, <i>Laguncularia racemosa</i>, <i>Avicennia germinans</i>, <i>Conocarpus erectus</i> et <i>Avicennia shaueriana</i>.</p>

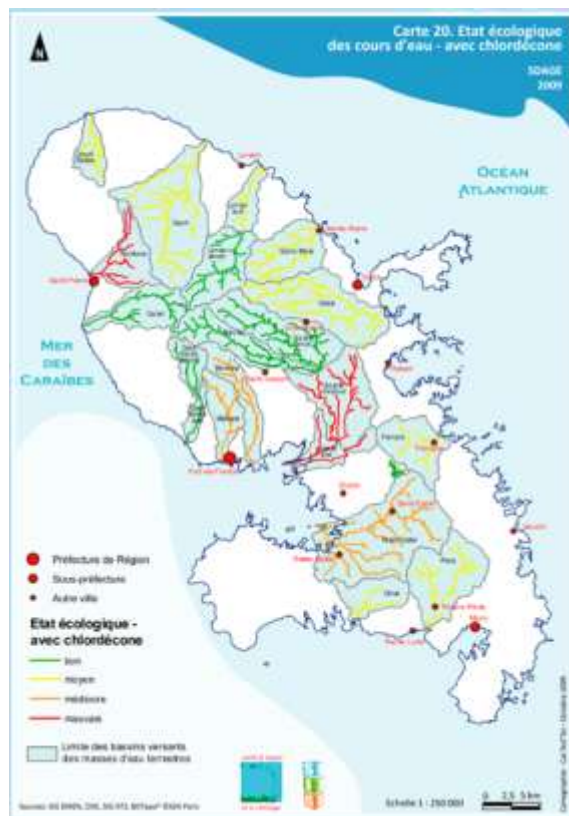
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		<p>- L'espèce <i>Avicennia shaueriana</i> est restreinte à la baie des Anglais.</p> <p><u>Connectivité entre les écosystèmes marins</u></p> <ul style="list-style-type: none">- La Martinique présente de grandes baies (telles que la baie de Fort de France, Robert, Galion, Le Marin, Trésor...) bordées de mangroves et inter connectées avec des herbiers (AAMP-DEAL Martinique 2010, Hily et al. 2011)- Plusieurs secteurs présentent un continuum écologique entre les mangroves, herbiers et récifs coralliens. <p>Actualisation en cours avec l'inventaires des zones humides de Martinique (2014-2015), étude commanditée par le PNRM.</p>
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Carte des zones clés pour la biodiversité (ZCB) identifiées pour la Martinique

- Corridor écologique - Réseau hydrographique (SDAGE 2009)



Le classement des cours d'eau de la Martinique permet de restaurer la continuité écologique à court et moyen termes en réglementant les autorisations et concessions impliquant la construction d'ouvrages qui peuvent constituer un obstacle à la continuité écologique. Ce classement distingue deux catégories de cours d'eau (Arrêté Préfectoral du 22 janvier 2015, Office de l'Eau Martinique, Asconit 2014, Rateau 2014):

- **Liste 1** - cours d'eau jouant le rôle de réservoir biologique: la **rivière du Carbet et la Grande Rivière**.

- **Liste 2** - cours d'eau à forts enjeux écologiques pour lesquels des aménagements sont nécessaire pour restaurer ou améliorer la continuité écologique: Rivière Case Navire, Rivière Blanche, Rivière Lézarde (aval et partie médiane), Fond Bourlet.

Plusieurs cours d'eau présentent un intérêt élevé de classement sur les listes 1 (Céron, Lorrain, Des Pères, Fond Laillet, Oman, Cacao) et 2 (Capot, Case Navire, Lorrain, Roxelane, La Manche, Fond Placide, Desroses) (Asconit 2014).

Ecosystème dulçaquicole

- Un réseau hydrographique important avec près de 300 cours d'eau pérennes et 70 rivières majeures (SDAGE).
- Maintien de la continuité biologique entre les cours d'eau et le milieu marin: facteur écologique important dans le cycle biologique des poissons et crustacés diadromes (ODE 2011)
- Les rivières du Carbet et la Grande Rivière sont inscrites sur la liste 1 de l'Arrêté Préfectoral du 22 janvier 2015 de classement des cours d'eau et interdisant toute perturbation de la continuité écologique. Ces cours d'eaux sont considérés comme des réservoirs biologiques importants.- 4 cours d'eau sont inscrits sur la liste 2 du classement des rivières de Martinique et présentent de forts enjeux écologiques: Rivière Case Navire, Rivière Blanche, Rivière Lézarde (parties aval et médiane), Fond Bourlet.

- Invertébrés

- Présence du crabe cirrique endémique des PA dans les rivières: *Guinotia dentata* (Carré 2006)

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- Esp. d'odonates endémiques des PA présentes aux abords des rivières: *Argia concinna* (Rivière Lézarde), *Protoneura ailsa* (Rivière Lézarde, Rivière du Carbet) (Meurgey 2005)

- Poissons de rivière

- Présence dans les cours d'eau de l'espèce de poisson endémique de l'île (*Anablepsoides cryptocallus*) et de l'espèce endémique des PA (*Eleotris perniger*) (Dal Pos 2010, ODE 2011, Tabouret 2012).

- L'espèce endémique *A.cryptocallus* est observée en amont de certains cours d'eau: rivière Salée, Galion, rivière Lézarde et Madame (Tabouret 2012, Lim et al. 2002).

- Une hiérarchisation du réseau hydrographique sera proposée suivant l'arrêté de classement des cours d'eau de Martinique.

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1-3. Institutions, organisations et associations impliquées dans le domaine de l'environnement

Tableau 4 - Liste des acteurs de Martinique

MARTINIQUE : LES ACTEURS DE LA BIODIVERSITE ET DE L ENVIRONNEMENT	
Services de l'Etat	
DEAL Martinique - Ministère de l'Ecologie, du Développement durable et de l'Energie (MEDDE)	La Direction de l'Environnement, de l'Aménagement et du Logement représente le Ministère de l'Écologie, du Développement durable et de l'Énergie en Martinique. Elaboration et mise en œuvre localement des politiques de l'Etat en matière d'environnement, de développement et d'aménagement durables et de logement. Ses missions consistent à apporter une expertise environnementale à la réalisation des grands documents de
Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt - DAAF Direction de l'Alimentation, de l'Agriculture et de la Forêt / Direction des Services Vétérinaires	La DAAF met en oeuvre l'ensemble des politiques du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt en matière de politiques relatives à l'agriculture et au développement des territoires, politique de l'alimentation, politique forestière et de mobilisation de la ressource en prenant en compte les préoccupations de gestion durable des forêts et de préservation de la biodiversité.
Direction de la Mer	Service déconcentré de l'État français chargé d'appliquer les politiques publiques dans le domaine de la mer. La Direction de la Mer résulte de la fusion de la DRAM (Direction régionale des affaires Maritimes) et du
Collectivités	
Collectivité d'Outre-Mer de la Martinique (COM)	
Communautés d'Agglomération et Syndicats intercommunal de Martinique: Services en charge de l'Environnement	
Etablissements publics / Institutions / Comités	
Antenne Antilles - Agence des Aires Marines Protégées (AAMP)	L'AAMP est un établissement public créé par la loi du 14 avril 2006 et placé sous la tutelle du ministère de l'Écologie, du Développement durable et de l'Énergie. Il est dédié à la protection du milieu marin. Son siège est basé à Brest et l'antenne Antilles est basée en Martinique. L'équipe du sanctuaire Agoa de l'AAMP est située
Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME)	Établissement public à caractère industriel et commercial, placé sous la tutelle conjointe des ministères en charge de l'Écologie, du Développement durable et de l'Énergie et de l'Enseignement Supérieur et de la Recherche. L'ADEME participe à la mise en oeuvre des politiques publiques dans les domaines de
Agence des 50 pas géométriques	L'Agence est un établissement public d'Etat chargé de la mise en valeur des espaces urbanisés de la zone des 50 pas géométriques, l'établissement régularise et valorise la zone des 50 pas Géométriques en Martinique et
Bureau de Recherches Géologiques et Minières (BRGM)	Le BRGM est un établissement public à caractère industriel et commercial dont le statut a été redéfini en 2004. Il est placé sous la tutelle du Ministère de l'Enseignement supérieur et de la Recherche et du Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer. Le BRGM est l'établissement de référence
Comité Régional des Pêches Marines et des Elevages Marins de Martinique (CRPMEM)	Organisme de représentation des professionnels du secteur de la pêche et des élevages marins. Le CRPMEM assure la défense des intérêts des généraux des pêcheurs auprès des pouvoirs publics nationaux et communautaires. Il participe à la gestion des ressources halieutiques dans le cadre d'une pêche responsable
Conservatoire Botanique de Martinique	Institution à caractère scientifique dont la mission est de contribuer à la connaissance de l'état et de l'évolution de la flore sauvage et des habitats naturels et semi-naturels; d'apporter à l'Etat, aux établissements publics et aux collectivités territoriales un appui technique et scientifique en matière de flore sauvage et d'habitats naturels et d'informer le public à la connaissance et la préservation de la diversité végétale. L'agrément en
Conservatoire de l'Espace Littoral et des Espaces Lacustres (CELRL)	Etablissement public chargé de mener une politique foncière de protection des espaces naturels littoraux, de respect des sites naturels et de leur équilibre écologique. Ces ensembles naturels sont ainsi préservés de toute
CSRPN Martinique	Le Conseil Scientifique Régional du Patrimoine Naturel est une instance consultative à compétence scientifique en matière de patrimoine naturel. Placé auprès du Préfet de Région et du Président du Conseil régional, ce conseil peut rendre des avis et des recommandations à caractère scientifique sur tout sujet
Office National de la Chasse et de la Faune Sauvage (ONCFS) - Cellule Martinique	Etablissement administratif public placé sous la tutelle du Ministère de l'Écologie, du Développement durable et de l'Énergie (MEDDE) et du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt (MAAF). Il a pour mission de « définir, promouvoir et contrôler les règles de bonne gestion de la faune sauvage et de ses habitats et contribuer à l'évolution de la chasse selon les principes du développement durable ». Dans les
Office National des Forêts (ONF)	Établissement public créé en 1964, l'Office national des forêts a pour principales missions la gestion des forêts domaniales et des forêts publiques relevant du Régime forestier ainsi que la réalisation de missions d'intérêt général confiées par l'Etat. L'ONF en Martinique se consacre aux forêts publiques de l'île, soit un tiers des forêts. Les enjeux sont nombreux: protection de la faune et de la flore, préservation du patrimoine foncier et
Office de l'Eau (ODE)	Créé le 10 juillet 2002, l'Office De l'Eau de la Martinique est un établissement public local à caractère administratif rattaché au Département. Outil technique et financier qui a vocation à mettre en application selon le principe pollueur payeur une panoplie de redevances bassin. Ces dernières doivent permettre le financement d'actions et de travaux ayant pour objectif l'amélioration et la préservation de l'environnement, des milieux aquatiques et de la ressource en eau. Il est un organe fédérateur des actions menées dans le cadre de la
Comité de Bassin de la Martinique	Le Comité de Bassin, créé par la loi sur l'eau de 1992, a été mis en place en 1996 en Martinique. Il constitue une assemblée qui regroupe les différents acteurs, publics ou privés, agissant dans le domaine de l'eau (8 représentants de l'Etat, 12 représentants des collectivités territoriales, 10 représentants des usagers, 3 experts et représentants des milieux socio-professionnels). Son objet est de débattre et de définir de façon concertée
Parc Naturel Régional de Martinique (PNRM)	Le PNRM a été créé en 1976 et s'étend sur près des 2/3 de l'île. Le PNR mène de nombreuses actions dans des domaines variés tels que l'agriculture, le tourisme, l'environnement, l'économie et accompagne les 32 communes de son territoire vers un développement durable. Le PNR intervient et coordonne des études scientifiques sur la biodiversité, préserve les paysages et sensibilise le grand public à l'environnement. Une
Service Mixte de Police de l'Environnement (SMPE)	Les missions de police de l'environnement sont réalisées par des services mixtes composés d'agents de l'ONCFS (Office National de la Chasse et de la Faune Sauvage), de l'ONEMA (Office National de l'Eau et des Milieux Aquatiques), des parcs nationaux ou régionaux, des collectivités ou des fédérations de chasseurs qui

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Organismes de recherche	
INRA Centre Antilles-Guyane	L'Institut National de la Recherche Agronomique couvre trois régions ultramarines (Guadeloupe, Martinique, Guyane) et est le principal acteur de la recherche agronomique dans la Zone Caraïbe depuis 60 ans, l'Inra contribue, par ses recherches sur l'agriculture, l'alimentation et l'environnement et par son implication
CIRAD Antilles-Guyane	Le Centre de Coopération Internationale en Recherche Agronomique pour le Développement axe ses activités de recherche sur les filières d'exportation agricole (Banane et Canne à sucre notamment) et sur les maladies
Université des Antilles	Université pluridisciplinaire créée en 1982 et initialement implantée sur trois régions (Guadeloupe, Martinique, Guyane). En 2014, l'UAG est scindée entre l'université de Guyane et l'université des Antilles. L'Université des Antilles a une expertise de recherche en biologie et écologie terrestre et marine. Plusieurs groupes de recherches basés en Martinique ont des thématiques liées à la biodiversité: DYNECAR-BOREA; AIHP-GEODE
GEODE Caraïbe	Créé en 1988 le laboratoire de recherche du Centre de Recherche Géographie, Développement, Environnement de la Caraïbe rassemble les géographes de l'Université des Antilles et les chercheurs intéressés par les programmes de recherche. GEODE Caraïbe intervient sur des missions de recherche en géographie dans la région Caraïbe, renforce la coopération régionale et diffuse l'information. Les thématiques
IFREMER Délégation des Antilles françaises	Institut français de recherche pour l'exploitation de la mer - La Délégation des Antilles françaises est basée en Martinique. La Délégation Ifremer des Antilles est l'une des six représentations de l'Ifremer présentes dans l'espace ultramarin français. Son domaine géographique de compétences correspond à la ZEE des Antilles françaises, comprenant la Martinique, la Guadeloupe, St. Martin et St. Barthélemy. Les activités conduites par
IRD - Antenne Antilles françaises	L'IRD est présent dans les Antilles françaises depuis 1960 et est basé en Martinique. L'IRD intervient sur différentes thématiques liées à la nématologie, la pédologie, la microbiologie, l'hydrologie, l'entomologie.
Muséum National d'Histoire Naturelle	marin.
Centre national de la recherche scientifique	Le CNRS réalise des études scientifiques en collaboration avec les institutions et organisations locales.
Associations	
Association Entreprises & Environnement	Association dont les missions sont le développement de filières de récupération et recyclage des déchets, la mise en valeur et protection de l'environnement, la sensibilisation du grand public et des scolaires.
Association pour la sauvegarde du patrimoine martiniquais (ASSAUPAMAR)	Association fondée en 1981 dont les missions sont la protection des habitats naturels (zones humides, milieux marins et dulçaquicoles,...) et le domaine public maritime, le soutien aux énergies renouvelables, la protection contre les risques majeurs.
AVAPLAMMAR	L'Association pour la Valorisation des Plantes Médicinales de la Martinique a pour objectifs la réhabilitation de la médecine et de la pharmacopée traditionnelles Martiniquaises, la préservation de la ressource botanique et
Association KAWAN	Cette association a pour objet la protection des tortues marines et des sites de ponte en Martinique.
Association Martinique Entomologie	Créée en 2012, l'association Martinique Entomologie a pour objectifs de développer la pratique de l'entomologie en Martinique, contribuer à enrichir la connaissance sur ces invertébrés et sensibiliser le grand
Association pour la Protection de la Nature et de l'Environnement (APNE)	Association qui a pour mission de sensibiliser le grand public à la protection de la nature et de l'environnement.
Association Ornithologique de la Martinique (AOMA)	Créée en 1998, l'AOMA est une association regroupant des naturalistes, des géographes et des ornithologues. Diverses activités sont menées: études à caractère écologique, contribution à la conservation et à la gestion d'espaces naturels, sensibilisation du grand public. L'association est le coordinateur régional du programme
Association Le Carouge	Association créée en 1989 dont les objectifs sont la réalisation de suivis et d'inventaires ornithologiques, la participation au programme de dératisation dans la RN des îlets de Ste Anne, la sensibilisation du grand public et des scolaires. L'association a été identifiée comme animateur du groupe STOC en Martinique dans le
Association OCEANvironnement	Association qui a pour objectifs d'améliorer la connaissance des écosystèmes marins, promouvoir la richesse et la biodiversité des milieux marins, sensibiliser au bonnes pratiques de l'environnement marin, recenser les espèces marines en vue de leur préservation, créer des outils pédagogiques. L'association réalise des
Association Mémoire et Patrimoine de St-Anne (AMEPAS)	Association qui a pour objectifs l'accueil, l'animation, et l'organisation de circuits éco touristiques.
Association pour la Protection et la Défense des Îlets de la Martinique	Protection de l'environnement des îlets par le respect de l'application des APB, information sur la réalité juridique et administrative des îlets.
Association Rivelo	L'association a pour missions de faciliter les échanges d'informations et la collaboration entre les acteurs du développement durable en Martinique et de rechercher des solutions scientifiques et techniques (en particulier
Association SEVE	création, la restauration et la valorisation d'espaces naturels.
Carbet des Sciences	L'association a pour objectifs de: 1. Contribuer à la diffusion de connaissances générales sur les sciences et les techniques ; 2. Constituer un centre de ressources centralisant l'information scientifique, technique et industrielle accessible au grand public ; 3. Créer et diffuser des produits culturels à destination de tous les types de publics, en liaison avec les milieux de la Recherche, de l'Education, de l'Industrie et des Associations ; 4. Coordonner les actions de culture scientifique, technique et industrielle en favorisant les contacts, les

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Eastern Caribbean Coalition for Environmental Awareness (ECCEA)	Association créée en 1995 qui a pour but d'assurer la diffusion des connaissances nécessaires à la sensibilisation de l'environnement en vue de conserver, protéger et de rétablir les écosystèmes et de regrouper
Fédération Départementale des Pêcheurs en rivière	Gestion des droits de pêche, participation à la protection du patrimoine piscicole et des milieux aquatiques.
GRAINE Martinique	Groupe Régional d'Animation et d'Initiation à la Nature et l'Environnement (GRAINE), association dont les missions sont axées sur l'éducation à l'environnement et le développement durable.
Institut Caraïbéen pour la Nature et la Culture (ICNC)	L'Institut Caraïbéen pour la Nature et la Culture (ICNC) est une association scientifique et culturelle qui a pour but de promouvoir l'étude, la connaissance et la protection du patrimoine naturel et culturel dans les Antilles, notamment en Martinique. L'ICNC réalise et soutient des missions d'études, ou d'expertise, et œuvre pour la
Mon Ecole, Ma Baleine - Antenne de Martinique	Association dont les missions sont de sensibiliser le grand public et les scolaires sur les mammifères marins et leur habitat. Réalisation d'interventions pédagogiques en milieu scolaire et hospitalier, sensibilisation sur les
Observatoire du Milieu Marin Martiniquais (OMMM)	Association scientifique créée en 2000 pour élaborer et conduire en partie le programme d'actions IFRECOR pour la Martinique. L'OMMM coordonne des projets axés trois objectifs majeurs: une meilleure connaissance des récifs coralliens de Martinique, le suivi des variations spatio-temporelles et la sensibilisation de la
Société pour l'Etude, la Protection et l'Aménagement de la Nature à la Martinique (SEPANMAR)	Association créée en 1970 qui a pour objectif la préservation de la biodiversité terrestre et marine de la Martinique. La SEPANMAR réalise des diagnostics écologiques, des inventaires floristiques et faunistiques, des suivis scientifiques sur les cétacés, l'avifaune, les tortues marines, des sorties naturalistes et sensibilise le
Société entomologique Antilles-Guyane (SEAG)	Association créée en 2007 qui oeuvre pour l'étude et la diffusion des connaissances (suivis, inventaires) sur l'entomofaune des Antilles, de la Guyane, et la zone Caraïbe.
Réseaux / Observatoire	
Réseau Tortues Marines de Martinique	Le réseau regroupe l'ensemble des acteurs et partenaires œuvrant pour l'étude et la protection des tortues marines et de leurs habitats. Il se compose de nombreuses associations, bénévoles, scientifiques, gestionnaires d'espaces naturels, organismes d'Etat en charge de la protection de la nature, mais également
IFRECOR	Créée en 1999, l'Initiative Française pour les Récifs Coralliens agit pour la protection et la gestion durable des récifs coralliens et des écosystèmes associés (mangroves, herbiers) dans les collectivités françaises d'outre-mer. Le secrétariat du comité national de l'IFRECOR est assuré par le ministère de l'écologie et par le
Reef Check	Réalisation de suivis annuels autour de l'archipel martiniquais.
Global Coral Reef Monitoring Network (GCRMN)	Global Coral Reef Monitoring Network, Suivi de l'évolution des récifs coralliens dans les Antilles françaises et plus généralement dans la Caraïbes.
ReguaR	Le Réseau d'étude et de suivi des populations de requins est coordonné par l'association Kap Natirel (basée en Guadeloupe) et a pour objectifs de centraliser les observations de requins et de raies dans les eaux des
Réseau TRAMIL	Réseau regroupant des institutions et experts travaillant sur les plantes médicinales du Bassin Caraïbe.
Observatoire Martiniquais de la Biodiversité	L'observatoire a été créé en juin 2015 et regroupe des institutions, collectivités, associations de protection de l'environnement. Ses missions sont de centraliser les connaissances en matière de biodiversité, de suivre l'état de la biodiversité et d'améliorer les connaissances. L'OMB est un dispositif multi-partenarial animé par le PNR
Secteur privé	
Bureaux d'études	Plusieurs bureaux d'études dont les expertises concernent la biodiversité terrestre, marine ou dulçaquicole, spécialisation en écologie insulaire tropicale, étude et suivis des populations (tortues marines, mammifères

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Ce rapport est un **document de travail** dont les objectifs sont d'identifier et cartographier les **Zones Clés pour la Biodiversité (ZCB)** pour le territoire selon 3 critères: **(1) les espèces**, comprenant: les espèces menacées à l'échelle globale, les espèces endémiques et les espèces se regroupant en grand nombre pendant leur cycle biologique; **(2) les sites** hébergeant les espèces précédemment identifiées; **(3) les corridors écologiques** reliant les ZCB.

Ce document a été utilisé comme guide lors des consultations avec les acteurs locaux et a été modifié selon les retours et informations des acteurs.

PROFIL ECOSYSTEMIQUE - SYNTHÈSE - GUADELOUPE

➤ **Contexte démographique et socio-économique**

La Guadeloupe est un Département/Région d'Outre-Mer (DROM) constitué de 32 communes et fait partie intégrante de l'Union Européenne dont elle est une Région Ultrapériphérique (RUP, European Overseas Region).

Surface: 1628 km², avec 2 îles principales Grande-Terre (570 km²) et Basse-Terre (944 km²)

ZEE Antilles françaises: 143 256 km² - ZEE Guadeloupe: 90,570 km²

Population: 405 739 hab., densité de 250 hab./km² (IEDOM 2013) - **PIB par hab.:** 19 810€ (IEDOM 2012)

➤ **Aires protégées et des sites remarquables** (DEAL Chiffres clés environnement 2012, DEAL 2012). Un réseau de sites protégés et de zones à enjeux qui couvre près de 29 000 ha.

- **Parc National de la Guadeloupe:** Cœurs de Parc National (21850 ha), Aire optimale d'adhésion (94 065 ha), Aire maritime adjacente (130 800 ha)

- **Réserves Naturelles Nationales (RNN)** des îlets de Petite-Terre (990 ha) et de La Désirade (Réserve Naturelle à caractère géologique, 62 ha).

- **Sanctuaire AGOA** (143 256 km², ZEE des Antilles françaises)

- **11 Arrêtés de Protection du Biotope** (1183 ha)

- **ZNIEFF** (20% du territoire): 56 ZNIEFF terrestres (21023 ha), 8 ZNIEFF marines (1253 ha)

- 1930 ha sont protégés suite à l'acquisition foncière du **Conservatoire du Littoral** (CELRL)

- 6 sites classés (dont une Opération Grand Site sur la Pointe des Châteaux, OGS-141)

- 4 sites inscrits (3178 ha)

- 38 000 ha de **forêts publiques gérées par l'ONF** (Forêt départementalo-domaniale, Forêt humide littorale, Forêt domaniale du littoral, Forêt départementale)

➤ **Reconnaissance internationale des habitats naturels et de la faune sauvage**

-Réserve de la Biosphère - Programme Man and Biosphere, UNESCO: archipel de la Guadeloupe (247 969 ha)

-3 aires protégées listées SPAW: Parc National de la Guadeloupe, RNN des îlets de Petite-Terre, Sanctuaire AGOA (incluant la ZEE de Guadeloupe)

-1 site inscrit à la Convention RAMSAR: le lagon du Grand Cul-de-Sac Marin (29 500 ha)

➤ **Aires protégées à l'étude**

- Projet de Réserve Naturelle Nationale de Marie Galante (13 km² marin-16,8 km² terrestre, Caraïbe Environnement 2005)

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- Projet de Réserve biologique dirigée du nord Grande-Terre (RBD) (738 ha, Ibéné et Questel 2011, Marc Gayot comm. pers. 2015): constituée de 8 massifs forestiers disjoints de forêt semi-décidue sèche (forêts départementales-430,47 ha; forêt domaniale du Littoral-237,59 ha; propriétés du CELRL-62,16 ha).
- Proposition d'inscription du marais et bois de Folle-Anse au protocole SPAW (ONF 2012)
- Projet de Réserve Intégrale en coeur de Parc National de la Guadeloupe (2718 ha dans le massif forestier de la Basse-Terre) (Meurgey et Maillard 2011): identification de sites non perturbés par les activités anthropiques dans les aires en coeur de Parc National.

Espèces

Tableau 1 - Liste des espèces menacées: Liste rouge mondiale UICN (données de Juillet 2014). Les statuts de la liste rouge Caraïbe sont indiqués entre parenthèses après le nom des espèces évaluées.

Taxon	Espèces menacées
Végétaux	
CR	<i>Grammitis stipitata</i> [#] , <i>Lindsaea lherminieri</i> [#] , <i>Polygala planellasi</i> [#] , <i>Octomeria frenchiana</i> [#] , <i>Pseudocentrum guadalupense</i> [#] , <i>Pleurothallis mazeri</i> [#]
EN	<i>Guaiacum officinale</i> , <i>Nectandra krugii</i> , <i>Pouteria pallida</i> , <i>Aechmea flemingii</i> [#] , <i>Swietenia mahagoni</i> , <i>Acrocomia karukerana</i> [#]
VU	<i>Cedrela odorata</i> , <i>Zanthoxylum flavum</i> , <i>Picrasma excelsa</i> , <i>Pouteria semecarpifolia</i> , <i>Echinodorus zombiensis</i> [#] , <i>Juncus guadeloupensis</i> [#] , <i>Verbesina guadeloupensis</i> [#] , <i>Swietenia macrophylla</i> , <i>Freziera cordata</i> , <i>Magnolia dodecapetala</i>
Coraux	
CR	<i>Acropora cervicornis</i> , <i>Acropora palmata</i>
EN	<i>Montastraea annularis</i> , <i>Montastraea faveolata</i>
VU	<i>Dendrogyra cylindrus</i> , <i>Dichocoenia stokesii</i> , <i>Agaricia lamarcki</i> , <i>Mycetophyllia ferox</i> , <i>Montastraea franksi</i>
Invertébrés	
CR	<i>Protoneura romanae</i> [#]
EN	<i>Macrothemis meurgeyi</i> [#]
VU	<i>Amphicyclotulus perplexus</i>
Requins et raies	
EN	<i>Sphyrna mokarran</i> , <i>Sphyrna lewini</i>
VU	<i>Rhincodon typus</i> [*] , <i>Manta birostris</i> [*] , <i>Carcharhinus longimanus</i> (CR-Redlist Caraïbe), <i>Isurus oxyrinchus</i> , <i>Sphyrna zygaena</i> , <i>Odontaspis ferox</i> , <i>Centrophorus granulosus</i> , <i>Manta alfredi</i>
Poissons	
CR	<i>Epinephelus itajara</i> (très rare)
EN	<i>Epinephelus striatus</i> , <i>Thunnus thynnus</i> (CR-Redlist Caraïbe)
VU	<i>Balistes vetula</i> , <i>Hippocampus erectus</i> , <i>Lachnolaimus maximus</i> , <i>Lutjanus analis</i> , <i>Lutjanus cyanopterus</i> , <i>Megalops atlanticus</i> , <i>Makaira nigricans</i> (EN-Redlist Caraïbe), <i>Thunnus obesus</i> , <i>Mycteroperca interstitialis</i> (très rare), <i>Hyporthodus flavolimbatus</i> ?, <i>Hyporthodus niveatus</i> ?
Amphibiens	
EN	<i>Eleutherodactylus barlagnei</i> , <i>E. pinchoni</i>
Reptiles	
CR	<i>Eretmochelys imbricata</i>
EN	<i>Iguana delicatissima</i> , <i>Alsophis sanctonum</i> , <i>Chelonia mydas</i> , <i>Gymnophthalmus pleii</i> [*] , <i>Caretta caretta</i> [*]
VU	<i>Dermochelys coriacea</i> , <i>Lepidochelys olivacea</i> [*]

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Oiseaux	
CR	(<i>Megaceryle torquata</i> ssp. <i>stictipennis</i> - sous-esp. endémique de 3 îles des Petites-Antilles)
EN	<i>Pterodroma hasitata</i> *
VU	<i>Turdus lherminieri</i> , <i>Dendrocygna arborea</i> *
Mammifères terrestres	
VU	<i>Sturnira thomasi</i> , <i>Myotis dominicensis</i> , <i>Eptesicus guadeloupensis</i> , <i>Chiroderma improvisum</i>
Mammifères marins	
EN	<i>Trichechus manatus</i> ssp. <i>manatus</i> (projet du Parc National de la Guadeloupe: réintroduction dans le lagon du GCSM)
VU	<i>Physeter macrocephalus</i>

* Espèces occasionnelles, # espèces endémiques de Guadeloupe menacées à l'échelle locale (UICN France, CBIG, FCBN & MNHN 2013. La Liste rouge des espèces menacées en France - Premiers résultats pour la Flore vasculaire de Guadeloupe; Meurgey 2007 Liste rouge locale des Odonates).

Tableau 2 - Liste des espèces endémiques (Références: AAMP-PNG-UAG 2013, AEVA 2008, Arnoux et al. 2013a, Breuil 2002, DEAL Guadeloupe-MDDEE 2012, DEAL Guadeloupe 2012, Dumont et al. 2013, Eraud et al. 2009, Feldmann et Barré 2001, Feldmann 2011, Ibéné et al. 2007, Leblond 2011, Leblond et Magnin 2013, Levesque et Mathurin 2008ab, Levesque et al. 2008, Maréchal 2011, Meurgey et Picard 2011, Régis Gomez (ASFA) com. pers. 2015, Sastre et Breuil 2007, UICN 2013, Villard et Rousteau 1998, Fiches ZNIEFF-DEAL-INPN, Liste rouge flore Guadeloupe 2013).

Groupes taxonomiques	Nombre d'espèces endémiques
Plantes	- 342 esp. végétales endémiques des Petites-Antilles - 30 esp. endémiques de Guadeloupe dont certaines inscrites sur la liste rouge locale (6 CR, 3 VU, 2 EN)
Invertébrés -Mollusques - Crustacés - Arachnides - Insectes	- au moins 3 esp. de Mollusques marins endémiques de Guadeloupe (<i>Muricopsis schrammi</i> , <i>Conus magellanicus</i> , <i>Triphora guadaloupensis</i>) et 1 esp. endémique de Guadeloupe et Martinique (<i>Timbellus phyllopterus</i>) - des espèces de Mollusques des profondeurs probablement endémiques de Guadeloupe (dans l'état actuel des connaissances): <i>Siratus cailleti</i> , <i>Sveltia yoyottei</i> , <i>Terebra lamyi</i> , <i>Kanamarua francroberti</i> , <i>Costoanachis roberti</i> , <i>Hemipolygona lamyi</i> , <i>Cantrainea yoyottei</i> - 2 espèces de Mollusques des profondeurs endémiques de la région de Puerto-Rico à Trinidad: <i>Conus mazei</i> , <i>Conus roberti</i> - au moins 7 esp. de Mollusques terrestres endémiques de Guadeloupe - crabe cirrique endémique des Petites-Antilles (<i>Guinotia dentata</i>) - 1 esp. endémique de Guadeloupe: Mygale de la Soufrière (<i>Holothele sulfurensis</i>) - 6 esp. endémiques de Guadeloupe: 2 libellules (<i>Protoneura romanae</i> , <i>Macrothemis meurgeyi</i>), 4 phasmes (<i>Hesperophasma pavisae</i> , <i>Lamponius lethargicus</i> , <i>Paraclonistria nigramala</i> , <i>Pseudobacteria donskoffi</i>)
Poissons	- 1 espèce de poisson dulçaquicole endémique de Trinidad à St-Martin: Petit-dormeur (<i>Eleotris perniger</i>)

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Amphibiens	<ul style="list-style-type: none"> - 2 esp. endémiques de Guadeloupe (Basse-Terre): Hylode de Pinchon (<i>Eleutherodactylus pinchoni</i>), Hylode de Barlagne (<i>E. barlagnei</i>) - 1 esp. endémique de quelques îles des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>)
Reptiles	<ul style="list-style-type: none"> - 15 esp. potentiellement endémiques de Guadeloupe, dont 7 esp. validées (les statuts des autres espèces restent à confirmer avec des études génétiques#) : <ul style="list-style-type: none"> - Anolis de la Guadeloupe (<i>Anolis marmoratus</i>²), Anolis des Saintes (<i>Anolis terraealtae</i>²), Anolis de Kahouanne (la sous-espèce <i>Anolis marmoratus kaouhanensis</i>¹ serait une espèce potentiellement endémique de l'îlet), Anolis des îlets Pigeons une espèce serait potentiellement endémique de l'îlet (<i>Anolis marmoratus pigeonnensis</i>¹), Anolis de la Désirade (<i>A. desiradei</i>¹), Anolis de Petite Terre (<i>A. chrysops</i>¹), Anolis de Marie-Galante (<i>A. ferreus</i>²) - Scinque de la Désirade (<i>Mabuya desiradae</i>¹), Scinque de l'îlet Cochon (<i>Mabuya cochonae</i>^{1*}), Scinque de la Grande-Terre (<i>Mabuya grandisterrae</i>^{1*}), Scinque de la Basse-Terre (<i>Mabuya guadeloupae</i>^{1*}), Scinque de Marie-Galante (<i>Capitellum mariagalantae</i>¹), Scinque des Saintes (<i>Mabuya</i> sp¹) - Sphérodactyle des Saintes (<i>Sphaerodactylus phyzacinus</i>) <p>(Remarques: # Le nouveau nom de genre "Ctenonotus" a été proposé pour remplacer le genre "Anolis" (Nicholson et al. 2012), le nom de genre Anolis pour l'instant reporté dans la base ITIS-Catalogue of Life est retenu dans le profil.</p> <p>* Espèces non observées lors des dernières prospections, ¹ le statut d'espèce est à confirmer avec des études génétiques; ² le statut d'espèce valide).</p> <ul style="list-style-type: none"> - Couresse de la Guadeloupe (<i>Alsophis antillensis</i>- petite population encore observée en Guadeloupe). - Couresse des Saintes (<i>Alsophis sanctorum</i> dont 2 sous-espèces sont endémiques de Terre-de-Haut, <i>A.s. sanctorum</i> et de Terre-de-Bas, <i>A.s. danforthii</i>), Typhlops de Guadeloupe (<i>Typhlops guadeloupensis</i>) <ul style="list-style-type: none"> - 4 esp. endémiques des Petites Antilles, dont certaines espèces présentes uniquement sur quelques îles: Iguane des Petites-Antilles (<i>Iguana delicatissima</i>), Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), la Petite Couresse (<i>Erythrolamprus juliae</i> - endémique de Guadeloupe et de Dominique, à vérifier avec des études génétiques), Gymnophthalme de Plée (<i>Gymnophthalmus pleii</i>)
Oiseaux	<ul style="list-style-type: none"> - 1 esp. endémique de Guadeloupe: Pic de la Guadeloupe (<i>Melanerpes herminieri</i>) - 1 esp. endémique de Guadeloupe et Dominique: Paruline caféïette (<i>Setophaga plumbea</i>) - 1 esp. endémique de Montserrat, Guadeloupe, Dominique et Ste Lucie: Grive à pieds jaunes (<i>Turdus lherminieri</i>), dont une sous-espèce est endémique de Guadeloupe - 10 esp. endémiques des Petites Antilles (incluant les 3 espèces citées ci-dessus) et 16 espèces endémiques des Petites-Antilles et de Puerto-Rico (- la sous-espèce du Martin pêcheur à ventre roux (<i>Megaceryle torquata</i> ssp. <i>stictipennis</i>) est endémique de Guadeloupe, Dominique et Martinique)

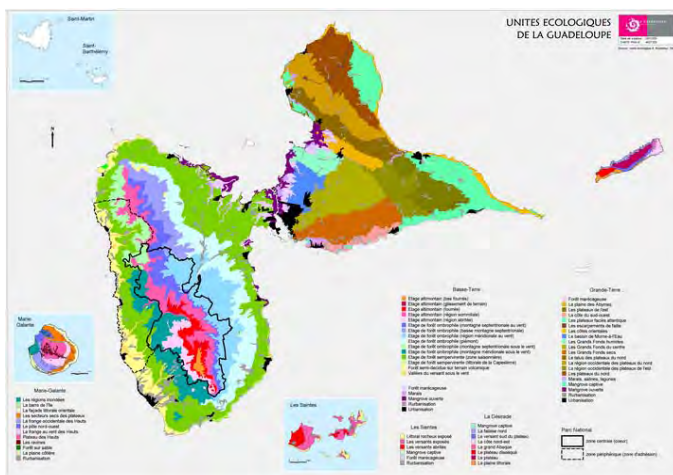
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Chauves-souris	<ul style="list-style-type: none">- 1 esp. endémique stricte de Guadeloupe: Sérotine de la Guadeloupe (<i>Eptesicus guadeloupensis</i>)- 3 esp. endémiques de quelques îles des Petites-Antilles: Chiroderme de la Guadeloupe (<i>Chiroderma improvisum</i>) et <i>Sturnira thomasi</i> (end. de Guadeloupe et de Montserrat), <i>Myotis dominicensis</i> (end. de Guadeloupe et de Dominique)- au total, 8 esp. endémiques des Petites-Antilles et de Puerto-Rico: les 4 esp. citées précédemment et l'Ardops des Petites Antilles (<i>Ardops nicholls</i>), le Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>), le Monophylle des Petites-Antilles (<i>Monophyllus plethodon</i>), le Natalide paillé (<i>Natalus stramineus</i>)
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Habitats - Ecosystèmes: habitats à fort intérêt écologique et patrimonial

- **ZNIEFF terrestres et marines et APB** (DEAL Chiffres clés de l'environnement 2012, DEAL Guadeloupe 2012)
 - ZNIEFF terrestres et marines (22 276 ha)
 - 11 APB (1183 ha)

➤ **Forêts**



- Près de 40% de l'archipel Guadeloupéen est recouvert de forêts (70 000 ha). Du fait des actions naturelles et anthropiques, ces formations végétales sont plus ou moins altérées et discontinues. Près de 40% du massif forestier de la Basse-Terre est considéré comme bien conservé (DEAL Guadeloupe 2012).

Carte écologique de l'archipel de Guadeloupe (Rousteau, 1996)

La forêt humide de la Basse-Terre bénéficie du statut de protection du Parc National de la Guadeloupe (cœur de Parc) et du régime forestier pour la forêt publique gérée par l'ONF. La forêt sèche et sempervirente saisonnière de Grande-Terre est relativement peu protégée et un projet de Réserve Biologique Dirigée est en cours en nord Grande-Terre afin d'améliorer la protection de ce milieu (DEAL Guadeloupe 2012).

➤ **Démarche Redom**

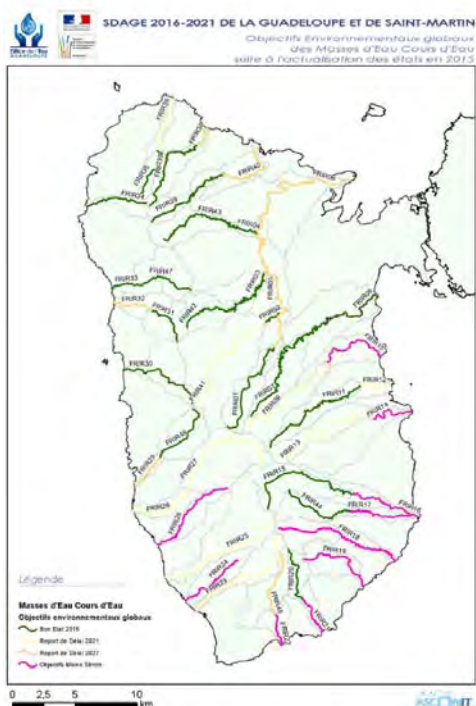
- 14 sites terrestres (7642 ha) identifiés dans le cadre de la Démarche Redom (Gayot and Korysko 2015)

➤ **Rivières**

- Le massif volcanique de la Soufrière alimente les rivières de la Basse-Terre (55 cours d'eau). La qualité physico-chimique et la continuité écologique des cours d'eau sont suivis dans le cadre de la Directive Cadre sur l'Eau.

Les rivières de la Basse-Terre hébergent notamment **2 espèces endémiques des Petites-Antilles**: le crabe cirrique (*Guinotia dentata*) et le poisson Petit-dormeur (*Eleotris perniger*).

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- En Grande-Terre: présence de ravines intermittentes et de canaux de type chenal lotique.

- La **partie aval de la rivière Grande Anse** est classée en tant que **réservoir biologique**. Cette partie du cours d'eau est nécessaire au maintien du bon état écologique des cours d'eau du bassin versant et le maintien d'une continuité écologique entre les eaux marines et dulçaquicoles est nécessaire (notamment pour les poissons migrateurs) (ASCONIT 2012).

- 18 autres cours d'eau correspondent aux critères définis pour le classement en « **Candidat au statut de réservoir biologique** » (ASCONIT 2012): Vieux Habitants (amont et aval), Beaugendre (amont et aval), Bourceau (amont et aval), Lostau (amont et aval), Petite Plaine (amont et aval), Ziotte (amont et aval), Moustique (aval), Lézarde (aval), Petite Rivière à Goyave (amont et aval), Pérou (amont et aval).

Carte des objectifs environnementaux globaux des rivières de Basse-Terre (SDAGE 2016-2021).

- Le classement des cours d'eau a pour objectif de maîtriser l'aménagement des cours d'eau vis-à-vis des ouvrages pouvant faire obstacle à la continuité écologique (DEAL Guadeloupe):

- **cours d'eau classés en liste 1** visant à préserver les cours d'eau de toute nouvelle atteinte à la continuité écologique: La Grande Rivière à Goyave, La Petite Rivière à Goyave et son affluent la rivière Moreau, La rivière Beaugendre, La rivière Bourceau, La rivière Briqueterie, les rivières de Petite Plaine, du Pérou, Grande-Anse (réservoir biologique), Lézarde, Lostau, La rivière Moustique de Sainte-Rose, La Grande Rivière de Vieux-Habitants, La rivière Ziotte.

- **cours d'eau classés en liste 2** visant à restaurer la continuité écologique: Grande Rivière à Goyaves aval 1, Rivière Ancenneau, Rivière de la Ramée amont, Petite Rivière à Goyave, Rivière des Pères, Rivière Moustique de Petit-Bourg, Grande Rivière de Vieux-Habitants amont.

=> Compte-tenu de l'importance écologique de ces 18 cours d'eau, ces rivières sont identifiées comme **corridors écologiques** dans le cadre du projet.

➤ Zones humides - Sites côtiers et marins

- Zones humides

- Six formations végétales ont été identifiées comme zones humides à caractère salé ou saumâtre en Guadeloupe: mangroves ouvertes et captives, canaux, lagunes, prairies humides, marais saumâtres. A ces surfaces s'ajoutent 2092 ha de forêts marécageuses à *Pterocarpus officinalis* situées en arrière mangrove. La Guadeloupe comprend la plus grande surface de forêts marécageuses à *Pterocarpus officinalis* de la Caraïbe (AAMP-PNG-UAG 2013, Imbert et al. 1988, ONF 2007, Roussel et al. 2010).

- Le secteur du lagon du Grand Cul-de-Sac Marin / Port-Louis comprend 3377 ha de zones humides.

- Le lagon du Grand Cul-de-Sac Marin est bordé par la plus grande formation de zone humide de Guadeloupe et des Petites-Antilles, constituée principalement de mangroves (2784 ha) et abrite 5 des 6 formations végétales de zone humide présentes en Guadeloupe (à l'exclusion des prairies salées).

- L'archipel guadeloupéen présente la plus grande surface de forêts marécageuses à *Pterocarpus officinalis* de la Caraïbe (2100 ha) (AAMP-PNG-UAG 2013).

- Le lagon du Petit Cul-de-Sac Marin comprend 334 ha de zones humides dont des mangroves sur la côte est de la Basse-Terre.

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- L'espèce rare de palétuvier noir, *Avicennia schaueriana*, est présente le long de la côte est du lagon du GCSM.
- Trois canaux bordés de mangroves sont présents à l'ouest de la Grande-Terre et communiquent avec le lagon du GCSM: canal des Rotours, canal Perrin, canal Belle-Plaine.
- Les mangroves du Moule (la seule zone de mangrove bien développée sur la façade Atlantique) et la Rivière Vieux Fort à Marie-Galante sont des bras de mer se prolongeant à l'intérieur des terres et bordés de mangroves.
- Les marais saumâtres de Choisy et Lambis (commune des Abymes), Marais des Jumeaux et de Port Louis et les lagunes de la Pointe des Châteaux et des îlets de Petite-Terre constituent des habitats importants pour l'avifaune.
- Plus de 3000 mares recensées en Grande-Terre (DIREN 2001) et 627 mares ont été recensées à Marie-Galante (Conseil Général de Guadeloupe, 2010)
- Programme européen INTERREG IV Caraïbes: protection et valorisation des écosystèmes humides du littoral (ONF).

- Le **lagon du GCSM** est une vaste baie de plus de 11 000 ha fermée par une barrière récifale de 29 km de long (une des plus importantes des Petites-Antilles) et bordée par la plus grande formation de zones humides des Petites-Antilles (3377 ha) (dont 2784 ha de mangroves). Près de 1800 ha de forêts marécageuses à *Pterocarpus officinalis* sont attenantes aux mangroves. La quasi-totalité des unités géomorphologiques (récifales ou non) sont présentes dans le lagon du GCSM (Andrefouet et al. 2005, Augris et al. 1992).

- Herbiers

- Les cartographies et données surfaciques existantes permettent d'identifier **10193 ha d'herbiers en Guadeloupe** dont 64% seraient principalement constitués de l'herbe à tortue, *Thalassia testudinum* (AAMP-PNG-UAG 2013, Boutry 2001, Carex 1999, 2001, Chauvaud 1997, Hily et al. 2010, TBM 2005).
- Le **lagon du GCSM** héberge 5766 ha d'herbiers qui sont de façon générale en bon état de santé. Les herbiers situés dans le cœur de Parc autour de l'îlet Fajou sont plus denses par rapport aux herbiers hors de cœur (AAMP-PNG-UAG 2013, Mège et Delloue 2007). Les herbiers autour de l'îlet Kahouanne et de Tête à l'Anglais sont suivis dans le cadre de la DCE et sont en bon état de santé (PARETO et al. 2009ab).
- Le **lagon du PCSM et la côte-au-vent de la Basse-Terre** abritent une petite surface d'herbiers (près de 1800 ha). Les herbiers à proximité du littoral de Goyave sont envasés et soumis aux apports d'alluvions de la Petite Rivière à Goyave (Boutry 2001). Une partie relativement importante de ces herbiers est en bon état écologique (AAMP-PNG-UAG 2013, Boutry 2001).
- Une frange d'herbiers est présente le long de la **côte sud de la Grande-Terre** (900 ha) et sur les **fonds côtiers Caraïbe de la Basse-Terre** (AAMP-PNG-UAG 2013, Bouchon-Navaro et Bouchon 2000, Boutry 2001).

- Depuis 2010, on recense la présence d'une espèce de Phanérogame marine originaire de Mer Rouge et de l'Océan Indien, *Halophila stipulacea*. La dispersion de cette espèce serait due à sa multiplication rapide par fragmentation végétative.

- Récifs coralliens

- On recense 57 espèces de coraux en Guadeloupe (toutes inscrites à l'Annexe II CITES et à l'Annexe III du Protocole SPAW à l'exception de *Acropora cervicornis*, *A. palmata*, *Montastraea annularis*, *M. faveolata* qui sont inscrites à l'Annexe II de SPAW).

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- La côte sous-le-vent et le sud de la côte-au-vent de la Basse-Terre (3300 ha de communautés coralliennes principalement entre Bouillante et Grande Anse à Deshaies, 42 espèces de coraux) sont caractérisées par la présence de communautés coralliennes non bioconstructrices et une diversité d'habitats benthiques (19 habitats connus).

- Le secteur de la Pointe des Châteaux regroupe plusieurs habitats d'intérêt majeur: communautés coralliennes, herbiers, lagunes, plages (Diaz 2005).

- Localisation de colonies vivantes d'Acropores (*Acropora palmata*, *A. cervicornis*- CR sur la liste UICN) notamment aux îlets Pigeons, autour de l'îlet Tête à l'Anglais, aux îlets Fajou et Caret (GCSM) et dans le Petit Cul-de-Sac Marin. Les formations remarquables et menacées d'espèces constructrices (*Montastraea annularis* (EN), *M. faveolata* (EN), *M. franksi* (VU)) constituent des colonies relativement homogènes et étendues aux îlets Pigeon et sur le récif face à Port-Louis (AAMP-PNG-UAG 2013).

- Plusieurs secteurs présentent une **inter-connectivité entre les herbiers et les récifs coralliens**: sud de la Grande-Terre (secteur de la Riviera), côte au-vent de la Basse-Terre et du Petit Cul-de-Sac Marin, côte sous-le-vent de la Basse-Terre (de la pointe Marsolle à l'Anse à la Barque) et les herbiers proches des formations récifales dans le lagon du GCSM. Les écosystèmes de mangroves, d'herbiers et de récifs coralliens sont inter reliés dans les lagons du Petit et du Grand Cul-de-Sac Marin. La plupart des hauts-fonds du lagon du GCSM sont colonisés par des herbiers pouvant être mélangés à des communautés coralliennes (AAMP-PNG-UAG 2013, Bouchon et Laborel 1990).

- Les communautés coralliennes font l'objet de suivis dans le cadre de la DCE, IFRECOR-GCRMN (Wilkinson et al. 2008, Jackson et al. 2014), Reef Check, suivis des réserves (RNN de Petite-Terre et de St-Martin), suivis du PNG et de l'UAG.

- Peuplement ichthyologique

- Près de 350 espèces de poissons sont recensées autour de l'archipel guadeloupéen dont environ 250 espèces sur les récifs coralliens, 120 dans les herbiers et 130 dans les mangroves. Dix espèces inscrites sur la liste rouge UICN (VU, EN, CR), dont 3 espèces observées de façon occasionnelle (AAMP-PNG-UAG 2013).

- La biomasse et la taille moyennes des poissons sont plus élevées dans les zones en coeur de Parc National (AAMP-PNG-UAG 2013).

- Les herbiers et les mangroves constituent des aires de nurserie et d'alimentation pour de nombreuses espèces de poissons. La connectivité entre mangroves-herbiers-récifs est particulièrement importante pour les peuplements de poissons et d'invertébrés marins.

ajouter ref des études et suivis

- Sources hydrothermales

- Trois secteurs sont concernés par la présence de sources hydrothermales terrestres ou sous-marines: le massif de la Soufrière, le secteur de Bouillante et le nord de la Basse-Terre (Ste-Rose, Lamantin) (ASCONIT).

- Les sources hydrothermales hébergent un écosystème sulfidique unique et diversifié composé d'Archae, de cyanobactéries recouvertes de bactéries sulfo-oxydantes et de diatomées. Parmi les diatomées, une étude biologique a inventorié 26 nouveaux taxons pour les Antilles françaises dont probablement la description d'une nouvelle espèce, *Amphora* nov. sp. (ASCONIT).

- Les mangroves constituent des écosystèmes sulfidiques peu profonds hébergeant des Archae géantes (Phylum Thaumarchaeota) dont plusieurs espèces ont été récemment décrites (Muller et al. 2010).

- La délimitation des ZCB marines se base sur l'Analyse Régionale de Guadeloupe Tome2 Synthèse/Analyse des enjeux en mer (AAMP en cours de finalisation).

- **Zones d'Importance pour la Conservation des Oiseaux (ZICO)** (Important Bird Areas - IBA) (Références: AAMP-PNG-UAG 2013, AEVA 2008, 2010, AMAZONA 2006, Arnoux et al. 2013, Eraud et al. 2009, Leblond 2003, 2008, Levesque et Mathurin 2008ab, Villard et Rousteau 1998, Levesque A. com. pers. 2015)

- **9 ZICO identifiées en Guadeloupe**, réparties en 4 catégories d'habitats: massif forestier de la Basse-Terre, falaises et îlots, mangroves et forêts marécageuses, plans d'eau douce et salines. Les ZICO de mangroves et forêts marécageuses et les plans d'eau douce et salines sont rares à l'échelle des Petites-Antilles. Ces ZICO représentent 19% de la surface de la Guadeloupe (Levesque et Mathurin 2008ab).

- Les ZICO sont identifiées par la présence de 16 espèces d'oiseaux à distribution restreinte et par le regroupement d'oiseaux marins dont 7 espèces nichent régulièrement dans l'archipel guadeloupéen (Leblond 2003, Levesque et Mathurin 2008ab). Trois espèces d'oiseaux marins forment des colonies relativement importantes avec plus de 100 couples (Leblond 2003, Levesque et Mathurin 2008ab): Sterne fuligineuse (*Onychoprion fuscata*), Grand Paille en queue (*Phaethon aethereus*), Noddi brun (*Anous stolidus*), Sterne bridée (*Onychoprion anaethetus*),

- **16 espèces sont endémiques des Petites Antilles et de Puerto-Rico** (Lesser Antilles and Puerto-Rico Endemic Bird Area EBA). L'ensemble de ces espèces à distribution restreinte est observée dans la ZICO du massif forestier de la Basse-Terre. Le Pic de la Guadeloupe (*Melanerpes herminieri*) est une **espèce endémique stricte de l'archipel guadeloupéen** dont la population est estimée à 19527 ± 3769 couples (AEVA 2008). Près de 80% de la population est présente dans le massif forestier de la Basse-Terre (AEVA 2008).

- 1 espèce est endémique de la Guadeloupe et de la Dominique: la Paruline caféïette (*Setophaga plumbea*).

- La Grive à pieds jaunes (*Turdus lherminieri*, espèce vulnérable et endémique de quelques îles des Petites-Antilles) est présente dans le massif forestier de la Basse-Terre. La sous-espèce *Turdus lherminieri lherminieri* est endémique de Guadeloupe. La Guadeloupe présente les effectifs les plus importants de cette espèce menacée par rapport aux effectifs recensés sur Montserrat et la Dominique. Les forêts de la Basse-Terre renferment la plus grande diversité génétique pour cette espèce et joueraient le rôle de réservoir génétique (Arnoux et al. 2013ab).

- 10 espèces sont endémiques strictes des Petites-Antilles.

- Le dendrocygne des Antilles (*Dendrocygna arborea*, VU) et le pétrel diabolotin (*Pterodroma hasitata*, EN) sont des espèces rares en Guadeloupe (Levesque et Mathurin 2008a).

- Près de 43 espèces de limicoles sont recensées en Guadeloupe. Les principaux sites de fréquentation des limicoles sont: La Pointe des Châteaux, les îlots de Petite-Terre, La Désirade, l'îlet Fajou, les marais de Port-Louis, Bois-Jolan, le barrage de Gaschet, les mangroves du lagon du GCSM et les terres et prairies inondées (AAMP-PNG-UAG 2013, Levesque et Mathurin 2008ab).

➤ **Reptiles et Amphibiens**

- Près d'une quinzaine d'espèces de reptiles seraient potentiellement endémiques de Guadeloupe (avec certaines espèces en cours de validation) dont des espèces endémiques des îles de La Désirade, des îlets de Petite-Terre, des Saintes, de Marie-Galante, de l'îlet Kahouanne. Trois espèces de reptiles sont endémiques des Petites-Antilles, dont l'iguane des Petites-Antilles qui est présent dans quelques îles de l'arc antillais (Breuil 2002, Lorvelec et al. 2004, 2007, 2012).

- La RNN des îlets de Petite-Terre abrite près de 50% de la population mondiale de l'iguane des Petites-Antilles, *Iguana delicatissima*. Cette espèce est classée en danger par l'UICN et est endémique de quelques îles des Petites-Antilles: Anguilla, St-Barthélemy, St-Eustache, Guadeloupe, Dominique et Martinique (Legouez 2010, Knapp et al. 2014). La vulnérabilité et l'état démographique de cette espèce a conduit à la mise en place d'un Plan National d'action piloté par la DEAL Martinique (Legouez 2010). La plus grande densité d'*I. delicatissima* des Antilles françaises est présente aux îlets de Petite-Terre (Lovelec et al. 2004, Association La Gaïac 2013, Dumont et al. 2013, Knapp et al. 2014). Hors événements climatiques

(cyclones), la population de Petite-Terre s'accroît jusqu'à 10000 individus avec des densités particulièrement importantes à Terre de Bas (91 ind. /ha) (Lorvelec et al. 2004, Dumont et al. 2014).

- Les seuls sites au sein desquels les populations d'iguanes des Petites-Antilles ne sont pas hybridées avec l'iguane vert exotique sont situés sur les îlets de Petite-Terre et de La Désirade. Des individus isolés d'iguane des PA sont présents sur les communes de Bouillante, Ste-Rose et Basse-Terre mélangés avec des hybrides et des populations d'iguanes communs (*Iguana iguana*) (ONCFS, Elisa Curot-Lodeon, comm. pers. 2015).

L'espèce introduite *Iguana iguana* entre en compétition avec cette espèce locale et des hybridations entre les 2 espèces sont observées (Legouez 2010).

- 2 hylodes sont endémiques de la Basse-Terre (*Eleutherodactylus pinchoni*, *E. barlagnei*) et une espèce d'hylode est présente dans plusieurs îles des Petites-Antilles (*Eleutherodactylus martinicensis*) (Breuil 2002).

- La distribution de la couresse des Saintes (*Alsophis sanctorum*), endémique des Saintes, reste méconnue. Une sous-espèce est endémique de Terre-de-Bas (*A.s. danforthii*) et serait présente sur toute l'île et une seconde sous-espèce est endémique de Terre-de-Haut (*A.s. sanctorum*, présente sur l'îlet le Chameau et dans les forêts au nord de l'île) (ASFA, Régis Gomez com. pers. 2015).- La Couresse de Guadeloupe (*Alsophis antillensis*) est présente dans le secteur des Grands Fonds et au sud de la Basse-Terre et la Petite Couresse (*Erythrolamprus juliae*) a été observée dernièrement dans les Grands Fonds. Ces 2 espèces endémiques seraient potentiellement présentes sur l'ensemble de la Basse-Terre, des prospections permettraient de confirmer ces distributions peu connues (ASFA, Régis Gomez com. pers. 2015).

- Le statut d'espèce pour les populations de scinques (préalablement l'espèce de Guadeloupe *Mabuza mabuza*) observées sur les différentes îles et îlets de l'archipel guadeloupéen est en cours de validation suite à des études morphométriques et génétiques. Des études sont en cours afin de requalifier et décrire les populations de scinques présentes sur l'archipel de Guadeloupe, plusieurs espèces seraient endémiques de Grande-Terre, Basse-Terre, l'îlet Cochon, Marie-Galante, Désirade.

➤ Reptiles: Sites de pontes des tortues marines

- **Trois espèces de tortues marines** viennent pondre sur les plages de l'archipel guadeloupéen: la tortue verte (*Chelonia mydas*), la tortue imbriquée (*Eretmochelys imbricata*) et la tortue luth (*Dermochelys coriacea*). Deux autres espèces observées plus occasionnellement s'alimentent dans les eaux de Guadeloupe mais ne pondent pas: la tortue caouanne (*Caretta caretta*) et la tortue olivâtre (*Lepidochelys olivacea*) (Santelli et al. 2010). Toutes ces espèces sont menacées et inscrites sur la liste rouge de l'UICN et l'Annexe II du Protocole SPAW. Les tortues verte, imbriquée et luth sont inscrites en annexe I de la CITES.

- Le **Plan National de Restauration des Tortues Marines dans les Antilles Françaises** vise l'amélioration du statut de conservation des différentes espèces de tortues marines (DEAL Guadeloupe-RTMG 2007). Ce Plan de Restauration, dont le maître d'ouvrage est la DEAL Guadeloupe, est mis en œuvre par le Réseau Tortues Marines de Guadeloupe (RTMG) et coordonné de 2004 à 2008 par l'association Kap'Natirel et depuis 2009 par l'ONCFS. Un réseau de suivi des sites de ponte a permis de recenser au moins 156 sites de ponte de tortues marines en Guadeloupe (Santelli et al. 2010, AAMP-PNG-UAG 2013, ONCFS, RTMG, Kap'Natirel).

- Les suivis de la fréquentation des sites de pontes réalisés par le RTMG depuis 1999 ont permis d'identifier **151 sites de pontes de tortues marines répartis sur 11 secteurs** (Santelli et al. 2010, AAMP-PNG-UAG 2013, Données RTMG 2013, Antoine Chabrolle comm. pers. 2015): Nord Basse-Terre, Sud Basse-Terre, Côte sous-le-vent de la Basse-Terre, Sud-Est Grande-Terre, Sud Grande-Terre, Nord Grande-Terre, Lagon GCSM, La Désirade, Terre de Haut des Saintes, Marie-Galante, îlets de Petite-Terre.

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- Un seuil de 10 activités de pontes par saison de ponte et par espèce a été proposé par Bass et al. 2011 pour identifier les ZCB pour les tortues marines. Lors des suivis réalisés de 2010 à 2014, 36 plages présentaient au moins 10 activités de pontes par saison de ponte et pour au moins une des 3 espèces de tortue marine (Données RTMG 2010-2014, Antoine Chabrolle comm. pers. 2015, Masson 2013, Santelli et al. 2010):

- La **tortue imbriquée** est l'espèce qui présente la plus grande activité de ponte sur l'archipel de la Guadeloupe et pond principalement sur les plages de:

- Trois-Ilets, Folle-Anse, Anse de Mays, Moustique à Marie-Galante,
- l'îlet Fajou (Four à chaux) et l'îlet Kahouanne,
- les îlets de la Petite-Terre (Pointe de Sable-Trou Canard).

D'autres sites avec une activité de ponte élevée (entre 10 et 40 activités de pontes par saison de ponte) sont recensés:

- sud de la Basse-Terre (Grande Anse de Trois Rivières, Les Esclaves à Capesterre Belle-Eau),
- en côte sous-le-vent de Basse-Terre (Anse à Sable à Bouillante),
- nord Basse-Terre (Cluny)
- au nord Grande-Terre (Pointe Antiques - Pointe Plate, Port Louis sud, Anse Lavolvaine),
- au sud-est de la Grande-Terre (Anse Canot à Gosier, Bois Jolan à Ste Anne, Les Rouleaux et la Gourde à St-François),
- sud Grande-Terre (ouest Pointe Canot et Salines à Gosier, Anse à Saint et Caravelle à Ste-Anne),
- à Marie-Galante (Les Galets, Vieux-Fort, Anse l'Eglise),
- aux Saintes (Pompierre), îlets de Petite-Terre (Voûte à Cabrit, Plage du nord, Pointe de Sable, Terre de Haut);

- Les principaux sites de ponte de la **tortue verte** sont situés sur:

- la façade est de Marie-Galante (plage Les Galets et Feuillard),
- Terre de Haut aux Saintes (Figuier, Grande Anse),
- aux îlets de Petite-Terre (Voûte à Cabrit, Pointe de Sable-Trou Canard, Plage du Nord, Pointe de Sable, Terre de Haut),
- au nord Basse-Terre (Grande Anse de Deshaies, Ilet Kahouanne),
- au sud-est de la Grande-Terre (Alizés au Moule, Anse Châteaux à St-François);

- La **tortue luth** pond principalement:

- au nord (plages des Amandiers, Nogent, Cluny, Grande Anse de Deshaies),
- au sud de la Basse-Terre (Grande-Anse à Trois-Rivières; Anse La Fontaine, Plage les Esclaves à Capesterre-Belle-Eau).

- L'état écologique des sites de ponte a été évalué sur 84 plages et environ les deux tiers des sites sont classés en bon état écologique (Santelli et al. 2010, AAMP-PNG-UAG 2013). Plusieurs sites présentent une activité de ponte importante malgré leur état de dégradation: plage de Cluny (Ste Rose), plage de Grande Anse (Trois-Rivières), Anse de Vieux-Fort (Marie-Galante). Ces sites représentent une priorité de restauration et de réhabilitation (Santelli et al. 2010).

- Les suivis INAScuba réalisés de façon volontaire par les plongeurs et apnéistes permettent d'obtenir des éléments sur les distributions et abondances en mer des tortues marines. Bien qu' influencé par la fréquentation des clubs de plongée sur les différents sites, ce protocole permet d'avoir des informations sur les abondances relatives des tortues marines en alimentation et de comparer la fréquentation inter-annuelle des sites (Association Kap'Natirel 2011, 2014).

- Les tortues imbriquées sont fréquemment observées en alimentation en côte sous-le-vent de la Basse-Terre (Pointe Malendure, Morphy). Les abondances relatives de cette espèce ont chuté drastiquement aux Saintes en 2012-2013 suite aux prises accidentelles par des filets (filets de type folles à lambis).

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- Les tortues vertes sont observées en alimentation en côte sous-le-vent de la Basse-Terre (Baie de Deshaies, Baie Bouillante, Baie de Malendure), dans le lagon de Petite-Terre et à Marie-Galante.
- A noter la faible abondance relative en alimentation sur les sites de plongées de Port-Louis (données depuis 2008 proches de 0) et de St-François.

Corridors écologiques

- Les tortues marines sont des espèces migratrices, il est donc primordial d'étudier leur aire de répartition de façon à développer des actions concrètes de coopération entre les îles des Petites-Antilles et plus largement de la Caraïbe (DEAL Guadeloupe-RTMG, Programme SEATAG 2015). La pose de balises ARGOS sur des tortues vertes a permis de mettre en évidence une connectivité entre l'archipel de Guadeloupe (sites de ponte) et St Kitt's-Nevis, Antigua, Puerto Rico, Venezuela (zones d'alimentation) (DEAL Guadeloupe-RTMG 2007, SEATAG 2015).
- Le programme SEATAG (2013-2015) a pour objectifs de suivre des femelles tortues vertes en ponte afin d'améliorer les connaissances sur les tortues marines (en alimentation ou nidification), sensibiliser le public à la vulnérabilité des tortues marines et disposer de résultats permettant de poursuivre les réflexions en matière de stratégie de conservation (RTMG).

➤ **Mammifères terrestres**

- Les chauves-souris sont les seuls mammifères terrestres indigènes encore présents en Guadeloupe (Ibéné et al. 2007). Les suivis réalisés sur l'archipel guadeloupéen ont permis de recenser 13 espèces de chauves-souris, dont 8 espèces endémiques des Petites-Antilles et de Puerto-Rico. Quatre de ces espèces ont une distribution limitée à quelques îles: *Eptesicus guadeloupensis* (endémique de Guadeloupe), *Chiroderma improvisum* et *Sturnira thomasi* (end. de Guadeloupe et de Montserrat), *Myotis dominicensis* (end. de Guadeloupe et de Dominique) (Ibéné et al. 2007).
- Plusieurs stations présentent une grande richesse qualitative (diversité élevée et présence d'espèces endémiques des Petites-Antilles) (Ibéné et al. 2007, Ibéné et Questel 2011): massif forestier de la Basse-Terre (forêts hygrophile ou mésophile), écotone entre les forêts marécageuses et les forêts mixtes en Grande-Terre. Les espèces de chauves-souris endémiques des Petites-Antilles sont principalement observées dans les sites de: Sofaïa (Ste Rose), Vernou (Petit-Bourg), Caféière (Deshaies), forêt Fredy (CBE), Guyonneau (Lamentin), Rousseau (Morne-à-l'Eau), Grand-Etang (CBE), Petit bras David, Port-Blanc (Gosier), Deshauteurs (Ste Anne), Morne rouge (Ste Rose) (Ibéné et al. 2007, Karubats Niouz 2014). Plusieurs gîtes hébergent des espèces de chiroptères menacés et /ou endémiques et 3 grottes sont protégées par APB (App. 2) (Ibéné et al. 2007, Karubats Niouz 2014).
- Il est à noter que les chauves-souris ont un rôle écologique important en tant que pollinisateurs et disséminateurs de graines et contribuent notamment à la dissémination d'espèces végétales endémiques des Petites-Antilles, telles que *Asplundia rigida*, *Clusia major*, *Agave* spp. (Ibéné et al. 2007).
- Les chauves-souris sont menacées par l'utilisation de pesticides (notamment des organochlorés) et par la fragmentation ou dégradation de leurs habitats. Plusieurs espèces endémiques des Petites-Antilles sont particulièrement vulnérables à la déforestation: la Sturnire de la Guadeloupe (*Sturnira thomasi*), Chiroderme de la Guadeloupe (*Chiroderma improvisum*), Sérotine de la Guadeloupe (*Eptesicus guadeloupensis*), Monophylle des Petites-Antilles (*Monophyllus plethodon*), Ardops des Petites Antilles (*Ardops nichollsi*), Myotis de la Dominique (*Myotis dominicensis*) (Ibéné et al. 2007).

➤ **Mammifères marins**

- Sur 31 espèces documentées en Caraïbe, 24 espèces de mammifères marins ont été recensées dans les eaux des Antilles françaises (AAMP 2012, AAMP-PNG-UAG 2013, Gandilhon 2013). Parmi ces espèces, on observe le cachalot (*Physeter macrocephalus*) une espèce listée vulnérable sur la liste rouge et la baleine à

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bosse (*Megaptera novaeangliae*) qui migre dans les eaux chaudes de la Caraïbe de décembre à mai pour se reproduire et mettre bas.

- La côte sous-le-vent de la Basse-Terre regroupe une grande diversité (19 espèces) et des abondances relatives élevées d'odontocètes, tels que le cachalot (*Physeter macrocephalus*-VU) et le dauphin tacheté pantropical (*Stenella attenuata*). Cette fréquentation de mammifères marins est probablement à relier à la bathymétrie de cet espace côtier, la disponibilité en nourriture, les conditions météorologiques, mais aussi le biais d'observation du fait d'un effort de recherche plus conséquent sur ce secteur.

- Les baleines à bosse sont observées tout autour de l'archipel guadeloupéen sur les secteurs de: Petite-Terre - Pointe des Châteaux - Désirade - Banc du Crabier/ secteur Port-Louis - Pointe de la Grande Vigie / Côte sous-le-vent de la Basse-Terre / Côte au-vent de la Basse-Terre et lagon du PCSM / Banc de Colombie - Marie Galante - Les Saintes.

Les groupes actifs de mâles chanteurs semblent particulièrement affectionner les hauts-fonds du plateau de la Grande-Terre et de la Désirade, avec l'hypothèse que la géomorphologie du fond aurait un intérêt acoustique. Les paires mère-baleineau semblent affectionner les petits fonds, comme le lagon du PCSM (AAMP-PNG-UAG 2013, Dumont et al. 2013, Gandilhon 2012, 2013).

Les delphinidés et physétéridés sont plus fréquemment observés en façade caraïbe (Gandilhon 2013).

- En Guadeloupe, un programme de réintroduction du lamantin des Antilles (*Trichechus manatus ssp. manatus*, espèce classée en danger sur la liste rouge UICN) est en cours dans le lagon GCSM (Parc National de la Guadeloupe, ONCFS, CAR-SPAW).

Migrations, corridors écologiques

- Dans l'Atlantique nord, les baleines à bosse réalisent des migrations annuelles entre leurs zones d'alimentation au nord (nord des Etats-Unis, Canada, Islande, Norvège) et leurs aires de reproduction en région Caraïbe où elles sont présentes de décembre à mai. Des émetteurs satellites déployés sur des baleines à bosse en Guadeloupe et en République Dominicaine (en 2008-2012) ont montré que certains individus fréquentent des habitats entre la Guadeloupe, Anguilla, St-Martin, les îles Turques et Caïques, le nord d'Haiti et la République Dominicaine avant de débiter leurs migrations vers leurs aires d'alimentation dans le golfe du Maine (Etats-Unis), au Canada ou en Islande et Norvège (Kennedy et al. 2013). Des suivis par photo-identification ont permis de mettre en évidence des routes de migrations entre la Guadeloupe et l'ouest de l'Atlantique nord d'une part et entre la Guadeloupe, la partie nord-est (Islande, Norvège) et est de l'Océan Atlantique (îles du Cap Vert) (OMMAG).

- Des coopérations régionales et internationales sont mises en place entre les aires marines protégées pour améliorer la protection et la gestion des mammifères marins. Le Sanctuaire AGOA (créé en 2010) est jumelé depuis 2011 avec le Stellwagen Bank National Marine Sanctuary (Massachusetts, Etats-Unis) et des projets de jumelage sont à l'étude avec la République Dominicaine, le Parc marin du Saguenay-St Laurent (Canada), les îles néerlandaises de la Caraïbe qui envisagent de classer les eaux sous juridiction en sanctuaire pour les mammifères marins.

- La mise en place d'un observatoire acoustique (bouée acoustique déployée en juillet 2015) et la prochaine campagne REMMOA (prévue en 2016) devront permettre d'en apprendre davantage sur les peuplements de mammifères marins plus au large.

➤ Agrégation d'espèces

- Les oiseaux marins se regroupent en grand nombre sur les sites identifiés comme ZICO sur l'archipel guadeloupéen. Plusieurs salines et marais représentent des sites importants pour les limicoles. Des îlets dans le lagon du GCSM sont des reposoirs et sites de nidification majeurs pour les oiseaux marins (Leblond 2003, Levesque et Mathurin 2008ab).

- Plusieurs espèces de Chiroptères endémiques des Petites-Antilles se réunissent dans des grottes et cavités telles que: la grotte Rousseau à Morne-à-l'Eau comprenant près de 2000 individus de Monophylle des Petites-Antilles (*Monophyllus plethodon*), gîte situé à l'ancienne usine Grosse Montagne au Lamentin et

sous le pont de la route de la traversée à Petit-Bourg (*Brachyphylla cavernarum*), gîte du Grand Trou à Diable à Marie-Galante et le gîte de la grotte de Terre-de-Bas aux Saintes (*Ardops nicholli*, *Brachyphylla cavernarum*) (Ibéné et al. 2007, KaruBats Niouz 2014).

➤ Corridors écologiques

Populations d'oiseaux

- La Guadeloupe est située sur la voie de migration des populations d'oiseaux migrateurs, notamment des limicoles néarctiques, reliant le continent nord américain (aire de nidification) au plateau des Guyanes (aire d'hivernage) (AMAZONA 2006).

- Les ZICO de Guadeloupe, associées aux ZICO des îles voisines, assurent une continuité écologique dans les zones importantes pour la conservation des oiseaux endémiques des Petites Antilles.

- Un corridor écologique a été identifié pour les populations de Pic de la Guadeloupe (*Melanerpes herminieri*) entre le massif forestier de la Basse-Terre et les Monts Caraïbes (AEVA 2008). Les populations de Pic de la Guadeloupe sont inter connectées entre la Grande-Terre et la Basse-Terre, et les échanges se réaliseraient via les zones de mangroves et de forêts marécageuses entre les 2 îles. La dégradation et fragmentation de ces zones végétalisées constitue une barrière empêchant les déplacements de Pic entre les îles (AEVA 2008).

- Des différenciations génétiques relativement importantes ont été constatées entre les populations de Grive à pieds jaunes (*Turdus lherminieri*) observées entre les îles de Montserrat, Guadeloupe et Dominique, et ce compte tenu de la faible distance kilométrique entre ces îles (environ 50 km) (Arnoux et al. 2013). Une certaine différenciation génétique est également observée pour les populations de Grive à pieds jaunes entre la Basse-Terre et Grande-Terre, qui serait vraisemblablement reliée à une rupture de la continuité des habitats favorables à l'espèce. Ce constat renforce la nécessité de préserver la connectivité entre les populations de Grive à pieds jaunes sur l'archipel guadeloupéen (Arnoux et al. 2013).

- Un couloir de migration important pour les Procellariidés a été mis en évidence au large des îlets de Petite-Terre et de La Désirade: migration de 26000 Puffins des Anglais (*Puffinus puffinus*), 14 150 Puffins majeurs (*Puffinus gravis*) et 3 000 Puffins cendrés (*Calonectris diomedea*) (Levesque et Yésou 2005, Levesque et Mathurin 2008).

- Plusieurs individus de limicoles observés à la Pointe des Châteaux ont été bagués en Baie de Delaware (New Jersey, Etats-Unis) une étape migratoire incontournable pour de nombreux limicoles nord-américains (Hecker et Levesque 2009).

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Tableau 3- Zones Clés pour la Biodiversité (ZCB) identifiées pour l'archipel guadeloupéen.

N. ZCB	ZCB	Taxons présents - Habitats/ Ecosystèmes - Sites à enjeux - Justification de la désignation de ZCB
Massif forestier et rivières de la Basse-Terre		
ZCB 1	<p>Massif forestier de Basse-Terre (périmètre de la forêt départementale et de la ZICO)</p>	<ul style="list-style-type: none"> - Végétation - Massif forestier peu ou pas impacté. - au moins 30 espèces de plantes endémiques de Guadeloupe, dont <i>Acrocomia karukerana</i>, <i>Lobelia persicifolia</i>, <i>Clidemia guadalupensis</i>, <i>Inga guadeloupensis</i>, <i>Ocotea dussii</i>, <i>Anthurium dussii</i>, <i>Megalastrum macrotheca</i>, <i>Miconia vulcanica</i>, <i>Peperomia balbisii</i>, <i>Myrsine rolletii</i>, <i>Meliosma pardonii</i>, <i>Pilea corymbosa</i>, <i>Specklinia mazei</i>, <i>Polygala planellasi</i> (CR), <i>Echinodorus zombiensis</i> (VU), <i>Juncus guadeloupensis</i> (VU), <i>Verbesina guadeloupensis</i> (VU) et 5 espèces d'orchidées endémiques (<i>Epidendrum mutelianum</i>, <i>Stelis dussii</i>, <i>Octomeria ffrenchiana</i> (CR), <i>Pseudocentrum guadalupense</i> (CR), <i>Pleurothallis mazei</i> (CR)) - Présence d'espèces végétales menacées: <i>Picrasma excelsa</i>, <i>Pouteria pallida</i>, <i>P. semecarpifolia</i>, ainsi que les 7 espèces endémiques citées ci-dessus. - Présence d'espèces endémiques des Petites-Antilles (plus de 300 esp. recensées en Guadeloupe), dont: <i>Charianthus purpureus</i>, <i>C. alpinus</i>, <i>C. corymbeus</i>, <i>Hymenophyllum macrothecum</i>, <i>Prunus pleuradenia</i>, <i>Sterculia caribaea</i> et les orchidées: <i>Malaxis major</i>, <i>Ponthieva petiolata</i>, <i>Leochilus puertoricensis</i>, <i>Malaxis massonii</i>, <i>M. umbelliflorai</i>, <i>Epidendrum revertianum</i>, <i>E. borcuarum</i>, <i>E. patens</i>, <i>Elleanthus dussii</i>, <i>Campylocentrum pygmaeum</i>, <i>Lepanthes aurea</i>, <i>Oncidium altissimum</i>, <i>Stelis ophioglossoides</i>. - Invertébrés - Présence de la Mygale de la Soufrière (<i>Holothele sulfurensis</i>), endémique du massif de la Soufrière - 8 esp. de Mollusques terrestres endémiques de Guadeloupe, dont l'espèce menacée <i>Amphicyclotulus perplexus</i> (VU), et 3 espèces endémiques des Petites-Antilles - Présence de papillons (<i>Antichloris toddi</i>, <i>Rejectaria karukerensis</i>, <i>Tricentrogyna crocantha</i>), libellules (<i>Protoneura romanae</i>-CR, <i>Macrothemis meurgeyi</i>-CR) coléoptères (<i>Peridinetus insignis</i>, <i>Carneades bicincta</i>, <i>Strategus syphax</i>) et phasmes (<i>Paraclonistria nigramala</i>, <i>Clonistria guadeloupensis</i>) endémiques de Guadeloupe. Libellules endémiques des Petites-Antilles (<i>Argia concinna</i>, <i>Brechmorhoga archboldi</i>). - Présence du crabe cirrique <i>Guinotia dentata</i>, endémique des Petites-Antilles, et du poisson Petit-dormeur (<i>Eleotris perniger</i>), endémique de Trinidad à St-Martin, dans les rivières de la Basse-Terre. - Avifaune - IBA (ZICO, 38705 ha, périmètre de forêt départementale gérée par l'ONF):

	<ul style="list-style-type: none"> - Présence de plus de 70% de la population du Pic de la Guadeloupe (<i>Melanerpes herminieri</i>, espèce endémique de l'île) (7500 couples) - Présence de l'espèce vulnérable et endémique de 4 îles des Petites-Antilles: Grive à pieds jaunes (<i>Turdus lherminieri</i>), dont la sous-espèce (<i>Turdus lherminieri lherminieri</i>) est endémique de Guadeloupe. - Présence de 16 espèces d'oiseaux endémiques des Petites-Antilles et Puerto Rico: Pic de la Guadeloupe (<i>Melanerpes herminieri</i>), Tyran janeau (<i>Myiarchus oberi</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Martinet chiquesol (<i>Chaetura martinica</i>), Trembleur brun (<i>Cinlocerthia ruficauda</i>), Moqueur grivotte (<i>Allenia fusca</i>), Moqueur corossol (<i>Margarops fuscatus</i>), , Colombe à croissant (<i>Geotrygon mystacea</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Paruline caféïette (<i>Setophaga plumbea</i>), Saltator gros-bec (<i>Saltator albicollis</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Grive à pieds jaunes (<i>Turdus lherminieri</i>). (- Présence du Martin pêcheur à ventre roux (<i>Ceryle torquatus stictipennis</i>) dont la sous-espèce est endémique de 3 îles des Petites-Antilles) <p>- Herpétofaune</p> <ul style="list-style-type: none"> - Présence de 2 espèces d'Amphibiens endémiques de Guadeloupe et restreintes à la Basse-Terre: Hylode de Barlagne (<i>Eleutherodactylus barlagnei</i>), Hylode de Pinchon (<i>Eleutherodactylus pinchoni</i>) - Présence de l'hylode de Martinique endémique des Petites-Antilles: <i>Eleutherodactylus martinicensis</i> - Présence du typhlops (<i>Typhlops guadeloupensis</i>) et de la Couresse de la Guadeloupe (<i>Alsophis antillensis</i>) endémiques de l'île. - la Petite Couresse (<i>Erythrolamprus juliae</i>), endémique de Guadeloupe et Dominique, serait encore présente en Basse-Terre (présence à confirmer). <p>- Présence de quelques individus isolés d'iguane des Petites Antilles sur les communes de Bouillante, Ste Rose, Basse-Terre: individus isolés et mélangés aux populations d'hybrides et aux iguanes communs (<i>Iguana iguana</i>).</p> <ul style="list-style-type: none"> - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Présence du Scinque de la Basse-Terre (espèce à confirmer) (<i>Mabuya guadeloupae</i>). <p>- Mammifères</p> <ul style="list-style-type: none"> - Présence de 3 espèces de chauve-souris vulnérables et endémiques de quelques îles des Petites-Antilles: Sérotine de la
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		<p>Guadeloupe (<i>Eptesicus guadeloupensis</i>, endémique de Guadeloupe), Sturnire de la Guadeloupe (<i>Sturnira thomasi</i>, endémique de Guadeloupe et Montserrat), Myotis de la Dominique (<i>Myotis dominicensis</i>, endémique des Petites-Antilles)</p> <ul style="list-style-type: none"> - Présence d'espèces endémiques des Petites-Antilles: <i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i> et <i>Monophyllus plethodon</i> <p>- Autres écosystèmes</p> <ul style="list-style-type: none"> - Présence de sources hydrothermales hébergeant un écosystème sulfidique diversifié, dont des espèces nouvellement décrites pour la Guadeloupe. - Coeur de Parc National: 17 300 ha (soit 60% de la ZICO), site SPAW - Forêt départemento-domaniale protégée par arrêté ministériel et gérée par l'ONF - Réserve de la Biosphère (MAB-UNESCO) - 5 ZNIEFF Type I: Plateau Dimba et forêt des Bains Jaunes, Forêt de Fumées et bord de la rivière St Louis, Trace des crêtes et secteurs avoisinants sous-le-vent, Vallée de la Rivière Losteau, Vallée Tambour Saut de la Lézarde - Alliance for Zero Extinction a identifié ce site en raison de la présence des espèces d'amphibiens endémiques et menacées (Hylode de Barlagne (<i>Eleutherodactylus barlagnei</i>), Hylode de Pinchon (<i>Eleutherodactylus pinchoni</i>)) (AZE 2010).
	Massif forestier des Monts Caraïbes	<ul style="list-style-type: none"> - Végétation - Présence d'espèces végétales endémiques des Petites-Antilles: <i>Oncidium altissimum</i>, <i>Stelis ophioglossoides</i>, <i>Epidendrum mutelianum</i> (end. Guadeloupe) - Invertébrés - Présence de phasme endémique des Petites-Antilles (<i>Diapherodes gigas</i>) - Avifaune - Présence d'une population de Pic de Guadeloupe (<i>Melanerpes herminieri</i>) - Corridor écologique pour cette espèce endémique de Guadeloupe entre les massifs forestiers de Basse-Terre et les Monts Caraïbes. - Herpétofaune - Présence de l'Hylode de Pinchon (<i>Eleutherodactylus pinchoni</i>) endémique de Guadeloupe et de l'Hylode de Martinique endémique des Petites-Antilles (<i>Eleutherodactylus martinicensis</i>) - Présence du typhlops de Guadeloupe, endémique de l'île (<i>Typhlops guadeloupensis</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles.

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		<p>- 5 ZNIEFF Type I (Ravine Salée, falaise Pointe Turllet à Pointe Mazarin, Ravine Cimetièrre, Morne Caca à Ravine Sèche, Ravine Blondeau et Pointe à Chaux) / ZNIEFF Type II et site du CELRL: Les Monts Caraïbes</p> <p>- 5 sites REDOM: Monts Caraïbes (1100 ha), Trace des Crêtes (1110 ha), Morne aux fous (128 ha), Rivière Losteau (225 ha), Vallée Tambour (518 ha).</p> <p>- Zones de forêts - ZCB1 identifiées comme sites à enjeux dans le Diagnostic des forêts de Guadeloupe (Conseil Général de Guadeloupe 2014).</p>
Nord Grande-Terre		
ZCB 2	Falaises nord est de Grande-Terre (Pointe de la Petite Vigie à Pointe Bellacaty)	<p>- Végétation</p> <p>- Présence de plantes endémiques des Petites-Antilles: Ti lait (<i>Chamaesyce balbisii</i>)</p> <p>- Avifaune</p> <p>- IBA (ZICO, 3960 ha)- Enjeu local: Population nicheuse de Grand Paille en queue (<i>Phaethon aethereus</i>) (40-70 couples), une des colonies les plus importantes de Guadeloupe (BirdLife, ZICO)</p> <p>- Site dortoir pour les sternes à Pointe Piton (nord de la Grande-Terre)</p> <p>- Marais de Port-Louis: site important pour les limicoles (inclus dans KBA 3).</p> <p>- Herpétofaune</p> <p>- Présence de l'Hylode de Martinique endémique des Petites-Antilles (<i>Eleutherodactylus martinicensis</i>)</p> <p>- Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles</p> <p>- Projet de site classé</p> <p>- 2 ZNIEFF de Type I: Pointe de la Grande Vigie, Falaises nord-est de Grande-Terre</p> <p>- ZNIEFF de Type II: Forêt de Philipsbourg à la Porte d'Enfer</p> <p>- 2 sites Redom: Anse des Corps (97 ha) et Porte d'Enfer (202 ha)</p>
	Secteur entre Port-Louis et Pointe de la Vigie	<p>- Milieu marin</p> <p>- plateau algal entre Port-Louis et la Pointe de la Vigie: présence de Mollusques marins endémiques de Guadeloupe (<i>Conus magellanicus</i>, <i>Muricopsis schrammi</i> (espèce présente uniquement dans cette zone), <i>Triphora guadaloupensis</i>), et de mollusque endémique de quelques îles des Petites-Antilles (<i>Timbellus phyllopterus</i>)</p> <p>- Aires d'alimentation, de reproduction et de repos pour les odontocètes (<i>Steno bredanensis</i>)</p> <p>- Zones profondes au nord de la Grande Vigie et de Port-Louis (-300 m): présence de Mollusques profonds endémiques</p>

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		<p>de Guadeloupe (<i>Sveltia yoyottei</i>, <i>Terebra lamyi</i>)</p> <ul style="list-style-type: none"> - Anse de la Guérite à Anse du Canal / Anse de la Guérite à Anse Gris-gris: 2 sites reconnus en ZNIEFF Mer Type 1 - Milieu terrestre - Sites de ponte de tortues imbriquées (CR): Pte Antigues - Pte Plate - 3 ZNIEFF Type I : Case Moustache et périphérie orientale du Marais de Port-Louis, Pointe des Mangles à Anse Lavolvaine, Marais de Port Louis - 1 ZNIEFF de Type II et site du CELRL: Marais de Port Louis - Site du CELRL: Grande Vigie-Barre de Cadoue - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Barrage de Gaschet	<ul style="list-style-type: none"> - Avifaune - IBA (ZICO, 290 ha)-enjeu local: <ul style="list-style-type: none"> - site important pour les limicoles, notamment les oiseaux migrateurs - présence saisonnière de l'Érismature routoutou (<i>Nomonyx dominicus</i>) (jusqu'à 80 individus) - ZNIEFF type I (243,5 ha): présence de plantes menacées (<i>Swietenia macrophylla</i>) - Plan d'eau artificiel : plus grand plan d'eau douce de la Guadeloupe (propriété du Conseil Général) - Corridor écologique entre les zones humides: barrage de Gaschet - marais de Port-Louis, zones humides à l'ouest de la Grande-Terre.
	Réserve biologique dirigée (RBD) du nord Grande-Terre. <i>Projet en cours (officialisée en Mars 2015)</i>	<ul style="list-style-type: none"> - Végétation - 8 massifs de forêt semi-décidue sèche tendant vers un stade climacique. Ces massifs hébergent une diversité floristique et faunistique importante et jouent les rôles de réservoir biologique et de corridor: forêts départementales (430 ha), forêt domaniale du Littoral (238 ha), forêt propriété du Conservatoire du Littoral (62 ha). - Présence de 15 espèces végétales endémiques des Petites-Antilles (dont <i>Tetramicra elegans</i>, <i>Consolea rubescens</i>, <i>Justicia eustachiana</i>, <i>Pisonia subcordata</i>) et d'espèces endémiques de Guadeloupe (<i>Spermacoce dussii</i>) - Présence d'espèces végétales menacées: Acajou des Antilles (<i>Swietenia macrophylla</i>-VU), Noyer (<i>Zanthoxylum flavum</i>-VU) - Travaux de plantation de gaïacs (<i>Guaiacum officinale</i>-EN) - <i>en projet</i> - Avifaune

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		<p>- Présence de l'espèce d'oiseau endémique de Guadeloupe (le Pic de Guadeloupe, <i>Melanerpes lherminieri</i>) et de 10 espèces endémiques des Petites-Antilles (<i>Elaenia martinica</i>, <i>Cincotheria ruficauda</i>, <i>Allenia fusca</i>, <i>Margarops fuscatus</i>, <i>Geotrygon mystacea</i>, <i>Orthorhynchus cristatus</i>, <i>Eulampis jugularis</i>, <i>Eulampis holosericeus</i>, <i>Saltator albicollis</i>, <i>Loxigilla noctis</i>)</p> <p>-Herpétofaune</p> <p>- Présence d'amphibien endémique des Petites-Antilles (<i>Eleutherodactylus martinicensis</i>)</p> <p>- Présence d'1 espèce de reptile endémique de Guadeloupe (<i>Anolis marmoratus</i>) et d'1 esp. endémique des Petites-Antilles (<i>Sphaerodactylus fantasticus</i>)</p> <p>- Présence du Scinque de la Grande-Terre (<i>Mabuya grandisterrae</i>) (présence à confirmer)</p> <p>-Mammifères</p> <p>- Présence de 2 espèces de chauves-souris endémiques des Petites-Antilles et de Puerto-Rico: Ardops des Petites Antilles (<i>Ardops nicholli</i>), le Brachyphylle des cavernes (<i>Brachyphylla cavernarum</i>)</p> <p>- 4 ZNIEFF de Type 1 et 1 ZNIEFF de Type 2</p> <p>- ZICO du littoral du nord Grande-Terre</p> <p>- Projet de site classé (DEAL Guadeloupe)</p>
Lagon GCSM / Port-Louis / Secteurs alentours		
<p>ZCB 3 - Lagon du GCSM, îlets et zones humides attenantes / côte nord de la Basse-Terre</p>	<p>Lagon du GCSM / secteur de Port-Louis</p>	<p>- Milieu marin et zones humides</p> <p>- Lagon de 11 000 ha fermé par au nord par une barrière récifale de près de 30 km de long et bordé par 3377 ha de zones humides dont 2784 ha de mangroves. Présence de 5 formations végétales de zones humides (sur les 6 identifiées en Guadeloupe). Le lagon GCSM comprend la plus grande formation de zone humide des Petites-Antilles.</p> <p>- Près de 1800 ha de forêts marécageuses à <i>Pterocarpus officinalis</i> sont attenantes aux mangroves. La Guadeloupe présente la plus grande surface de ce type de formation végétale (2092 ha) de la Caraïbe.</p> <p>- Inter-connectivité entre les habitats de mangroves, herbiers, récifs coralliens.</p> <p>- Diversité des unités géomorphologiques (récifales ou non) et diversité élevée des espèces coralliennes (41 espèces de coraux). Présence d'environ 4177 ha de constructions récifales comprenant la barrière récifale de 30 km de long et des communautés coralliennes dispersées sur les hauts fonds du lagon.</p> <p>- Diversité des communautés ichtyologiques avec des richesses spécifiques élevées autour de l'îlet Fajou, Ilet Caret, Ilet Christophe et de la Passe à Colas, sur les récifs de Port-Louis (+ de 70 espèces).</p> <p>- Présence d'espèces marines menacées: <i>Acropora palmata</i>, <i>A.</i></p>

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		<p><i>cervicornis</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>M. franksi</i>, <i>Epinephelus striatus</i>, <i>Lutjanus analis</i>, <i>L. cyanopterus</i>, <i>Lachnolaimus maximus</i>, <i>Epinephelus itajara</i> (très rare, quelques spécimens observés entre Port-Louis et la Grande Vigie)</p> <ul style="list-style-type: none"> - Présence de 5766 ha d'herbiers qui sont de façon générale en bon état de santé. Les herbiers situés en coeur de Parc National sont relativement denses. - Services écosystémiques: protection de la côte, rôle épuratoire et de rétention des sédiments (herbiers et mangroves), nurseries pour des espèces menacées. <p>- Invertébrés</p> <ul style="list-style-type: none"> - Présence d'un cône endémique de Guadeloupe (<i>Conus magellanicus</i>) (secteur de Fajou à la Grande Vigie) <p>- Avifaune</p> <ul style="list-style-type: none"> - Présence régulière de 14 espèces d'oiseaux marins dont certaines espèces nicheuses - Salines de l'ilet Fajou: site important pour les limicoles - Sites de dortoir des oiseaux marins: mangroves de la Haie Bébel (Sainte-Rose) pour les frégates, Ilet Caret pour les sternes <p>- Tortues marines</p> <ul style="list-style-type: none"> - Sites de pontes importants pour les tortues marines: <ul style="list-style-type: none"> -- tortues imbriquées (CR): Pte Antiques - Pte Plate (Port-Louis), sud Port-Louis, Four à chaux (ilet Fajou), ilet Kahouanne -- tortues vertes (EN): ilet Kahouanne -- tortues luth (VU): côte nord de la Basse-Terre (plages de Nogent, Cluny, Amandiers) <ul style="list-style-type: none"> - lagon GCSM: 4 zones en Coeur et Aire marine adjacente du Parc National de Guadeloupe, site SPAW, site du CELRL - Zone humide d'importance internationale (RAMSAR) - Réserve de la Biosphère - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Zones humides - côte est du GCSM (ZICO)	<p>- Zones humides</p> <ul style="list-style-type: none"> - Vaste zone de mangrove et de forêts marécageuses s'étendant sur 15 km. Présence de l'espèce rare de palétuvier noir, <i>Avicennia schaueriana</i>. - Présence des marais saumâtres de Choisy et Lambis (commune des Abymes), Marais des Jumeaux et de Port Louis: habitats importants pour l'avifaune - Présence de 3 canaux bordés de mangroves communiquant à l'est avec le lagon du GCSM (canal des Rotours, canal Perrin, canal Belle-Plaine) <p>- Avifaune</p> <ul style="list-style-type: none"> - IBA (ZICO, 2785 ha): <ul style="list-style-type: none"> - Présence de 11 espèces d'oiseaux à distribution restreinte aux Petites-Antilles et Puerto Rico: Elénie siffleuse (<i>Elaenia</i>

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		<p><i>martinica</i>), Trembleur brun (<i>Cinlocerthia ruficauda</i>), Moqueur corossol (<i>Margarops fuscatus</i>), Colombe à croissant (<i>Geotrygon mystacea</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Paruline caféïette (<i>Setophaga plumbea</i>), Saltator gros-bec (<i>Saltator albicollis</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Moucherolle gobemouche (<i>Contopus latirostris</i>), Grive à pieds jaunes (<i>Turdus Iherminieri</i>, VU - peu commune dans cette zone)</p> <ul style="list-style-type: none"> - Présence de l'espèce endémique: Pic de la Guadeloupe (<i>Melanerpes herminieri</i>) (environ 580 couples, soit 5% de la population) <p>- Invertébrés</p> <ul style="list-style-type: none"> - Présence de libellules endémiques de Guadeloupe (<i>Protoneura romanae</i>) <p>- Mammifères</p> <ul style="list-style-type: none"> - Présence de chauves-souris endémiques des Petites-Antilles en lisière de forêts marécageuses (<i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i>, <i>Monophyllus plethodon</i>) - Gîte de la grotte Rousseau - Site RAMSAR - 2 ZNIEFF Mer (Anse de la Guérite à Anse du Canal / Anse de la Guérite à Anse Gris-gris) - Réserve de la Biosphère (zone sud) - Une partie de ce site fait partie du périmètre du Parc National (zone sud) , site SPAW
	Ilet de Tête à l'Anglais	<ul style="list-style-type: none"> - Avifaune - IBA (ZICO, 339 ha): <ul style="list-style-type: none"> - Populations d'oiseaux marins nicheurs: Sternes fuligineuses (<i>Onychoprion fuscatus</i>, 6156 (±518) couples nicheurs), Sterne de Dougall (<i>Sterna dougallii</i>). - Reposoir pour d'autres espèces d'oiseaux marins: Noddi brun (<i>Anous stolidus</i>), Fou brun (<i>Sula leucogaster</i>) - Herpétofaune - Présence de reptiles endémiques de Guadeloupe: Anolis de la Guadeloupe (<i>Anolis marmoratus</i>, dont une sous-espèce <i>A. m. kahouannensis</i> est endémique des îlets Kahouanne et de Tête à l'Anglais) - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence d'herbiers en bon état de santé - Coeur de Parc National (partie terrestre de l'îlet), site SPAW, zone RAMSAR - ZNIEFF Type I - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Ilet Kahouanne	<ul style="list-style-type: none"> - Végétation - Présence de 2 espèces de plantes endémiques des Petites-

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		<p>Antilles (Leblond 2011): <i>Justicia eustachiana</i>, <i>Chromolaena integrifolia</i></p> <p>- Herpétofaune</p> <ul style="list-style-type: none"> - Présence de reptiles endémiques de Guadeloupe: Anolis de la Guadeloupe (<i>Anolis marmoratus</i>, dont la sous-espèce <i>A. m. kahouannensis</i> est endémique des îlets Kahouanne et de Tête à l'Anglais) - Présence de reptiles endémiques des Petites-Antilles: Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), populations relictuelles d'iguane des Petites-Antilles (<i>Iguana delicatissima</i>) - Site de ponte pour les tortues vertes (EN) et imbriquées (CR) <p>- Avifaune</p> <ul style="list-style-type: none"> - Présence d'oiseaux endémiques des Petites-Antilles et de Puerto-Rico: Elénie siffleuse (<i>Elaenia martinica</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>) - Du fait de la proximité avec l'îlet Tête à l'Anglais, des colonies d'oiseaux marins utilisent cet îlet comme reposoir et dortoir bien qu'il ne soit pas identifié comme ZICO. <p>- Milieu marin et zones humides</p> <ul style="list-style-type: none"> - Présence de récifs coralliens et d'herbiers en bon état de santé - Mangroves captives situées en arrière du cordon littoral - Présence d'espèces marines menacées: <i>Lachnolaimus maximus</i>, <i>Lutjanus analis</i> <ul style="list-style-type: none"> - Coeur de Parc National (partie terrestre de l'îlet), site SPAW, zone RAMSAR - ZNIEFF de Type I, site du CELRL - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	<p>Îlets de Carénage et Haie Bébel / Îlet Caret / Îlets de mangroves de Petit-Canal / Îlet Blanc</p>	<p>- Avifaune</p> <ul style="list-style-type: none"> - Îlets de mangroves: reposoirs d'oiseaux marins - Mangroves: habitat pour les espèces marines (poissons, invertébrés, sélaciens) - Connectivité entre les mangroves - les herbiers sous-marins - Îlets Carénage: connectivité mangroves - herbiers - récifs <p>- Avifaune (Îlet Blanc)</p> <ul style="list-style-type: none"> - Site de nidification d'oiseaux marins: Sterne de Dougall (27 adultes), Petite Sterne (70 adultes), Mouette atricille (22 adultes), Sterne de Cabot (6 adultes), Sterne royale (5 adultes) <ul style="list-style-type: none"> - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	<p>Côte nord de la Basse-Terre</p>	<p>- Herpétofaune</p> <ul style="list-style-type: none"> - Présence de populations relictuelles d'iguane des Petites-Antilles (<i>Iguana delicatissima</i>) (Plage de Cluny)

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		<ul style="list-style-type: none"> - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Sites de ponte pour les tortues luth (VU): côte nord de la Basse-Terre (plages de Nogent, Cluny, Amandiers) - site de ponte pour les tortues imbriquées (Cluny) - Mammifères - Présence de chauves-souris endémique de Guadeloupe (<i>Eptesicus guadeloupensis</i>) et des Petites-Antilles (<i>Chiroderma improvisum</i>, <i>Myotis dominicensis</i>, <i>Sturnira thomasi</i>, <i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i>, <i>Monophyllus plethodon</i>) (Ste Rose-Morne Rouge) - ZNIEFF Type I: Etang du Vieux Fort - Site redom d'intérêt éco-régional 577ha: mosaïque d'habitats d'intérêt éco-régional.
Côte au-vent - Basse Terre		
ZCB 4 - Côte au-vent de la Basse-Terre	Côte au-vent de la Basse-Terre	<ul style="list-style-type: none"> - Milieu marin - Présence près de 1800 ha d'herbiers et 1476 ha de communautés coralliennes. Inter-connectivité entre ces écosystèmes marins. - Caye à Dupont: ZNIEFF Mer Type I - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale - Herpétofaune - Présence de populations relictuelles d'iguane des Petites-Antilles (<i>Iguana delicatissima</i>) - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Anse à la Fontaine- Esclave (Capesterre-Belle-Eau): site de ponte des tortues imbriquées - Batterie et sucrerie de la Grande Pointe (Trois Rivière): site inscrit, présence d'une flore diversifiée.
	Lagon du Petit cul-de-sac Marin	<ul style="list-style-type: none"> - Milieu marin et zones humides - Présence de 334 ha de zones humides dont 295 ha de mangroves le long de la côte au-vent de la Basse-Terre. - Présence d'herbiers (907 ha) dont 44% relativement envasés (influence des apports alluvionnaires des rivières) et 430 ha de communautés coralliennes (récifs frangeants de Petit-Bourg à Capesterre Belle-Eau). - Inter-connectivité des écosystèmes de mangroves, herbiers et récifs coralliens.

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		<p>- Invertébrés et poissons</p> <p>- 7 coraux (<i>Montastraea annularis</i>, <i>Montastraea faveolata</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Agaricia lamarcki</i>, <i>Mycetophyllia ferox</i>, <i>Montastraea franksi</i>) et 7 poissons menacés (<i>Epinephelus striatus</i>, <i>Balistes vetula</i>, <i>Hippocampus erectus</i>, <i>Lachnolaimus maximus</i>, <i>L. analis</i>, <i>L. cyanopterus</i>, <i>Megalops atlanticus</i>)</p> <p>- Sites du CELRL</p> <p>- Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale</p>
	Ilet Cochon	- Présence du Scinque de l'ilet Cochon - espèce potentiellement éteinte, présence à confirmer (<i>Mabuya cochonae</i>)
Côte sous-le-vent - Basse Terre		
<p>ZCB 5 Côte sous-le-vent Basse-Terre</p>	<p>Côte sous-le-vent de la Basse-Terre / sud de la Basse-Terre</p>	<p>- Milieu marin</p> <p>- 1713 ha d'herbiers et 3300 ha de communautés coralliennes (principalement entre Bouillante et Grande Anse à Deshaies).</p> <p>- Présence de formations coralliennes non bio-constructrices. Secteurs avec des diversités coralliennes élevées: ilets Pigeons (37 espèces de coraux), Morne Deshaies (32 espèces), Pointes Mahaut et Lézarde (24 espèces)</p> <p>- secteurs littoraux de Deshaies et de la commune de Bouillante / ilets Pigeons: communautés coralliennes remarquables</p> <p>- Espèces de coraux et de poissons menacées: <i>Epinephelus striatus</i>, <i>Mycteroperca interstitialis</i> (rare), <i>Lutjanus analis</i>, <i>Lachnolaimus maximu</i>.</p> <p>- Inter-connectivité herbiers et récifs coralliens</p> <p>- Milieux profonds en côte sous-le-vent de la Basse-Terre (Ilets Pigeon, Vieux-Fort, Rivière Sens): Présence de Mollusques profonds endémiques de Guadeloupe (<i>Hemipolygona lamyi</i>, <i>Cantrainea yoyottei</i>, <i>Costoanachis roberti</i>, <i>Kanamarua francroberti</i>) et de la région de Puerto-Rico à Trinidad (<i>Conus roberti</i>).</p> <p>- Autres écosystèmes</p> <p>- Présence de sources hydrothermales terrestres et sous-marines (secteur de Bouillante) hébergeant un écosystème sulfidique diversifié, dont des espèces nouvellement décrites pour la Guadeloupe.</p> <p>- Herpétofaune</p> <p>- Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>)</p> <p>- Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles</p> <p>- sud de la Basse-Terre: petite population de Couresse de la Guadeloupe (<i>Alsophis antillensis</i>).</p> <p>- Sites de ponte des tortues marines:</p>

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		<ul style="list-style-type: none"> -- pour les tortues imbriquées (CR): Grande Anse (Trois-Rivières), Anse à Sable (Bouillante) -- pour les tortues luth (VU) et vertes (EN): Grande-Anse (Deshaies) - Pointe Malendure et Morphy: Aire d'alimentation probable pour les tortues imbriquées (InaScuba) - Baies de Deshaies et de Bouillante: aire d'alimentation probable pour les tortues vertes (InaScuba) - Mammifères marins - Sec de Pointe Noire: activité de nutrition importante pour les odontocètes (cachalots et dauphins). - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale - Milieu terrestre- ZNIEFF Type I: Morphy, Pointe Malendure à Anse Colas, Anse à la Barque, littoral de Trois-Rivières - 1 APB: Plage de Grande Anse à Trois-Rivières - Anse à La Barque (Vieux Habitants, Bouillante): site classé et inscrit, diversité floristique. Présence de Pic de la Guadeloupe. - Batterie et sucrerie de la Grande Pointe (Trois Rivière): site inscrit, présence d'une flore diversifiée. - Site redom d'intérêt éco-régional (975 ha)
	Ilets Pigeon	<ul style="list-style-type: none"> - Milieu marin - Diversité élevée des espèces de coraux (37 espèces) et présence d'espèces marines menacées: <i>Acropora palmata</i>, <i>A. cervicornis</i>, <i>Montastraea annularis</i>, <i>M. faveolata</i>, <i>M. franksi</i> - Diversité des peuplements de poissons (115 espèces recensées) - Milieu terrestre - Anolis des ilets Pigeons une espèce serait potentiellement endémique de l'ilet (<i>Anolis marmoratus pigeonnensis</i>) - Présence de reptiles endémiques des Petites-Antilles: Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>) - Coeur du PNG (partie terrestre des ilets et 850 ha de zone marine), site SPAW - ZNIEFF de Type I et ZNIEFF marine de Type I - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Morne Deshaie / Pointe Mahaut et Lézarde	<ul style="list-style-type: none"> - Milieu marin - Diversité élevée des espèces de coraux (Morne Deshaie: 32 esp., Pointe Mahaut et Lézarde: 24 esp.) - Gros Morne de Deshaie, Pointe Mahaut et Pointe Lézarde: 3 sites identifiés comme ZNIEFF Mer de Type 1 - Milieu terrestre - 3 ZNIEFF Type I: Sablières et marais de Grande Anse, Gros

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		<p>Morne, Morne aux Fous: présence de plantes endémiques des Petites-Antilles, diversité floristique élevée, présence du Pic de la Guadeloupe.</p> <ul style="list-style-type: none"> - Grande Anse et Gros Morne (Deshaies): site classé - Bassin versant de Grande Anse: site inscrit, stades écologiques étagées de la forêt ombrophile montagnarde à la forêt littorale sur sable. <ul style="list-style-type: none"> - 1 site Redom: Piton de Deshaies (544 ha) - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
Grande-Terre - Pointe des Châteaux		
ZCB 6 Les Grands Fonds - Grande Terre	Côte sud de la Grande-Terre	<ul style="list-style-type: none"> - Milieu marin - Frange d'herbiers le long de la côte sud (903 ha) et 252 ha de communautés coralliennes (secteur de la Riviera). 28 espèces de coraux recensées sur la côte de Gosier à St François. - Inter-connectivité entre les herbiers et récifs coralliens <ul style="list-style-type: none"> - Herpétofaune - Présence de reptiles endémiques de quelques îles des Petites-Antilles: Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), Gymnophthalme de Plée (<i>Gymnophthalmus pleii</i>, quelques spécimens auraient été observés aux Abymes, la présence de l'espèce est à confirmer (ASFA pers. com. 2015) <p>Sites de ponte des tortues imbriquées (CR): Ouest Pointe Canot, La Saline (Gosier), Anse à Saint, Caravelle, Bois Jolan</p> <ul style="list-style-type: none"> - Milieu terrestre - 4 ZNIEFF Type I: Bois Jolan Anse Gros Sable (mare et lagune), Anse à la Barque (Ste Anne), La Saline, Pointe Canot Anse Du Mont - 243 ha de terrains littoraux appartiennent au Conservatoire du Littoral. - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Les Grands Fonds (140 km ² , communes des Abymes, Morene-à-L'Eau, Gosier, Ste Anne, Moule)	<ul style="list-style-type: none"> - Végétation - Présence d'une des plus importantes populations de Palmier dendé-glouglou (<i>Acrocomia karukerana</i>), espèce menacée et endémique de Guadeloupe-Martinique et d'espèces endémiques des Petites-Antilles (<i>Genipa americana</i>, <i>Byrsonima lucida</i>) - Présence d'espèces végétales menacées: Noyer (<i>Zanthoxylum flavum</i>) - Massif boisé (7641 ha végétalisés): corridors écologiques (trame verte) au sein du massif boisé des Grands Fonds; continuité écologique avec le massif forestier de la Basse-Terre. - Zones humides (mares): 730 points d'eau recensés, un réseau de ravines non pérennes. <ul style="list-style-type: none"> - Invertébrés

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		<ul style="list-style-type: none"> - Présence de coléoptère endémique de Guadeloupe (<i>Strategus slyphax</i>) - Avifaune <ul style="list-style-type: none"> - Présence d'une population de Pic de Guadeloupe (<i>Melanerpes herminieri</i>) (250 couples) - Présence de la grive à pieds jaunes (VU) - Bois Jolan: site important pour l'avifaune - Herpétofaune (ASFA) <ul style="list-style-type: none"> - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence de reptiles endémique de Guadeloupe: Typhlops de Guadeloupe (<i>Typhlops guadeloupensis</i>), Couresse de la Guadeloupe (<i>Alsophis antillensis</i>, une petite population est encore observée dans ce site); et endémique de Guadeloupe et Dominique: la Petite Couresse (<i>Erythrolamprus juliae</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Mammifères <ul style="list-style-type: none"> - Présence de chauves-souris endémiques des Petites-Antilles: Ardops des Petites Antilles (<i>Ardops nichollsi</i>) (Deshauteurs, Port Blanc) - 3 ZNIEFF de Type I: Boucart Bon Ami Rousseau, Morne et bas fonds de Terrasson, Liard St Robert - 2 ZNIEFF Type II (6443 ha): Les Grands Fonds, Plaine côtière du Gosier - Site redom d'intérêt éco-régional (1495ha): morcellement minimal de la forêt, herpétofaune à enjeu patrimonial.
ZCB 7 Côte est de la Grande-Terre	Côte Atlantique de la Grande-Terre	<ul style="list-style-type: none"> - Zones humides <ul style="list-style-type: none"> - Secteur du Moule: présence des seules mangroves bien développées de la façade Atlantique - Anse à l'Eau: espace littoral varié (falaises, côte découpée avec des anses, des plages de sable et de galets, arrière littoral avec des grottes, ravines sèches, présence de récifs coralliens). - 3 ZNIEFF Type I: Ravine d'Audoïn (Le Moule), Anse à L'Eau, Baie Olive - 1 APB: Grotte de Courcelles: importante colonie de Molosse du Brésil (<i>Tadarida brasiliensis</i>) - Tortues marines <ul style="list-style-type: none"> - Site de ponte pour les tortues marines: <ul style="list-style-type: none"> -- pour les tortues imbriquées (CR): Baie Ste-Marie Les Rouleaux, La Gourde, -- pour les tortues vertes (EN): Plage Alizées (Le Moule), Anse des Châteaux

	<p>Pointe des Châteaux</p>	<ul style="list-style-type: none"> - Habitats terrestres et marins - Présence d'espèces végétales endémiques des Petites-Antilles, dont: <i>Heliotropium microphyllum</i> - Diversité d'habitats: falaises, plage protégée par un récif frangeant délimitant un lagon, lagune, salines bordées de mangroves, mares, végétation xérophile. - Présence de 4,2 ha de récifs coralliens en bon état de santé (lagon de l'Anse des Salines). La couverture corallienne est supérieure à 50%. - Connectivité entre les écosystèmes de récifs coralliens et les herbiers - Présence d'espèces menacées: <i>Acropora palmata</i> (quelques colonies éparses), <i>Lutjanus analis</i> - Présence de plantes menacées (Gaïac <i>Guaiacum officinale</i>) et d'espèces endémiques des Petites-Antilles (<i>Pisonia subcordata</i>) - Invertébrés - Présence de Mollusque marin endémique de Guadeloupe: <i>Triphora guadaloupensis</i> - Grande diversité de mollusques marins - Avifaune - IBA (ZICO, 1292 ha): <ul style="list-style-type: none"> - Présence de 8 espèces d'oiseaux à distribution restreinte aux Petites-Antilles et Puerto Rico: Elénie siffleuse (<i>Elaenia martinica</i>), Moqueur corossol (<i>Margarops fuscatus</i>), Moqueur grivotte (<i>Allenia fusca</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Saltator gros-bec (<i>Saltator albicollis</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>) - Regroupement de 4 espèces d'oiseaux marins: Grand Paille en queue (<i>Phaethon aethereus</i>), Petite Sterne (<i>Sternula antillarum</i>), Sterne bridée (<i>Onychoprion anaethetus</i>), Sterne fuligineuse (<i>Onychoprion fuscata</i>) - Les îlets de La Roche et de L'Eperon regroupent plus de 1000 couples d'oiseaux marins: Sterne fuligineuse (<i>Onychoprion fuscata</i>), Sterne bridée (<i>Onychoprion anaethetus</i>), Grand Paille en queue (<i>Phaethon aethereus</i>), Noddi brun (<i>Anous stolidus</i>). Un des sites les plus importants de Guadeloupe pour la nidifications des Sternes fuligineuses (<i>Onychoprion fuscata</i>) (1500 à 2000 couples) - Site important pour les limicoles (salines): 21 espèces, dont 7 présentant plus de 100 individus - Herpétofaune - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), espèce endémique de quelques îles des Petites-Antilles - Présence de l'hylode endémique des Petites-Antilles: <i>Eleutherodactylus martinicensis</i> - Anse des Châteaux: Site de ponte des tortues vertes
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		<ul style="list-style-type: none"> - Mammifères - Concentration de groupes reproducteurs de baleines à bosse (<i>Megaptera novaeangliae</i>). - ZNIEFF Type II: Pointe des Châteaux - Site classé - Opération Grand Site, label qui « garantit que le site est préservé et géré suivant les principes du développement durable, conciliant préservation du paysage et de "l'esprit des lieux", qualité de l'accueil du public, participation des habitants et des partenaires à la vie du Grand Site » - 10 ha acquis par le CELRL: site remarquable d'un point de vue paysager - Site redom d'intérêt éco-régional (1029 ha) - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	Digue de Port de pêche de St François	<ul style="list-style-type: none"> - Avifaune - IBA (ZICO, 50 ha): <ul style="list-style-type: none"> - population nicheuse de Petites Sterne (<i>Sternula antillarum</i>, 20-50 couples) - l'absence de connexion entre l'îlot et la terre assure une bonne protection contre les prédateurs.
Iles et Ilets		
ZCB 8 Ilets de Petites-Terre et La Désirade	Ilets de Petite-Terre	<ul style="list-style-type: none"> - Végétation et zones humides - Peuplement de Gaïac (<i>Guaiacum officinale</i>): 80 pieds d'individus adultes recensés sur Terre de Bas. Seule population sauvage au sens strict de l'archipel guadeloupéen (Fournet 1978). Etude sur la compréhension de l'absence de régénération du Gaïac sur Petite-Terre. - Présence de 4 salines (15 ha): habitat important pour l'avifaune. Des mangroves bordent les rives des salines (<i>Laguncularia racemosa</i>, <i>Rhizophora mangle</i>, <i>Avicennia germinans</i>) - Présence d'espèces végétales endémiques des Petites-Antilles et de Puerto-Rico: <i>Tolumnia urophylla</i>, <i>Agave karatto</i>, <i>Pisonia subcordata</i>, <i>Tabebuia pallida</i>, <i>Tetramicra elegans</i> - Ecosystèmes marins - Inter-connectivité entre les récifs coralliens (11 ha) et herbiers (2 ha) - Herbier plurispécifique et relativement dense (1766 plants/m²) - Récifs frangeants principalement présents à l'est du chenal séparant les 2 îles. Le récif longeant Terre-de-Haut paraît en bon état de santé et héberge la communauté récifale la plus diversifiée des îlets (14 espèces). En moyenne le recouvrement corallien est estimé à 18% - Lagon peu profond entre les 2 îlets (frayère, aire d'alimentation et de grossissement pour de nombreuses espèces marines). Zone de frayère pour les requins citron (<i>Negaprion brevirostris</i>). - Présence d'espèces menacées: <i>Acropora palmata</i>, <i>A. cervicornis</i>, <i>Dendrogyra cylindrus</i>, <i>Dichocoenia stokesii</i>, <i>Montastraea annularis</i>, <i>Eretmochelys imbricata</i>, <i>Chelonia mydas</i>, <i>Dermochelys coriacea</i>

	<p>- Concentration de groupes reproducteurs de baleines à bosse (<i>Megaptera novaeangliae</i>). Aires d'alimentation, de reproduction et de repos pour les odontocètes. Groupe résident de <i>Tursiops truncatus</i>.</p> <p>- Zones profondes entre Petite-Terre et la Désirade: présence de Mollusques profonds endémiques de Guadeloupe (<i>Siratus cailleti</i>, <i>Terebra lamyi</i>, <i>Kanamarua francroberti</i>) et de la région de Puerto-Rico à Trinidad (<i>Conus mazel</i>)</p> <p>Invertébrés</p> <p>- Présence d'insectes endémiques de Guadeloupe (<i>Arawakia inopinata</i>) et des Petites-Antilles: <i>Blapstinus opacus</i>, <i>Diastolinus perforatus</i>, <i>Styloleptus posticalis</i>, <i>Urgleptes cobbeni</i></p> <p>Herpétofaune</p> <p>- Les îlets hébergent 50% de la population mondiale de l'Iguane des Petites-Antilles (<i>Iguana delicatissima</i>) : densité élevée et entre 4000 et 8000 spécimens comptabilisés en 2002. Les suivis permettent d'échantillonner un fragment de la population qui est estimée à plusieurs milliers d'individus (ONCFS, Elisa Curot-Lodeon, comm. pers. 2015).</p> <p>- Présence de reptiles endémiques de Guadeloupe: Anolis de Guadeloupe (<i>Anolis marmoratus</i>), Anolis potentiellement endémique des îlets de Petite-Terre (<i>A. chrysops</i>-description de l'espèce à confirmer)</p> <p>- Présence de reptiles endémique de quelques îles des Petites-Antilles: Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>)</p> <p>- Site de ponte important pour les tortues imbriquées et les tortues vertes (données de 2013) :plage nord de Terre de Bas, Pointe Sable Trou canard, Voûte à cabrit, plages de Terre de Haut.</p> <p>- Avifaune et IBA (ZICO, 1385 ha)</p> <p>- Présence de 6 espèces d'oiseaux à distribution restreinte aux Petites-Antilles et Puerto Rico: Elénie siffleuse (<i>Elaenia martinica</i>), Moqueur corossol (<i>Margarops fuscatus</i>), Moqueur grivotte (<i>Allenia fusca</i>), Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Colibri Madère (<i>Eulampis jugularis</i>).</p> <p>- Nidification de 2 espèces à distribution restreinte: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>)</p> <p>- Haut lieu de passage des oiseaux marins migrateurs (29 espèces, Levesque 2005). Populations nicheuses d'oiseaux marins: Grand Paille en queue (<i>Phaethon aethereus</i>), Petite Sterne (<i>Sternula antillarum</i>, jusqu'à 42 couples)</p> <p>- Site important pour l'avifaune: 151 espèces d'oiseaux recensées en 2008 dont 28 espèces de limicoles. Site propice</p>
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		<p>pour l'hivernage des limicoles (Salines).</p> <ul style="list-style-type: none"> - Observation d'espèces rares et menacées: Dendrocygne des Antilles (<i>Dendrocygna arborea</i>, VU), Pétrel diabolin (<i>Pterodroma hasitata</i>, EN) - Réserve Naturelle Nationale terrestre et marine, site SPAW - ZNIEFF Type II, ZNIEFF Mer Type I, APB, site du CELRL - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
	<p>La Désirade</p>	<ul style="list-style-type: none"> - Végétation- Forêts semi-décidues et végétation xérophile abritant des espèces végétales menacées (<i>Guaicum officinale</i>) et endémiques des Petites-Antilles, des îles Vierges et de Puerto-Rico (Cactus tête à l'anglais <i>Melocactus intortus</i>, <i>Tetramicra elegans</i>, <i>Pisonia subcordata</i>, <i>Agave dussiana</i>) (DEAL Guadeloupe 2005 - Etude de faisabilité) - Pépinière de Gaïac mise en place à La Désirade (rapport d'activités 2014). - suivi <i>Melocactus</i> - Biocénoses marines - récifs frangeants longeant la côte sud de l'île. - continuum écologique entre les récifs coralliens et les herbiers. - Invertébrés - Présence de Mollusques marins endémique de Guadeloupe: <i>Conus magellanicus</i> - Diversité de mollusques marins (secteur sud-est de l'île) - Avifaune - Population d'oiseaux marins nicheurs: Grand Paille en queue (<i>Phaethon aethereus</i>), Noddi brun (<i>Anous stolidus</i>), Sterne bridée (<i>Onychoprion anaethetus</i>) - Les Salines des Sables et Saline du Bourg (1 ha, 2 ha) de La Désirade constituent des sites importants pour les limicoles et les oiseaux marins: 52 espèces d'oiseaux recensées - Corridor de migration pour les Procellariidés entre les îlets de Petite-Terre et La Désirade (<i>Puffinus puffinus</i>, <i>P. gravis</i>, <i>Calonectris diomedea</i>). - étude de l'AEVA à intégrer - Herpétofaune - Présence d'iguanes des Petites-Antilles (<i>Iguana delicatissima</i>). Les suivis permettent d'échantillonner un fragment de la population qui est estimée à plusieurs centaines d'individus, très probablement à moins d'un millier d'individus (ONCFS, Elisa Curot-Lodeon, comm. pers. 2015). - Présence de l'anolis de la Guadeloupe (<i>Anolis marmoratus</i>), un espèce d'anolis serait potentiellement endémique de la Désirade (<i>Anolis desiradei</i>) et du scinque endémique de la Désirade (<i>Mabuya desiradae</i>).

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		<ul style="list-style-type: none"> - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles dont une sous-espèce serait endémique de l'île (<i>Sphaerodactylus fantasticus hippomanes</i>) - Suivi des populations de scinques - Mammifères - Groupes reproducteurs de baleines à bosse (<i>Megaptera novaeangliae</i>). - Réserve Naturelle Nationale terrestre à caractère géologique (62 ha) - 2 ZNIEFF de Type I: Ravine la Rivière, Morne Frégule - 1 site Redom (nord de La Désirade, 175 ha) - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
<p style="text-align: center;">ZCB 9 Marie Galante</p>	<p>Folle Anse / St Louis / Ilet de Vieux Fort et Falaises Nord de Marie-Galante / milieu marin</p>	<ul style="list-style-type: none"> - Végétation - Présence de plantes menacées (Gaïac, <i>Guaiaecum officinale</i>) et de plantes endémiques des Petites-Antilles: Ti lait, <i>Chamaesyce balbisii</i>, <i>Tetramicra elegans</i> (falaises est) et <i>Byrsonima lucida</i>, <i>Tabebuia pallida</i>, <i>Cordia nesophila</i>, <i>Andira inermis</i> (Talus sud) - Herpétofaune - Site de ponte pour les tortues marines: <ul style="list-style-type: none"> -- pour les tortues imbriquées (CR): Les Galets, Anse Vieux Fort, Anse Eglise, Folle-Anse, Trois-îlets, Moustique, Anse de Mays -- pour les tortues vertes (EN): Les Galets, Anse Feuillard. - Herbiers de Marie-Galante: aire d'alimentation probable pour les tortues vertes (InaScuba) - Présence d'amphibien endémique des Petites-Antilles: Hylode de Martinique (<i>Eleutherodactylus martinicensis</i>) - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Présence de l'anolis de Guadeloupe (<i>Anolis marmoratus</i>) et d'une espèce d'anolis potentiellement endémique de Marie-Galante, endémique de l'île (<i>Anolis ferreus</i>). - St-Louis & Bois de Folle-Anse - Etude de faisabilité pour la création d'une Réserve Naturelle: <ul style="list-style-type: none"> - Zones humides du marais de St Louis et du bois de Folle-Anse et de l'étang de Vieux-Fort (199.3 ha) (forêts marécageuses, marais herbacés, mangroves captives, savanes inondées) - Folle Anse: présence de forêt mésophile développée (formation phyto-écologique se développant sur sable calcaire devenue très rare dans les Petites-Antilles) - Le marais de St-Louis est en continuité écologique avec la forêt sur sable de Folle Anse. Présence de forêt marécageuse à

	<p><i>Pterocarpus officinalis</i>.</p> <ul style="list-style-type: none"> - Présence d'espèces végétales menacées: population naturelle de Gaïac en milieu forestier (secteur des Falaises) (<i>Guaiacum officinale</i>), <i>Cedrela odorata</i> (Folle Anse), <i>Guarea macrophylla</i>, <i>Zanthoxylum flavum</i>, <i>Picrasma excelsa</i> - Présence d'espèces végétales endémiques des Petites-Antilles: <i>Tolumnia urophylla</i>, <i>Sterculia caribaea</i>, <i>Drypetes serrata</i> - 586 mares dénombrées sur l'île <p>- Milieu marin</p> <ul style="list-style-type: none"> - Présence des 3 écosystèmes marins: mangroves, herbiers et récifs coralliens. Les écosystèmes d'herbiers et de récifs sont inter connectés dans les 3 secteurs proposés en réserve marine. - Communautés coralliennes florissantes sur le secteur de Cocoyer (1 km²) et de Trois-Ilets (1,5 km²) - Les herbiers sont particulièrement développés sur le secteur Nord (40% de couverture du substrat). Ces herbiers colonisent la baie de St-Louis et des étendues remarquables et denses d'herbiers à <i>Thalassia</i> sont présentes à proximité de la pointe du Cimetière de la plage de Chalet. - Densité élevée de lambis (59.5 ind/ha), densité qui assurerait un bon succès reproducteur de l'espèce. <p>- Invertébrés</p> <ul style="list-style-type: none"> - Présence d'espèces endémiques de Guadeloupe (et de Marie-Galante): insecte (<i>Solenoptera canaliculata</i>), - Présence d'espèces endémiques des Petites-Antilles: gastéropode terrestre (<i>Pleurodonte badia</i>) <p>- Avifaune</p> <ul style="list-style-type: none"> - IBA (ZICO, 1780 ha) - Ilet de Vieux Fort et Falaises Nord de Marie-Galante : <ul style="list-style-type: none"> - Regroupement en nombre important de 3 espèces d'oiseaux marins: Grand Paille en queue (<i>Phaethon aethereus</i>), Sterne bridée (<i>Onychoprion anaethetus</i>), Noddi brun (<i>Anous stolidus</i>), Sterne fuligineuse (<i>Onychoprion fuscata</i>) - 2ème plus grande colonie de Sterne fuligineuse (<i>Onychoprion fuscata</i>) de Guadeloupe (900 à 1100 couples). Une des colonies les plus importantes de Grand Paille en queue (<i>Phaethon aethereus</i>, 40-70 couples) - Folle Anse, St Louis: Présence de 9 oiseaux endémiques des Petites-Antilles et de Puerto-Rico: Colibri huppé (<i>Orthorhynchus cristatus</i>), Colibri Madère (<i>Eulampis jugularis</i>), Colibri falle-vert (<i>Eulampis holosericeus</i>), Elénie siffleuse (<i>Elaenia martinica</i>), Moqueur grivotte (<i>Allenia fusca</i>), Moqueur corossol (<i>Margarops fuscatus</i>), Paruline caféïette (<i>Setophaga plumbea</i>), Sporophile rouge-gorge (<i>Loxigilla noctis</i>), Saltator gros-bec (<i>Saltator albicollis</i>) <p>- Mammifères</p> <ul style="list-style-type: none"> - Présence d'espèces endémiques des Petites-Antilles: <i>Ardops</i>
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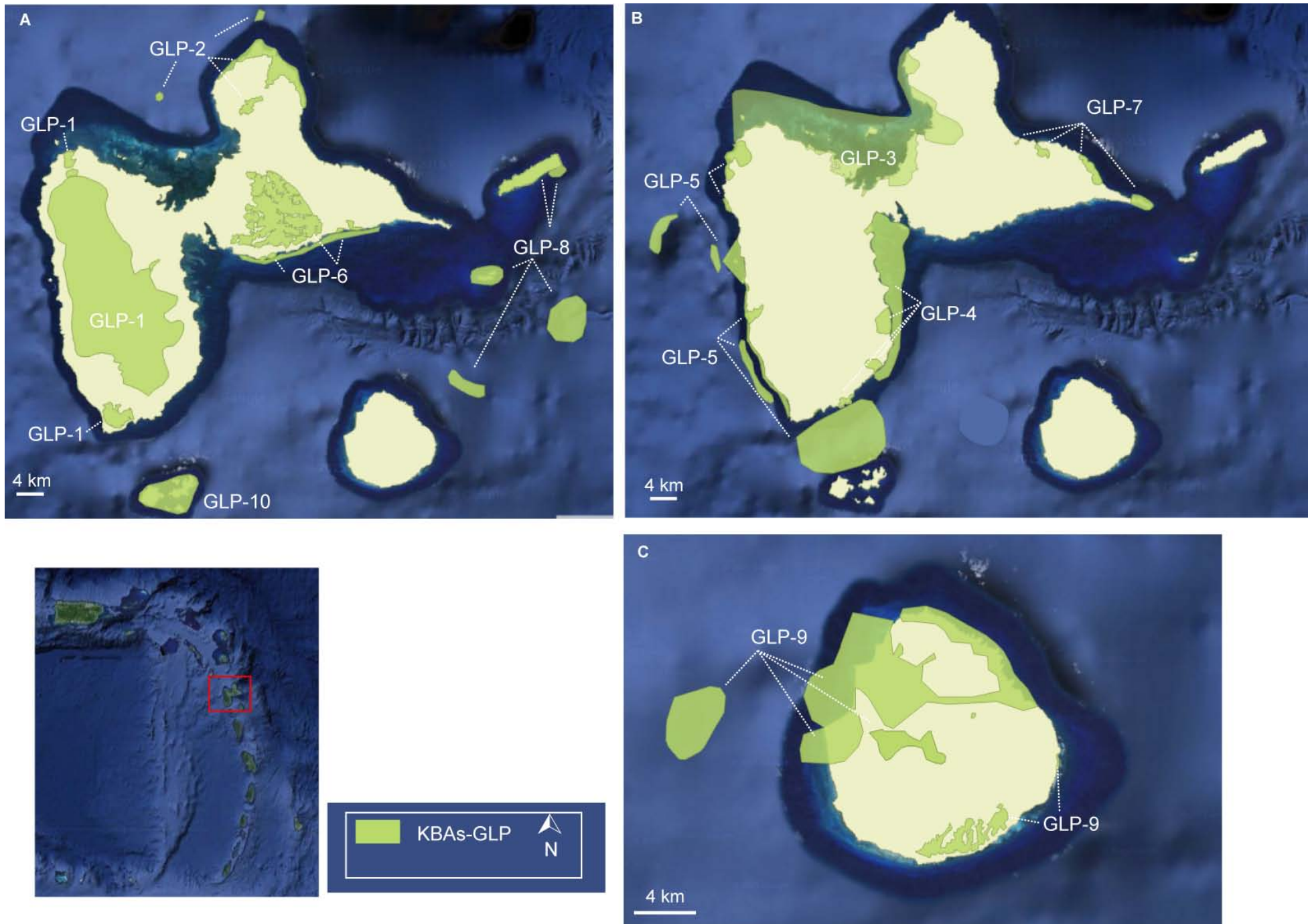
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		<p><i>nichollsi</i>, <i>Brachyphylla cavernarum</i>, <i>Monophyllus plethodon</i>, <i>Natalus stramineus</i> (gîte au Grand Trou à Diable)</p> <ul style="list-style-type: none"> - Grotte du Trou à Diable: gîte pour les 4 esp. de chauves-souris endémiques des Petites-Antilles - Côte ouest de Marie-Galante et Banc de Colombie: concentration de groupes reproducteurs de baleines à bosse (<i>Megaptera novaeangliae</i>) - 2 APB (Marais et bois de Folle-Anse, Grotte du Trou à Diable) - 3 ZNIEFF terrestre type I: Petite Barre de l'île, Falaises est de Marie-Galante, Plage et bois de Folle-Anse - 1 ZNIEFF Type II: Marais de St-Louis - site du CELRL: Saragot, St Louis, Grand Bourg - 2 sites REDOM d'intérêt éco-régional - Nord-ouest de Marie-Galante (882 ha) et Les Ravines (337 ha): identifié par la présence d'espèces remarquables (notamment herpétofaune), la potentialité de la forêt à tendre vers un climax, et le réseau hydrographique. - Espaces littoraux remarquables - Site classé des falaises de la côte Est de l'île (St-Louis et Capesterre de Marie-Galante) - Proposition d'inscription des marais et bois de Folle-Anse au protocole SPAW - Les falaises et l'îlet de Vieux Fort sont régis par la loi littoral, sont soumis aux 50 pas géométriques et font partie de la forêt domaniale du littoral. - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
ZCB 10 Les Saintes	Ilets des Saintes	<ul style="list-style-type: none"> - Herpétofaune - Présence de reptiles endémiques de ces îlets: l'Anolis des Saintes (<i>Anolis terraesaltae</i>), Sphérodactyle des Saintes (<i>Sphaerodactylus phyzacinus</i>), Couresse des Saintes (<i>Alsophis sanctonum</i> dont 2 sous-espèces sont endémiques de Terre-de-Haut, <i>A.s. sanctorum</i> et de Terre-de-Bas, <i>A.s. danforthii</i>), Scinque des Saintes (<i>Mabuya</i> sp). Peu de prospections ont été réalisées sur les populations de couresses. - 2 populations du scinque endémique des Saintes (<i>Mabuya</i> sp) ont été observées en 2014 (ASFA, Régis Gomez com. pers. 2015). - La Couresse des Saintes est présente sur l'ensemble de Terre-de-Bas et quelques sites sur Terre-de-Haut (Le Chameau, forêts au nord de l'île). La distribution de cette espèce est encore peu connue. Peu de prospections spécifiques ont été réalisées sur les îlets des Saintes (ASFA, Régis Gomez com. pers. 2015). - Présence d'amphibien endémique des Petites-Antilles: Hylode

		<p>de Martinique (<i>Eleutherodactylus martinicensis</i>)</p> <ul style="list-style-type: none"> - Présence du Sphérodactyle bizarre (<i>Sphaerodactylus fantasticus</i>), endémique de quelques îles des Petites-Antilles - Site de ponte pour les tortues marines: <ul style="list-style-type: none"> -- pour les tortues imbriquées (CR): Pompierre -- pour les tortues vertes (EN): Grande Anse, Figuier. - Avifaune <ul style="list-style-type: none"> - Les Augustins: regroupement de nombreux couples d'oiseaux marins (<i>Sterna fuscata</i>, <i>S. anaethetus</i>, <i>S. maxima</i>, <i>Anous stolidus</i>) - Grand Ilet: dortoir pour les fous bruns (200-250 individus) et les frégates (plus de 200 individus). Présence de 5-10 couples de fous à pieds rouges. - Mammifères <ul style="list-style-type: none"> - Canal des Saintes: concentration de groupes reproducteurs de baleines à bosse (<i>Megaptera novaeangliae</i>) - Aires d'alimentation, de reproduction et de repos pour les odontocètes (<i>Tursiops truncatus</i>). - Présence de chauves-souris endémique des Petites-Antilles: <i>Ardops nichollsi</i>, <i>Brachyphylla cavernarum</i>, <i>Natalus stramineus</i> (gîte de la grotte de Terre-de-Bas, partiellement détruit par un tremblement de terre) - 1 APB: Grotte de l'aérodrome (Terre-de-Bas) - Milieu terrestre <ul style="list-style-type: none"> - Baie de Pont Pierre et Pain de Sucre: site classé, végétation xérophile caractéristique des Saintes, présence de cactus Tête à l'Anglais (<i>Melocactus intortus</i>). Présence de Grand Paille-en-queue (<i>Phaethon aethereus</i>), oiseau nicheur sur le Pain de Sucre. - Terre-de-Haut, Ilet à Cabrit, Ilet de la Redonde: site inscrit, diversité floristique, présence de reptiles endémiques. - 3 ZNIEFF Type I: Ilet à Cabrit, Grand Ilet, La Coche et les Augustins - 2 ZNIEFF Type II: Les Trois Morne, Le Chameau - 2 APB: Terre-de-Haut et Grotte de l'aérodrome (Terre-de-Bas) - site du CELRL: Grand Ilet, Le Chameau - 1 site Redom - Terre de Bas (248 ha) - Schéma de Mise en Valeur de la Mer (SMVM): espace maritime à forte valeur patrimoniale
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Candidate ZCBs		
Candidate ZCB1	Mares de Marie Galante (hors KBA 9)	627 mares recensées à Marie Galante (DEAL Guadeloupe 2012a) - habitat important pour les populations d'oiseaux - faune dulçaquicole - services écosystémiques: usage agricole (abreuvement du bétail, micro-irrigation), collecte des eaux de pluie
Candidate ZCB2	Sites de ponte des tortues marines	- Sites de ponte des tortues marines comprenant moins de 10 activités de ponte par espèce et par saison de ponte: - Grande-Terre : Anse Laborde, la Chapelle, Pointe de la fontaine (Anse Bertrand), Anse des Salines (Pointe des Châteaux), la Grotte et KM7 (St François) - Basse-Terre : plage des Galets Rouge et Anse Machette (CSV), Leroux (Deshaies), Petite Anse et Malendure (Bouillante), La Madeleine et Anse du Grand Marigot (CAV) - Plage a Galets (La Désirade), Feuillère et Anse Canot (Marie-Galante), Ilet Cabrit, Pain de Sucre (Les Saintes)
Candidate ZCB3	Ecosystèmes marins - côte Atlantique	- récifs frangeants hébergeant des coraux et poissons menacés - manque de connaissance sur ce site difficile d'accès
Corridors écologiques		
Forêts de Basse-Terre	Corridor terrestre	- corridor écologique entre les forêts et zones humides de la Basse-Terre pour les populations d'oiseaux (dont le Pic de la Guadeloupe)
18 cours d'eau de Basse-Terre	Corridor pour les peuplements dulçaquicoles et marins	- 18 cours d'eau identifiés comme réservoir biologique ou candidats comme réservoirs biologiques et classés en listes 1 ou 2 visant le maintien de la continuité écologique des cours d'eau: La Grande Rivière à Goyave, La Petite Rivière à Goyave et son affluent la rivière Moreau, La rivière Beaugendre, La rivière Bourceau, La rivière Briqueterie, les rivières de Petite Plaine, du Pérou, Grande-Anse (réservoir biologique), Lézarde, Lostau, La rivière Moustique de Sainte-Rose, La Grande Rivière de Vieux-Habitants, La rivière Ziotte.
Zones humides	Peuplements d'oiseaux	- corridor écologique pour les populations d'oiseaux entre les zones humides du nord Grande-Terre
Corridor entre La Désirade et Petite-Terre	Peuplements d'oiseaux	- corridor écologique pour les oiseaux migrateurs de la famille des Procellariidés (<i>Puffinus puffinus</i> , <i>P. gravis</i> , <i>Calonectris diomedea</i>)



Carte des ZCB terrestres et marines de l'archipel Guadeloupéen.

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➤ Contexte socio-économique

Tableau 3 - Institutions, organisations et associations impliquées dans le domaine de l'environnement en Guadeloupe

GUADELOUPE : LES ACTEURS DE LA BIODIVERSITE ET DE L ENVIRONNEMENT	
Services de l'Etat	
DEAL Guadeloupe - Ministère de l'Ecologie, du Développement durable et de l'Energie (MEDDE)	La Direction de l'Environnement, de l'Aménagement et du Logement représente le Ministère de l'Écologie, du Développement durable et de l'Énergie en Guadeloupe. Elaboration et mise en œuvre localement des politiques de l'Etat en matière d'environnement, de développement et d'aménagement durables et de logement. Ses missions consistent à apporter une expertise environnementale à la réalisation des grands documents de planification locale et d'aménagement du territoire, concilier environnement et développement économique, connaître et faire connaître l'environnement, et protéger les ressources ainsi que les milieux naturels.
Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt - DAAF Direction de l'Alimentation, de l'Agriculture et de la Forêt / Direction des Services Vétérinaires	La DAAF met en oeuvre l'ensemble des politiques du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt en matière de politiques relatives à l'agriculture et au développement des territoires, politique de l'alimentation, politique forestière et de mobilisation de la ressource en prenant en compte les préoccupations de gestion durable des forêts et de préservation de la biodiversité.
Direction de la Mer	Service déconcentré de l'État français chargé d'appliquer les politiques publiques dans le domaine de la mer. La Direction de la Mer résulte de la fusion de la DRAM (Direction régionale des affaires Maritimes) et du service des phares et balises de la DDE (Direction Départementale de l'Équipement), et intègre le dispositif Polmar terre.
Collectivités	
Conseil Régional et Général de la Guadeloupe	
Communes de Guadeloupe: Services en charge de l'Environnement	
Etablissements publics / Institutions / Organisations / Réseaux	
Antenne Antilles - AGOA - Agence des Aires Marines Protégées (AAMP)	L'AAMP est un établissement public créé par la loi du 14 avril 2006 et placé sous la tutelle du ministère de l'Écologie, du Développement durable et de l'Énergie. Il est dédié à la protection du milieu marin. Son siège est basé à Brest. L'équipe du sanctuaire Agoa dépend de l'antenne Antilles de l'Agence des aires marines protégées.
Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME)	Établissement public à caractère industriel et commercial, placé sous la tutelle conjointe des ministères en charge de l'Écologie, du Développement durable et de l'Énergie et de l'Enseignement Supérieur et de la Recherche. L'ADEME participe à la mise en oeuvre des politiques publiques dans les domaines de l'environnement, de l'énergie et du développement durable.
Agence des 50 pas géométriques	L'Agence est un établissement public d'Etat chargé de la mise en valeur des espaces urbanisés de la zone des 50 pas géométriques, l'établissement régularise et valorise la zone des 50 pas Géométriques de la Guadeloupe.
BRGM	Le Bureau de recherches Géologiques et Minières est l'établissement public de référence dans les applications des sciences de la Terre pour gérer les ressources et les risques du sol et du sous-sol. En Guadeloupe le BRGM axe ses recherches sur la cartographie et connaissances géologiques, la connaissance et qualité des eaux souterraines, les risques naturels et géologiques sismiques, la géothermie.
Comité Régional des Pêches Marines et des Elevages Marins de Guadeloupe (CRPMEM)	Organisme de représentation des professionnels du secteur de la pêche et des élevages marins. Le CRPMEM assure la défense des intérêts des généraux des pêcheurs auprès des pouvoirs publics nationaux et communautaires. Il participe à la gestion des ressources halieutiques dans le cadre d'une pêche responsable et d'un développement durable. Le CRPMEM de Guadeloupe est basé à Pointe-à-Pitre.
Conservatoire Botanique de Guadeloupe	Institution à caractère scientifique dont la mission est de contribuer à la connaissance de l'état et de l'évolution de la flore sauvage et des habitats naturels et semi-naturels; d'apporter à l'Etat, aux établissements publics et aux collectivités territoriales un appui technique et scientifique en matière de flore sauvage et d'habitats naturels et d'informer le public à la connaissance et la

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	préservation de la diversité végétale. L'agrément en qualité de Conservatoire Botanique National est délivré par le MEDDE.
Conservatoire de l'Espace Littoral et des Espaces Lacustres (CELRL)	Etablissement public chargé de mener une politique foncière de protection des espaces naturels littoraux, de respect des sites naturels et de leur équilibre écologique. Ces ensembles naturels sont ainsi préservés de toute urbanisation et deviennent un lieu accessible à tous
CSRPN Guadeloupe	Le Conseil Scientifique Régional du Patrimoine Naturel est une instance consultative à compétence scientifique en matière de patrimoine naturel. Placé auprès du Préfet de Région et du Président du Conseil régional, ce conseil peut rendre des avis et des recommandations à caractère scientifique sur tout sujet intéressant la conservation du patrimoine naturel de la Guadeloupe.
Office National de la Chasse et de la Faune Sauvage (ONCFS) - Cellule Guadeloupe	Etablissement administratif public placé sous la tutelle du Ministère de l'Écologie, du Développement durable et de l'Énergie (MEDDE) et du Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt (MAAF). Il a pour mission de « définir, promouvoir et contrôler les règles de bonne gestion de la faune sauvage et de ses habitats et contribuer à l'évolution de la chasse selon les principes du développement durable ». Dans les régions d'Outre Mer, l'Office fait partie du Service Mixte de Police de l'Environnement (SMPE) avec l'Office National de l'Eau et des Milieux Aquatiques (ONEMA) depuis 2008.
Office National des Forêts (ONF)	Établissement public créé en 1964, l'Office national des forêts mène son action dans le cadre d'un contrat pluriannuel d'objectifs et de performance avec l'Etat et la Fédération nationale des communes forestières. Il assure la gestion durable des forêts publiques françaises, soit près de 10 Mha de forêts et espaces boisés en France métropolitaine et dans les DOM. L'ONF est co-gestionnaire, avec l'association Ti-Té, des RNN de Petite-Terre et de la Désirade et est chargée de la gestion technique et l'organisation du travail sur le terrain.
Office de l'Eau et Comité de Bassin	Créé le 16 avril 2006, l'Office de l'Eau Guadeloupe est un établissement public local à caractère administratif rattaché au Département de la Guadeloupe. Outil technique et financier qui a vocation à mettre en application selon le principe pollueur payeur une panoplie de redevances bassin. Ces dernières doivent permettre le financement d'actions et de travaux ayant pour objectif l'amélioration et la préservation de l'environnement, des milieux aquatiques et de la ressource en eau. Il est un organe fédérateur des actions menées dans le cadre de la politique globale de gestion de l'eau, définie par le Schéma Directeur d'Aménagement et de Gestion des Eaux (SDAGE), dont il assure le suivi de la mise en œuvre.
Parc National de Guadeloupe	Etablissement public sous tutelle du ministère chargé de l'environnement créé en 1989 qui a pour mission la gestion des sites du Parc National de la Guadeloupe. L'équipe de gestion se compose au 1er janvier 2013 d'environ 80 personnes issues d'univers professionnels différents répartis en 3 pôles territoriaux (cœur forestier, aire d'adhésion, milieu marin) et 4 services supports (secrétariat général, systèmes d'information, patrimoines et communication).
CAR-SPAW	Centre d'Activités Régional destiné à la mise en œuvre du protocole SPAW de la Convention de Carthagène, protocole relatif aux zones et à la vie sauvage spécialement protégées de la zone Caraïbe. Le CAR-SPAW est hébergé par le Parc National de la Guadeloupe. La mission du CAR est d'apporter un appui aux pays signataires de SPAW pour que ceux-ci développent les actions décidées. Le CAR travaille dans un cadre de coopération régionale avec des organisations et réseaux oeuvrant dans l'ensemble de la Caraïbe.
Service Mixte de Police de l'Environnement (SMPE)	Les missions de police de l'environnement sont réalisées par des services mixtes composés d'agents de l'ONCFS (Office National de la Chasse et de la Faune Sauvage), de l'ONEMA (Office National de l'Eau et des Milieux Aquatiques), des parcs nationaux, des collectivités ou des fédérations de chasseurs qui surveillent les territoires et font respecter la réglementation.
Organismes de recherche	
INRA Centre Antilles-Guyane	L'Institut National de la Recherche Agronomique couvre trois régions ultramarines (Guadeloupe, Martinique, Guyane) et est le principal acteur de la recherche agronomique dans la Zone Caraïbe depuis 60 ans, l'Inra contribue, par ses recherches sur l'agriculture, l'alimentation et l'environnement et par son

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	implication permanente dans l'enseignement et la formation, au développement durable de l'agriculture aux Antilles-Guyane.
CIRAD Antilles-Guyane	Le Centre de Coopération Internationale en Recherche Agronomique pour le Développement axe ses activités de recherche sur les filières d'exportation agricole (Banane et Canne à sucre notamment) de la Guadeloupe, mais aussi sur les maladies infectieuses affectant la faune végétale et animale.
Université des Antilles	Université pluridisciplinaire créée en 1982 et initialement implantée sur trois régions (Guadeloupe, Martinique, Guyane). En 2014, l'UAG est scindée entre l'université de Guyane et l'université des Antilles. L'Université des Antilles a une expertise de recherche en biologie et écologie terrestre et marine.
IFREMER Antilles françaises	Institut français de recherche pour l'exploitation de la mer - La Délégation des Antilles françaises est basée en Martinique. La Délégation Ifremer des Antilles est l'une des six représentations de l'Ifremer présentes dans l'espace ultramarin français. Son domaine géographique de compétences correspond à la ZEE des Antilles françaises, comprenant la Martinique, la Guadeloupe, St. Martin et St. Barthélemy. Les activités conduites par l'UR-Antilles s'intéressent et s'adressent donc aux grands domaines de l'halieutique, de l'aquaculture et de l'environnement, qui intimement liés, relèvent d'une seule approche, écosystémique et intégrée.
MNHN	Réalisation d'inventaires terrestre et marin et d'étude en biologie écologie marine et terrestre en Guadeloupe.
Associations	
ACED	Association Conseil Environnement Développement Durable fondée en 1999: Education à l'Environnement et au Développement Durable; valorisation du patrimoine naturel et culturel; réalisation d'études, brochures, supports de vulgarisation et de sensibilisation sur la flore, la découverte du patrimoine naturel et culturel des vallées, la valorisation de la biodiversité. Organisation de sorties naturalistes. Sensibilisation du grand public et des scolaires à l'environnement et à la biodiversité insulaire tropicale.
Antilles Mollusques	Association dont les missions sont axées sur la recherche sur les espèces de mollusques marins des Antilles (études, inventaire, croissance, reproduction, diffusion et communication) ; la participation à des missions scientifiques étudiant le milieu marin et la formation et sensibilisation des jeunes chercheurs en malacologie.
AEVA	Fondée en 1993, AEVA (Association pour l'Etude et la protection des Vertébrés et Végétaux des Petites Antilles) a pour objectifs de faire connaître, partager et protéger la biodiversité de l'archipel guadeloupéen. Cette association naturaliste fait découvrir la faune et la flore sauvage de Guadeloupe au plus grand nombre, et sensibilise le public aux pressions exercées sur les milieux et leurs espèces. Elle réalise des inventaires et des suivis sur l'archipel guadeloupéen, à Saint-Martin et à Saint-Barthélemy. Sensibilisation du public.
AGO	L'Association Guadeloupéenne d'Orchidophilie (AGO) (créée en 1980) a pour mission de promouvoir la connaissance des espèces botaniques d'orchidées et de participer à leur protection au niveau local, mettre en relation les orchidophiles et faciliter les échanges de plantes. L'AGO réalise des inventaires d'orchidées sur l'archipel guadeloupéen.
AMAZONA	Association de protection de la nature spécialisée en ornithologie créée en 1998, l'association est agréée au titre de la protection de l'environnement. Elle a pour mission l'observation, l'étude et la protection des oiseaux en Guadeloupe et participe à l'éducation à l'environnement et à la sensibilisation du public à l'ornithologie. L'association réalise des études pour le compte des collectivités et des structures de l'Etat. Des comptages sont réalisés en Guadeloupe et plus de 10 000 oiseaux ont été bagués lors des suivis ornithologiques.
ASFA	L'Association pour la Sauvegarde et la réhabilitation de la Faune des Antilles (ASFA) a pour objectifs l'étude et la conservation de la faune sauvage terrestre de la Guadeloupe et des Petites-Antilles: amphibiens, reptiles, oiseaux, mammifères (chauves-souris). L'ASFA sensibilise et alerte le public sur les menaces affectant la biodiversité et participe notamment au suivi des populations de chauves-souris depuis 1998 et coordonne le Groupe Chiroptères Guadeloupe.

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BREACH - Antenne Antilles	L'antenne Antilles de l'association a pour objectifs d'étudier, de protéger et de connaître les mammifères marins fréquentant les eaux des Antilles, et plus particulièrement des Antilles françaises. L'association réalise des études visuelles et acoustiques sur les populations des cétacés, sensibilise le grand public et participe à des programmes de recherche.
Caribbean Lagoons	Cette association a pour objet la préservation, la protection et la mise en valeur des lagons de Guadeloupe en particulier et des lagons de la Caraïbe et du monde en général via des projets de sensibilisation, information, éducation, et au travers de rassemblements, de conférences et de manifestations, ainsi que par des actions de lutte contre les pollutions et les espèces nuisibles ou invasives.
EcoLambda	Dès sa création en 1994, l'association Ecolambda a œuvré pour la protection du site de Folle Anse et a été à l'initiative de l'arrêté de protection du biotope de la zone. En 2001, l'association a été agréée pour la protection de l'environnement et ses membres ont intégré le réseau tortues marines.
Ecole de la Mer - Aquarium de Guadeloupe	L'association créée en 2007 est hébergée par l'Aquarium de Guadeloupe et constitue un pôle d'éducation, de sensibilisation et d'information sur le milieu marin. Des animations et des activités pédagogiques, alternant découverte et expérimentations sur le terrain, sont réalisées avec le grand public et les scolaires.
Evasion Tropicale	Association spécialisée dans l'étude, le recensement et la protection des tortues marines et des cétacés en zone Caraïbe. Elle mène notamment des suivis des populations par photo identification et des actions d'éducation à la préservation de l'environnement auprès des milieux scolaires et du public. Référent du Réseau National des Echouages de Mammifères Marins pour l'archipel de la Guadeloupe.
Kap'Natirel - ReguaR	Créée en 2004, Kap Natirel a pour principal objectifs la préservation et la valorisation du patrimoine naturel de l'archipel guadeloupéen et l'information et la sensibilisation du grand public, des scolaires et des élus. L'association s'est spécialisée sur les thématiques liées au milieu marin et au littoral (tortues marines, poissons lion, requins...). Kap'Natirel a animé le Réseau Tortues Marines de Guadeloupe de 2004 à 2008 sous la tutelle de la DIREN Guadeloupe. Dans le cadre du RTMG, l'association réalise des suivis des tortues marines (sites de ponte, aires d'alimentation). L'association coordonne le Réseau Guadeloupe Requins qui a pour objectifs de centraliser les observations de requins et de raies dans les eaux de l'archipel Guadeloupéen, et d'informer et sensibiliser la population à ces animaux. Il s'agit de la première initiative de ce type dans les Antilles françaises.
Guadeloupe Nature Environnement	Association œuvrant comme plateforme d'engagement entre citoyens et associations éco responsables. Elle a pour vocation le suivi technique de dossiers, la mise en œuvre d'actions et de projets, orientés vers l'environnement autour de différents domaines d'Activités : Biodiversité, Énergie Renouvelables, Agriculture Biologique et Gestion des Déchets.
IGEROCC	Institut Guadeloupéen d'Etudes et de Recherches Ornithologiques de la Caraïbe. Association ornithologique basée en Guadeloupe.
Le GAIAC	Association basée à Sainte-Rose qui réalise des suivis des sites de ponte des tortues marines dans le cadre du Réseau de Tortues Marines de Guadeloupe. L'association a participé à la mise en place, avec la DEAL Guadeloupe et plusieurs associations locales, du Groupe d'Etudes et de Conservation de l'Iguane des Petites Antilles en Guadeloupe (GECIPAG).
Mon Ecole, Ma Baleine	Association dont les missions sont de sensibiliser le grand public et les scolaires sur les mammifères marins et leur habitat. Réalisation d'interventions pédagogiques en milieu scolaire et hospitalier, sensibilisation sur les menaces affectant les cétacés et leur milieu.
Nature Kulture 971	Association située à Bouillante (Basse-Terre) dont l'objectif principal est la sensibilisation du public à la protection et la valorisation du patrimoine naturel de la Guadeloupe. Depuis 3 ans, le jardin extraBIOrdinaire permet de conserver et de présenter de nombreuses plantes médicinales à l'Habitation Birloton.
OMMAG	L'OMMAG (Observatoire des Mammifères Marins de l'Archipel Guadeloupéen) est une association d'observation et d'identification des mammifères marins de l'archipel guadeloupéen. L'association est en charge de la coordination du réseau d'observateurs en Guadeloupe, de la constitution d'un catalogue de photo-identification des mammifères marins pour l'archipel guadeloupéen, de l'étude et du suivi des populations de cétacés.

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Prepasub	Association créée en 1991 chargée du dénombrement et de la cartographie des sites d'archéologie sous-marine de l'archipel guadeloupéen.
Société d'Histoire Naturelle L'Herminier	La Société L'HERMINIER (basée à Nantes) a pour but de contribuer au progrès des Sciences Naturelles dans la région Caraïbe, plus particulièrement dans les domaines de l'Entomologie et de la Botanique. La Société met à disposition ses compétences dans la réalisation d'études scientifiques, d'inventaires, d'études écologiques et biologiques dans les Antilles françaises.
Stenella	L'association, créée en 2010 en Guadeloupe, a pour objectifs de sensibiliser et éduquer le grand public à l'environnement marin en réalisant des sessions de découverte de la flore et de la faune sous-marines, en participant à des programmes de recherche, de protection et de mise en valeur du milieu marin.
Tamata	Les objectifs de l'association sont de promouvoir, développer et enseigner les activités physiques et sportives de pleine nature dans un contexte de protection de l'environnement. L'association a participé à la création et la mise en place du sentier sous-marin de l'îlet Gosier, en partenariat avec la DEAL Guadeloupe et IFRECOR.
Terre d'Avenir	Association de protection et de sensibilisation à l'environnement en Guadeloupe. L'association participe aux stands d'Action Corail, organisés sous forme d'exposition itinérante sur les récifs coralliens, avec la DEAL Guadeloupe et l'IFRECOR qui ont pour but de sensibiliser les enfants des centres de loisirs, mais aussi les vacanciers, à la fragilité des coraux et à leurs différents rôles dans notre milieu insulaire.
Ti-Té	L'association Ti-Té (association loi 1901 créée en 2002) est co-gestionnaire avec l'ONF des Réserves Naturelles Nationales de Petite-Terre et de La Désirade. L'association est en charge de l'aspect administratif et financier, elle emploie 5 salariés et des volontaires accompagnent le personnel dans leurs missions.
Réseaux	
Réseau Tortues Marines de Guadeloupe	Le RTMG créé en 1999 regroupe l'ensemble des acteurs et partenaires œuvrant pour l'étude et la protection des tortues marines et de leurs habitats en Guadeloupe. Il se compose de nombreuses associations, bénévoles, scientifiques, gestionnaires d'espaces naturels, organismes d'Etat en charge de la protection de la nature, mais également de socio-professionnels dont les activités concourent à suivre, préserver ou communiquer sur les tortues marines.
Groupe d'Etudes et de Conservation de l'Iguane des Petites Antilles en Guadeloupe (GECIPAG)	Réseau dynamisé par des associations (Le Gaïac, l'ASFA, l'AEVA...), des institutionnels et professionnels de la nature (ONF, Parc national, DEAL, ONCFS, MNHN, UAG...) ainsi que par des indépendants. Les bénévoles et associatifs ont pour mission d'actualiser l'inventaire des différentes populations d'iguanes de l'archipel guadeloupéen et s'investissent sur le terrain afin d'améliorer les connaissances sur la biologie et l'écologie de l'iguane des petites Antilles.
IFRECOR	Créée en 1999, l'Initiative Française pour les Récifs Coralliens agit pour la protection et la gestion durable des récifs coralliens et des écosystèmes associés (mangroves, herbiers) dans les collectivités françaises d'outre-mer. Le secrétariat du comité national de l'IFRECOR est assuré par le ministère de l'écologie et par le ministère chargé de l'outre-mer.
Reef Check	REEF CHECK France est le réseau de sciences participatives pour le suivi des récifs coralliens français. Réalisation de suivis annuels autour de l'archipel guadeloupéen.
GCRMN	Global Coral Reef Monitoring Network, Suivi de l'évolution des récifs coralliens dans les Antilles françaises et plus généralement dans les Caraïbes.
ReguaR	Le Réseau Guadeloupe Requins est coordonné par l'association Kap Naturel et a pour objectifs de centraliser les observations de requins et de raies dans les eaux de l'archipel Guadeloupéen, et d'informer et sensibiliser la population à ces animaux. Il s'agit de la première initiative de ce type dans les Antilles françaises.
Secteur privé	
Bureaux d'études	Plusieurs bureaux d'études dont les expertises concernent la biodiversité terrestre, marine ou dulçaquicole, spécialisation en écologie insulaire tropicale, étude et suivis des populations (tortues marines, mammifères marins, vertébrés terrestres...). Conseil en environnement et études d'impact.

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