St. Eustatius National Marine Park
Management Plan 2020 – 2025

MANAGEMENT BRIEF

This Management Brief provides a short summary of the key information contained in the St Eustatius National Marine Park management plan and is intended as a quick reference guide for day-to-day management. Please refer to the full management plan and extensive appendices for further information.

Contents

Reference: St. Eustatius National Marine Park Management Plan Brief 2020-2025
Date: May 2021
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Management framework

The Island Government of the Public Entity St Eustatius delegated the day-to-day management of the St. Eustatius National Marine Park to STENAPA under a ten-year Service Level Agreement signed on the 18th June 2019.

According to the Service Level Agreement, STENAPA is responsible for:

- Protecting ecosystems and habitats including coral reefs, seagrass beds, nesting beaches
- Conservation of endangered and critically endangered species including turtles, sharks, grouper, corals and marine mammals
- Management of a turtle conservation programme
- Controlling invasive species, such as lionfish
- Research and monitoring
- Providing operational support for scientific research and advice regarding CITES and other relevant treaties.
- Providing advice regarding legal issues and development
- Ensure park management is informed by expert guidance
- Dive and snorkel site maintenance (36 sites)
- Awareness and outreach, including visitor centre, junior ranger club, school programme, summer club, outreach to the local community, media relations and working with stakeholders
- Patrolling and assisting with law enforcement
- Providing immediate response to oil spills
- Beach and underwater clean ups

Vision statement and scope

Vision statement

STENAPA's vision for the St. Eustatius National Marine Park is:

> *"St. Eustatius National Marine Park is recognized as a local, regional and international example of successful marine conservation for its work in protecting its rich biodiversity and unique cultural heritage for future generations."*

Geographic scope

> *"The sea floor and the overlying waters around and adjacent to the island St. Eustatius, from the highwater tidemark to the 30m depth contour."*

Thematic scope

> *"The St. Eustatius National Marine Park has been established to protect and improve biodiversity, regulate and promote sustainable use of the park and a green economy for the island through education and collaboration."*

Conservation targets

Conservation targets are the ecological systems and processes, habitats, communities and species that represent and encompass the biological diversity found within the park. The conservation targets are the basis for setting conservation strategies and goals and are used to measure conservation success.

The conservation targets for the St. Eustatius National Marine Park have been defined as:

- Coral reefs
- Native sea grass beds
- Grouper
- Marine turtles
- Sharks, rays and marine mammals
- Conch

Threats

Table 1 Threats to St Eustatius National Marine Park

		Conservation target					
Threat category (METT - CMP)	Threat	Coral reef	Turtles	Seagrass	Grouper	Sharks, rays	Marine mammals
Category 8: Invasive and other problematic species and genes	*Free roaming goats*	very high	very high	very high	high	medium	low
	Invasive fauna - lionfish	high	low	low	very high	low	low
	Invasive flora – seagrass	low	high	very high	low	low	low
	Disease	high	high	high	high	high	high
	Events (sargassum)	low	very high	low	low	low	low
Category 9: Pollution entering or generated within protected area	*Oil spills/pollution*	high	high	high	high	high	high
	Noise pollution	high	medium	low	medium	medium	high
	Untreated sewage	very high	medium	high	medium	medium	low
	Littering (plastics)	high	high	medium	medium	medium	medium
Category 5: Biological resource use and harm within a protected area	*Unsustainable fishing*	medium	low	medium	very high	medium	low
	Bycatch	high	low	low	low	high	low
Category 6: Human intrusions and disturbance within a protected area	*Anchoring*	very high	low	very high	low	low	low
	Diver damage	medium	medium	low	low	low	low
Category 1. Residential and commercial development	*Coastal development*	very high	very high	medium	low	medium	low
Category 11: Climate change and severe weather	*Climate change*	high	high	high	high	high	high
	Extreme weather	very high	medium	very high	low	medium	low
	Summary	**HIGH**	**HIGH-MED**	**MED**	**MED**	**MED**	**MED-LOW**

Resources

The human, financial, physical and information resources are critical component of park management and under pin a park's ability to meet its management objectives.

Inadequate financial support plays a central role in limiting park management effectiveness and causing loss and degradation of natural resources globally. The World Bank, International Union for the Conservation of Nature (IUCN) and others, recognise that serious funding deficits exist worldwide in non-developed regions. Management of protected areas on small islands is known to be disproportionately expensive as they are unable to benefit from economies of scale which show that management costs decrease rapidly as the size of the area under protection increases. Marine parks without adequate investment in human and financial capacity will have sub-optimal conservation outcomes[1].

Studies have shown that the STENAPA's operations have been chronically underfunded since the parks were first established. Inadequate funding to cover recurrent management costs, which include staff salaries and related costs, maintenance and field work, outreach, education and community engagement, science and monitoring and enforcement, has left STENAPA chronically understaffed and under resourced.

Issues

It is widely recognised that protected areas require long-term political and financial commitment in order to be effective. On St Eustatius, the most pervasive issues facing STENAPA and the St. Eustatius National Marine Park are:

- Lack of structural funding to cover the cost of day-to-day management
- Inconsistent support from the Public Entity
- Lack of awareness generally about the value of nature and the need for conservation

Table 2 Overview of strategies and issues

KEY
Indirect benefit
Direct benefit
Essential

		Funding	Public entity support	Awareness
Enabling strategies				
E1	Developing institutional capacity…	Essential		
E2	Influencing policy, regulation and management	Indirect benefit	Essential	Essential
E3	Optimizing income generation	Essential		Indirect benefit
E4	Providing nature education opportunities …		Essential	Essential
E5	Communicating effectively …	Indirect benefit	Essential	Indirect benefit
E6	.. science and monitoring programmes …		Indirect benefit	Essential
E7	Providing excellent enforcement …		Indirect benefit	Indirect benefit
Conservation Strategies				
C1	STENAPA: a valued conservation partner	Essential	Essential	Essential
C2	Optimizing coral reef protection (resilience)...		Indirect benefit	Indirect benefit
C3	Optimizing conservation management …	Indirect benefit	Essential	Essential
C4	sustainable recreational and commercial use		Indirect benefit	Indirect benefit
C5	Improving fisheries management …		Indirect benefit	Indirect benefit
C6	.. impact of invasive species …		Indirect benefit	Indirect benefit
C7	Addressing climate change readiness		Indirect benefit	Indirect benefit

1 Capacity shortfalls hinder the performance of marine protected areas globally (Gill, D. et al 2017)

Management plan

The framework for the St Eustatius National Marine Park management plan is determined by STENAPA's vision statement, the geographic boundaries of the park and the thematic scope of STENAPA's work. The Management Plan focuses on conservation targets (coral reefs, seagrass beds, grouper, turtle, sharks, rays and conch) which together with a detailed threat analysis, provide the basis for the conservation strategies and objectives.

Stakeholder involvement was a critical element in the development of the Management Plan. Marine Park stakeholders were identified and consulted and their feedback has been incorporated directly into the Management Plan. Where stakeholder feedback contributed towards an objective, this is indicated with an 'S'.

It is designed to guide STENAPA and Marine park managers and staff in their work for the coming five years.

Enabling strategies

For the Management Plan to be successfully implemented, STENAPA needs to be a strong, well-managed organisation equipped with adequate human, physical, information and financial resources. Enabling strategies address resources and fundamental park management tasks.

Critical enabling strategies include:

- E1 Developing institutional capacity (including good governance and staff development)
- E2 Influencing policy, regulation and management
- E3 Optimizing income generation
- E4 Providing nature education opportunities to school age children
- E5 Communicating effectively (including outreach, media, social media and interpretation)
- E6 Implementing science and monitoring programmes to support management
- E7 Providing excellent enforcement (including permitting, rules, regulations advice)

Full Enabling strategies, including 5-year objectives and activities, can be found in the Appendix

Conservation strategies

Conservation strategies are designed to protect conservation targets and addressing threats.

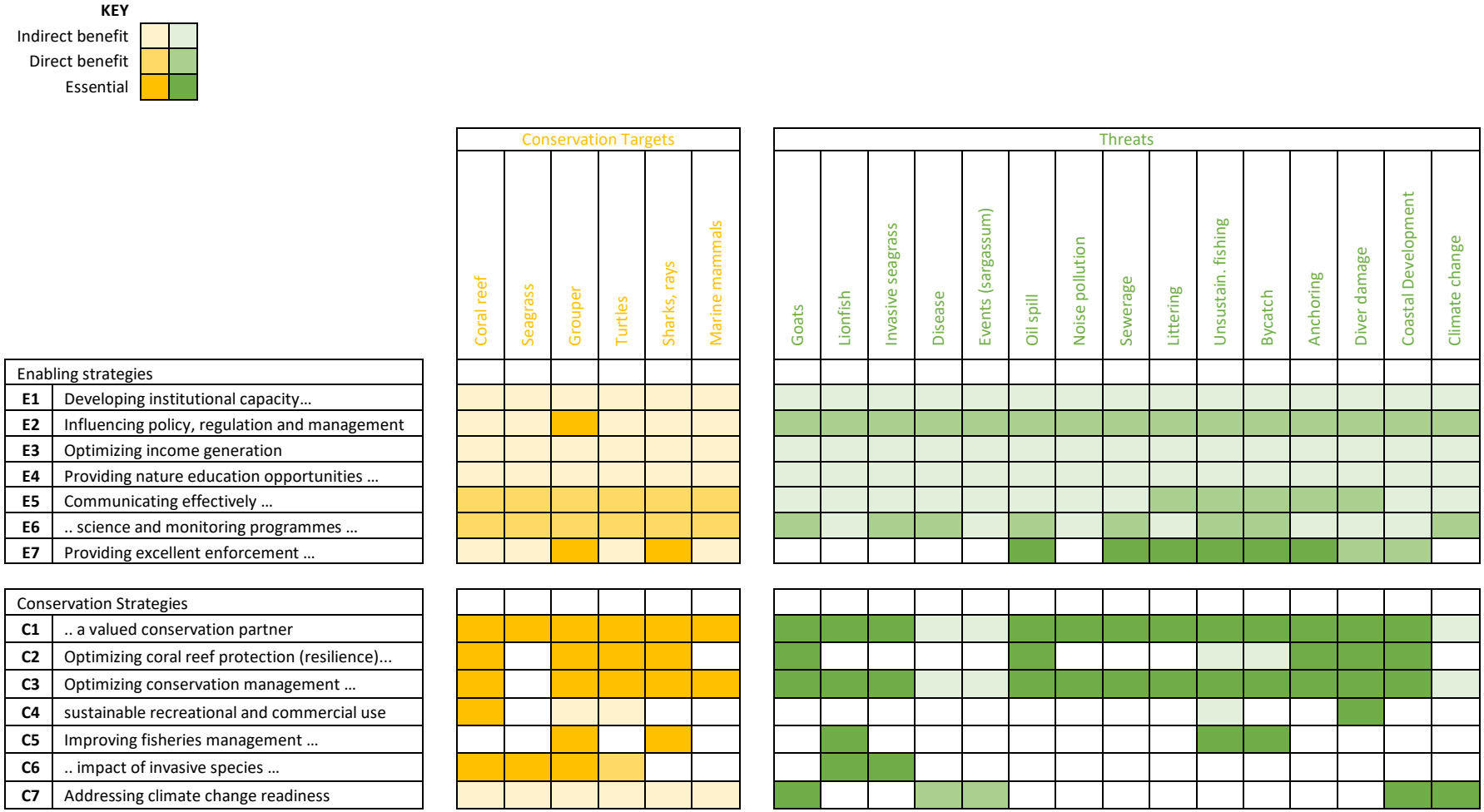
Target based key Conservation strategies for the St. Eustatius National Marine Park have been identified as:

- C1 Ensuring the St. Eustatius National Marine Park is a valued conservation partner
- C2 Optimizing coral reef protection (resilience), building support for reef conservation and reef restoration
- C3 Optimizing conservation management for species of special interest including turtles, sharks, rays and marine mammals
- C4 Improving sustainable recreational and commercial use of the Marine Park
- C5 Improving fisheries management for commercially important species
- C6 Reducing the (potential) impact of invasive species of fauna and flora
- C7 Addressing climate change readiness.

Full Conservation strategies, including 5-year objectives and activities, can be found in the Appendix

Matrix: strategies, issues, conservation targets and threats

Table 3 Strategies, targets and threats matrix



Enabling strategies and objectives

	Priority	Year	Lead	Stake-holders
E1 Developing institutional capacity (including good governance and staff development)				
The Foundation Board has adopted good governance procedures and norms [Dec 2022]		2021	Board	
The Marine Park is fully staffed and staff are well trained [2025]		2021	Director	
STENAPA's volunteer programme provides significant ongoing support to the Marine Park [2025]		2022	MP Manager	
The Marine Park has a clear idea of all resource needs [2023]		2021	Director	
Marine Park administration is optimized including procurement, accounting, budgeting [2023]		2021	Director	
Management Success is used to inform adaptive management and allow STENAPA to assess park success		2021	Director	S
E2 Influencing policy, regulation and management				
The Marine Park has an excellent working relationship with the local government and is invited to join relevant working groups and committees [2023]			Director	S
The Marine Park has clearly defined policy objectives [2023]			Director	S
Local legislation adequately protects the Marine Park [2025]			Director	S
Service Level Agreement has been refined and approved by government [2023]			Director	S
E3 Optimizing income generation				
The Marine Park has a clear understanding of its financial needs and a plan in place to secure funding [2022]		2021	Director	
User fees are being collected from all Marine Park users [2022]		2021	Director	
The Marine Park has diversified its income stream as much as possible [2023]			Director	
E4 Providing nature education opportunities to school age children				
Marine Park provides nature education in all elementary schools [2025]			Ed Officer	
The Marine Park provides nature education to secondary school [2025]			Ed Officer	
10% of school age children have participated in the Marine Park's out of school activity programmes (such as snorkel club, summer camp) [2025]			Ed Officer	
The Marine Park has 5 dedicated volunteers to assist with marine themed out of school activities [2025]			Ed Officer	

E5 Communicating effectively (outreach, media, social media and interpretation)				
The Marine Park has a range of up-to-date outreach and communication materials [2023]		2021	Comm Officer	
The Marine Park has an active social media following of 1,000 people [2025]		2021	Comm Officer	S
The Marine Park has an e-learning package for the dive sector and all visitors [2025]			Comm Officer	
The Marine Park has exhibits and display material in a visitor centre [2025]			Comm Officer	
STENAPA has a calendar of key events to engage stakeholders [2023]		2021	Comm Officer	S
E6 Implementing science and monitoring programmes to support management				
The Marine Park has a science and monitoring programme in place [2024]			MP Manager	S
The Marine Park has a group of 10+ citizen scientists assisting with data collection [2024]			MP Manager	
The Marine Park is recognised as a marine science and conservation management authority [2024]			MP Manager	S
E7 Providing excellent enforcement				
The Marine Park has an enforcement plan targeting major threats and issues and the ability to enforce [2023]			MP Manager	S
The Marine Park is involved in reviewing permit applications relevant to the park [2023]			MP Manager	
Enforcement of existing rules and regulations has been optimized [2024]		*2021*	Director	*S*

Conservation strategies and objectives

	Priority	Year	Lead	Stake-holders
C1 Ensuring the St. Eustatius National Marine Park is a valued conservation partner				
Management capacity and decision making are improved through the implementation of an up-to-date Management Plan [2021]		2021	Director	
The Marine Park is well regarded by local stakeholders and a 'go to' for knowledge and information about the marine environment and marine conservation management [2023]		2021	Director	S
The Marine Park has built strong working relationships with three external bodies to optimize resources and support [2024]		2022	Director	
C2: Optimizing coral reef protection (resilience), building support for reef conservation and reef restoration				
Provide decision makers with information and solutions to address key issues effecting corals reefs		2020	Director	*S*
Ensure maximum legal protection for coral reefs [2022]		2021	Director	
Integrate nutrient and sediment pollution concerns throughout all forms of planning, policy making and management		2020	MP Manage	
Promote reuse, reduce, recycling on St. Eustatius to minimize locally generated marine debris		2021	MP Manager	*S*
Maximize coral reef resilience		2020	MP Manager	
STENAPA is the premier partner on St. Eustatius for all issues regarding nature and conservation [2022]		2020	MP Manager	
Reef restoration efforts have substantially improved the resilience of reefs on St. Eustatius [2025		2020	MP Manager	
C3: Optimize conservation management for species of special interest including globally endangered turtles, sharks, rays and marine mammals				
Develop species management plans for species of special interest and vulnerable species				
St. Eustatius's nesting turtles are adequately conserved [2025]				
Sharks and ray is populations numbers are stable				
Marine mammal populations are optimally conserved				
C4: Improving sustainable recreational and commercial use of the Marine Park				
STENAPA determines criteria for sustainable use		2021	MP Manager	
STENAPA ensures that recreational activities conducted in the National Parks create minimal impact on nature		2023	MP manager	
User impacts on National Parks are systematically reduced		2022	Director,	
STENAPA actively facilitates sustainable recreational use of the National Parks		2021	Comms officer	
Conduct inventory of park use and limits of acceptable change				
Commercial use of the Marine Park is not damaging or destroying resources [2025]				
Historical and/or archaeological sites are under active management [2025]				

C5: Improving fisheries management for commercially important species				
Local commercial fisheries management has been optimized by working closely with local fishermen [2025]		*2021*	Director	*S*
Sustainable fisheries policy and legislation has been developed and implemented [2025]		*2023*	MP Manager	
Legal protection has been extended to include commercially important species [2025]		*2021*	Director	*S*
Local recreational fishing activity is optimally managed [2025]				
FADs have been installed and are managed in the Marine Park [2025]		*2023*	MP Manager	
C6: Reducing the (potential) impact of invasive species of fauna and flora				
Ensure STENAPA remains current on the regional status of exotic and invasive species including potential impacts and mitigation		*2022*	MP Manager	
Ensure adequate screening measures are in place to prevent accidental importation of invasive species		*2022*	Director	
Knowledge gaps about invasive lionfish have been filled and control programme is implemented [2022]		*2021*	MP Manager	
Knowledge gaps about invasive seagrass and impact on turtle populations and conch have been adequately filled [2023]		*2021*	MP Manager	
C7: Addressing climate change readiness				
STENAPA has a well-defined internal policy to reduce its carbon footprint [2024]		*2023*	Director	
STENAPA is working with three key partners to recognise and address key climate change effects on St. Eustatius		*2021*	Director	

Appendix

Table 4 St. Eustatius National Marine Park zones

Zone	Goal	Location	Area	Organisation responsible	Rational
Marine Park	Protection of the marine resources for the future generations of St. Eustatius.	Surrounding the entire island to the 30m isobath, extending to approximately 4 km to the West over a relatively shallow plateau and to about 1-2 km around the rest of the island.	2750 hectares (marine park west 961, east 1039 + reserves).	STENAPA	Within the marine park all relevant legislation, rules and guidelines apply as described in the Marine Environment Ordinance.
Northern Reserve	Habitat preservation and multi species conservation.	The Northern Marine Reserve is located at 17° 30'.5 N along the high waterline to the northern point, to the north to the 30 meter depth limit, to the west and south along the 30 meter depth limit until these lines pass the coordinate 17° 30'.5 N and back to Jenkins Bay.	163 hectares	STENAPA	The Reserves were set up to conserve marine biodiversity, restore fish stocks, promote sustainable tourism, and safeguard the marine ecosystem.
Southern Reserve	Habitat preservation and multi species conservation.	The Southern Marine Reserve is located at 17° 28'.5 N along the high waterline to the point of White Wall, south out to sea for half a nautical mile, to the west following the 30 meter depth limit to the crossing with the 17° 27'.7 N coordinate, to the north 17° 28'.5 N and back to Gallows Bay.	364 hectares	STENAPA	The Reserves were set up to conserve marine biodiversity, restore fish stocks, promote sustainable tourism, and safeguard the marine ecosystem.
Yacht anchoring	Maintain yachts north of the piers and away from inter island traffic	General use area from 5-15 metres	unknown	-	Designated zone confines the potential damage by anchoring yachts to the less sensitive sandy areas which are dynamic and can tolerate some disturbance.
GTI anchoring zones	Safe anchorage for Bunker vessels with draft up to 15m.	The zones are situated in Oranje Baai between the City Pier and the St. Eustatius Terminal Jetty. The zones are located in water of 24m to 40m. Two of the zones fall entirely within the marine park while half of Zone A lies beyond the depth boundaries of the marine park.	unknown	-	Due to the heavy boat traffic using St. Eustatius Terminals NV, anchoring zones have been designated for bunker vessels with drafts up to 15m (50ft). Tankers also use the area west of these designated zones for anchoring vessels.

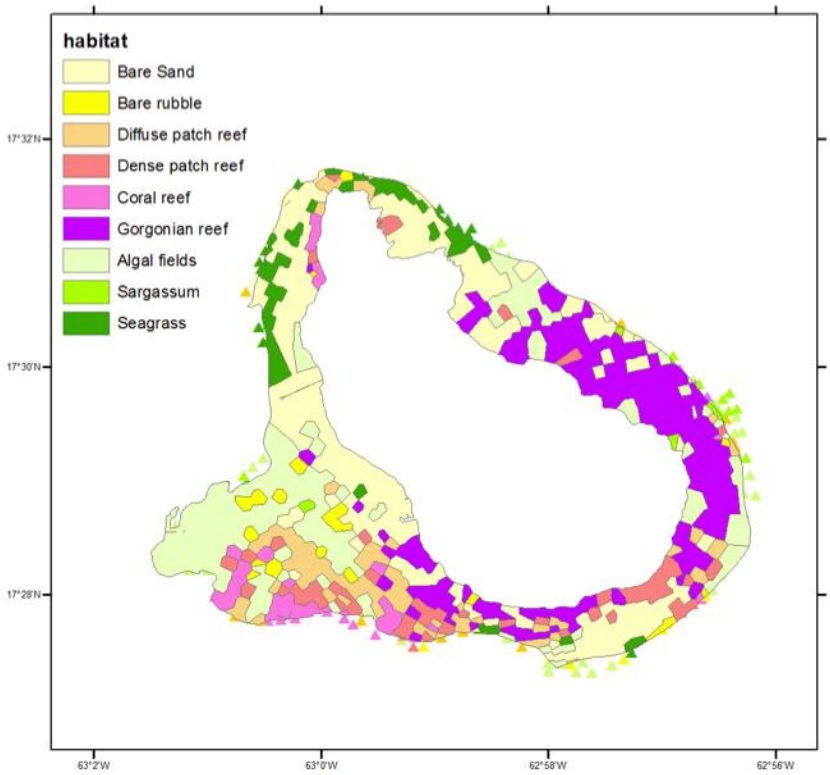


Figure 1 Map of main the benthic seascapes of St. Eustatius[2].

Listed species

The IUCN Red List includes species that are recognised as endangered, CITES list species that are controlled for international trade, SPAW and IBA programmes list regionally important marine and bird species respectively.

Table 5 Species numbers of conservation importance on St. Eustatius

	Red List Critical	Red List Endangered	Red List Vulnerable	CITES I	CITES II	SPAW II	IBA species
Marine	**6**	**12**	**40**	9	230	34	**1**
Terrestrial	**1**		**3**	1	42	3	**8**
Terrestrial/Marine		**2**	**2**				
Total	**7**	**14**	**45**	10	272	37	**9**

Table 6 IUCN Red List Critically endangered marine species

Acropora cervicornis	Staghorn Coral
Acropora palmata	Elkhorn Coral
Eretmochelys imbricata	Hawksbill Turtle
Epinephelus striatus	Nassau Grouper
Sphyma mokarran	Great hammerhead shark
Carcharhinus longimanus	Oceanic whitetip shark

[2] Debrot, A, et. al (2014) Habitat diversity and biodiversity of the benthic seascapes of St. Eustatius. IMARES Wageningen UR report number C078/14

Table 7. Overview of information resources

Key:

Available
Insufficient (old, inaccessible, unfinished)
Unavailable

		Notes / links
General		
Geological maps		1973, Geomorphology (2012), soils (2012,
Land use plans		Zoning plan (2010)
Topographical maps		Topography (2015), terrain (2014)
Hydrological survey		No full survey, streams included in Topography map
Tide tables		Available online
Current maps		
Nautical charts		Hard copy held by STENAPA, available from Imray
Bathymetric charts		2013 sonar map
Biological		
Baseline habitat maps		Marine (2014), terrestrial 2015 (1956), General 2015
Community descriptions		2014
Species lists		2014, conservation, algae 1968
Status of commercially important species		Conch (2014), fisheries/lobster (2018), Fisheries (2017)
Status of endangered, threatened and endemic species		Reefs and fisheries (2015)
Mapping		
Aerial photographs		2014, limited access
Digital multispectral images		terrain (2014), marine (2013), limited access
GIS		Various shapefiles available, Google Earth files
Socio-economic		
Economic valuation		Nature valuation (2014, not park focussed)
Cultural valuation		1993
Traditional usage		1993
Current use and usage levels		STENAPA have limited visitor data
Socio-economic survey		Tourism and nature, Marine (2010)
User Fee Survey		2006