

Research Overview

September 2018

CATEGORY	SUBJECT	DC ISLANDS	ORGANIZATION(S): LEAD SCIENTIST(S)
Birds	Suitability study and reforestation of exclosures facilitating the Yellow-shouldered Amazon Parrots (<i>Amazona barbadensis</i>) on Bonaire	BON	Echo: Julianka Clarenda
Coral Reef ecosystems	Larval biology of corals and reef microbiology	CUR	Marhaverlab, Curacao: Kristen Marhaver CARMABI
Coral Restoration	Cryopreservation of Caribbean coral species	CUR	Marhaverlab, Curacao: Kristen Marhaver CARMABI
Fisheries	Social Mapping (Funded by WWF-NL)	BON SAB EUX	WWF-NL: Pieter van Baren KITLV: Stacey Mac Donald
Fisheries	Market & Supply Chain Analysis study (Funded by WWF-NL)	BON SAB EUX	WWF-NL: Pieter van Baren The Good Fish Foundation: Michelle Boonstra
Fisheries	Historical fisheries (Funded by WWF-NL)	BON SAB EUX	WWF-NL: Pieter van Baren Terramar Museum Bonaire: Ruud Stelten
Fisheries	Testing and comparing various lionfish traps to study their potential use in a directed lionfish fishery (funded by WWF-NL)	SAB	SCF (SBMU): Ayumi Kuramae Izioka 7Senses: Madelon van Eelderink & Evert-Jan van Hasselt Interns: Michael Beekhuizen and Alex van der Last
Invasive species	Research into mitigation measures for Sargassum Seaweed	SXM	NFSXM: Tadzio Bervoets Government of St. Maarten
Plants	Testing effective ways to grow native plants	BON	Echo: Johan van Blerk
Plants	Germination of seeds of indigenous trees of Curaçao	CUR	CARMABI: John de Freitas
Reptiles	Lesser Antillean iguana nest research (funded by WWF-NL)	EUX	RAVON: Tim van Wagenveld, Ronald Zollinger

Long Term Projects

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Coral Reef Ecosystems	Deep Reef Observation Project (DROP) (ARMS: Autonomous Reef Monitoring Structures)	CUR	Smithsonian: Carole Baldwin
Coral Reef Ecosystems	Developing a plan to manage the waters around Curaçao sustainably, profitably, and enjoyably for this and future generations	CUR	Waitt Institute (Blue Halo Curaçao): Kathryn Mengerink
Coral Reef Restoration	St. Maarten's Coral Restoration Project	SXM	NFSXM: Tadzio Bervoets, Melanie Meijer zu Schlochtern CRF
Coral Reef Restoration	Development of restoration methods for threatened Caribbean coral species	BON, CUR, SAB	CRF Bonaire: Augusto Montbrun, Francesca Viridis SECORE Project CARMABI: Mark Vermeij UvA: Valerie Chamberland
Coral Reef Restoration	Artificial structures that encourage larvae settlement and discourage the growth of competitor species	CUR	University of Illinois: Amy Wagoner Johnson, Bruce Fouke, Gabriel Juarez San Diego State University: Forest Rohwer CARMABI: Kirsten Marhaver, Mark Vermeij
Database	Dutch Caribbean Species Register: Taxonomic knowledge system Dutch Caribbean (http://www.dutchcaribbeanspecies.org/)	All	Naturalis: Sander Pieterse, Hanco Bakker, Bert Hoeksema
Endemic species	Overview endemic species	SAB EUX SXM	WUR: Dolfi Debrot, Oscar Bos, Rene Henkens Naturalis: Hanco Bakker
Interstitial biodiversity	Moleculair biodiversity analysis of marine communities by metabarcoding	EUX	Naturalis: Arjen speksnijder ANEMOON: Niels Schrieken
Invasive species	Global Register of Introduced and Invasive Species GRIIS	All	IUCN Invasive Species Specialist Group ISSG: Shyama Pagad
Invasive species	CIRCULATIONS (Connectivities between Islands Alters Traveling Invasive Seagrasses)	BON	Development and Knowledge Sociology, ZMT: Rapti Siriwardane Mangrove Ecology, ZMT: Lucy Gillis Algae and Seagrass Ecology, ZMT: Inés González Viana

Long Term Projects

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Marine ecosystems	Taxonomy and biodiversity in Lac Bay	BON	STINAPA Sabine Engel, Caren Eckrich Ecosub : Godfried van Moorsel CEAB : Daniel Martin
Marine ecosystems	Marine species discoveries in the Dutch Caribbean	All	Naturalis : Bert Hoeksema CNSI CARMABI
Marine Litter	Clean Coast Bonaire (Citizen science project, OSPAR methodology)	BON	Boneiru Duradero : Sharon Bol, Carolyn Caporusso
Molluscs	Population dynamics and role in the food chain of the Queen Conch <i>Lobatus gigas</i> in the Dutch Caribbean Territories	EUX, SAB, SXM	WUR : Aad Smaal, Leo Nagelkerke, Martin de Graaf Erik Boman (PhD candidate) SCF (SBMU) : Ayumi Kuramae Izioka CNSI
Public Health	DNA waterscan: Monitoring disease vectors in the Caribbean (mosquitoes and midges)	CUR EUX	Naturalis : Klaas-Douwe B. Dijkstra ECPHF : Teresa Leslie CBHRI : Delia-Maria Goilo (NWO DUCAMID project)
Reforestation	Reforestation Project on St. Eustatius	EUX	Mac & Field : Tim van Wagenveld & Stacey Mac Donald STENAPA : Clarisse Buma LVV : Gershon Lopes
Sponges	Bioersion of reefs by coral-excavating sponges	BON,CUR, SAB, EUX	NIOZ : Fleur van Duyl WUR : Erik Meesters, Didier de Bakker (PhD student)
Sponges	The role of sponges as key ecosystem engineers of coral reef ecosystems Pumping iron: can iron availability fuel the sponge loop and affect coral reef community structure? (Misha Streekstra)	CUR	Uva : Jasper de Goeij, Benjamin Mueller CARMABI : Mark Vermeij PhD students : WUR : Misha Streekstra UvA : Sarah Campana*, Meggie Hudspich*, Niklas Korner* * Part of the ERC project "SPONGE ENGINE — Fast and efficient sponge engines drive and modulate the food web of reef ecosystems"

Long Term Projects

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NWO Projects in the Dutch Caribbean			
Bioproducts	Stand-alone production of algal products for food, feed, chemicals and fuels	BON	WUR: R.H. Wijffels CIEE: Rita Peachey
Coral Reef Ecosystems	Caribbean coral reef ecosystems: interactions of anthropogenic ocean acidification and eutrophication with bioerosion by coral excavating sponges - Bioerosion and climate change	BON, SAB, EUX	NIOZ: Fleur van Duyl, Steven van Heuzen (PostDoc), Alice Webb (PhD student) STENAPA CNSI
Coral Reef Ecosystems	Seawater chemistry of CO ₂ system and nutrients as drivers of benthic community structure and carbon metabolism of coral reef ecosystems of different trophic status in the Caribbean	SAB, SABA BANK	NIOZ: Gert Jan Reichart, Lennart de Nooijer, Alice Webb (PhD student) WUR: Didier Bakker
Coral Reef Ecosystems	Benthic-pelagic coupling on coral reefs of the Saba Bank and Saba	SAB, SABA BANK	NIOZ: Fleur van Duyl
Coral restoration	Artificial Reefs On Saba and Statia (AROSSTA)	SAB EUX	VHL: Alwin Hylkema, Marlous Heemstra WUR: Dolfi Debrot STENAPA: Jessica Berkel SCF: Kai Wulf, Aymi Kuramae Izioka CNSI: Johan Stapel Students: Marijn van der Laan, Daniel Heesink, Marit Pistor, Callum Reid, Jan Koschorrek
Environmental	Caribbean island biogeography meets the anthropocene	AUA, BON, CUR, EUX, SXM	VU: Jacintha Ellers, Matt Helmus, Wendy Jesse (PhD. Student), Jocelyn Behm (Postdoc) CNSI

Long Term Projects

CATEGORY	SUBJECT	DC ISLANDS	ORGANIZATION(S): LEAD SCIENTIST(S)
Environmental psychology	Confronting Caribbean Challenges: Hybrid Identities and Governance in Small-scale Island Jurisdictions - Behavioral differences between/within the BES islands when it comes to nature conservation and cultural heritage.	BON, SAB, EUX	KITLV, Leiden University: Gert Oostindie (Project director) KITLV, Leiden University: Stacey Mac Donald (PhD student)
Geosciences	Stability of Caribbean coastal ecosystems under future extreme sea level changes (SCENES) - The effects of climate change on calcifying algae	BON, EUX, SXM	UU: Henk Dijkstra, NIOZ: Peter Herman, Rebecca James (PhD student) TU Delft: Julie Pietrzak STENAPA CNSI
Geomorphological	4D crust-mantle modelling of the eastern Caribbean region: toward coupling deep driving processes to surface evolution - Reconstructing past climate change	EUX	UU: Wim Spakman NIOZ: Lennart de Nooijer Alfred Wegener Institute Germany CNSI
Invasive species	Exotic plant species in the Caribbean: foreign foes or alien allies? (1) Socio-economic impacts of invasive plant species (2) Ecological impacts of invasive plant species	BON, SAB, EUX	(1) UU: Jetske Vaas (PhD student), Peter Driessen, Frank van Laerhoven and Mendel Giezen (2) UU: Elizabeth Haber (PhD student), Martin Wassen, Max Rietkerk, Maarten Eppinga. CNSI
Invasive species	Global defaunation and plant invasion: cascading effects on seagrass ecosystem services	BON	WUR: Marjolijn Christianen, Fee Smulders (PhD student) Smithsonian: Justin Campbell (coordinator Caribbean wide research project), Olivier Kramer STINAPA: Sabine Engel
Reptiles	Ecology and conservation of green and hawksbill turtles in the Dutch Caribbean	AUA, BON, CUR, SAB, EUX, SXM	RuG: Per Palsbøll, Jurjan van der Zee (PhD student) WUR: Lisa Becking, Marjolijn Christianen STCB: Mabel Nava STINAPA CARMABI STENAPA CNSI

Long Term Projects

CATEGORY	SUBJECT	DC ISLANDS	ORGANIZATION(S): LEAD SCIENTIST(S)
Tourism and sustainable development	Vulnerability is dynamic: Enhancing adaptive governance to climate change for Caribbean tourism through interactive modelling	CUR	WUR: Jillian Student, Machiel Lamers UOC: Filomeno A. Marchena
BO-projects in the Dutch Caribbean (Min EZ)			
Coral Reef Ecosystems	BO-43-021.04-003 –Inventory corals Includes monitoring and research of the longest coral reef time-series in the world (since 1973)	BON, CUR	WUR: Erik Meesters
DCBD	BO-43-021.04-001 - Expansion knowledge system Dutch Caribbean	AUA, BON, CUR, SAB, EUX, SXM	WUR (Alterra): Peter Verweij
Environmental Hazards	BO-43-021.04-008 - Sunscreen and risks for coral reefs	BON	WUR: Diana Slijkerman
Fisheries	BO-11-019.02-006 - Fish stocks and fisheries Caribbean Netherlands	EUX, SAB, BON	WUR: Dolfi Debrot CNSI: Kimani Kitson-Walters PiskaBon, STINAPA SCF: Kai Wulf, Ayumi Kuramae, interns: Michael Beekhuizen and Alex van der Last
Marine biodiversity	BO-43-021.04-002 – Saba Bank – Marine biodiversity	SAB	WUR: Erik Meesters (benthic communities), Dolfi Debrot, Thomas Brunel, Leo Nagelkerke (fish stocks)
Marine mammals & sharks	BO-43-021.04-005 – Management plan marine mammal and shark sanctuary Yarari	SAB, EUX	WUR: Dolfi Debrot, Dick de Haan, Meike Scheidat, Ayumi Kuramae Izioka SCF (SBMU): Ayumi Kuramae Izioka
Marine mammals	BO-43-021.04-009 Acoustic monitoring of cetacean distribution	SAB	WUR: Dolfi Debrot, Dick de Haan, Hans verdaat SCF: Kai Wulf, Ayumi Kuramae

Long Term Projects

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Marine mammals	BO-43-021.04-007 –Marine mammals in the Dutch Caribbean	BON, SAB, EUX	WUR: Dolfi Debrot, Dick de Haan, Meike Scheidat
World Heritage nomination	BO-43-021.04-004 – World Heritage nomination Bonaire National Marine Park	BON	WUR: Dolfi Debrot Wolfs Co.: Esther Wolfs UNESCO: Josephine Langley DRO: Frank v Slobbe CARMABI: Mark Vermeij, John de Freitas Curacao Footprint Foundation: Leon Pors
"Nature Funding" Projects in the Dutch Caribbean (Min EZ)			
Coastal ecosystems (Lac Bay: Mangroves and seagrass beds)	Ecological restoration Lac Bay and South coast, Bonaire	BON	STINAPA: Sabine Engel WUR: Klaas Metselaar STCB: Mabel Nava DRO: Frank van Slobbe
Sustainable Agriculture	The sustainable agriculture and rural development program (POP Bonaire)	BON	Bonaire Agri & Aqua Business BV: Sherwin Pourier Wayaká Advies BV: Jan Jaap van Almenkerk DRO: Frank van Slobbe
Invasive species	Feral Pig Control	BON	Echo: Julianka Clarendá DRO: Frank van Slobbe
Reforestation	Reforestation Project	BON	Echo: Julianka Clarendá DRO: Frank van Slobbe
Invasive species	Goat eradication and control in Washington Slagbaai National Park	BON	STINAPA DRO: Frank van Slobbe
World Heritage nomination	World Heritage Nomination Bonaire Marine Park and/or other interconnected sites	BON	Wolfs Company: Esther Wolfs, Boris van Zanten, Amilcar Guzman, Viviana Lujan DRO: Frank van Slobbe

Long Term Projects

CATEGORY	SUBJECT	DC ISLANDS	ORGANIZATION(S): LEAD SCIENTIST(S)
Terrestrial ecosystems	Combating Erosion and Nature Restoration on Bonaire	BON	Bonaire Agri & Aqua Business BV: Sherwin Pourier Wayaká Advies BV: Jan Jaap van Almenkerk DRO: Frank van Slobbe
Terrestrial ecosystems	Cave and karst nature reserve	BON	DRO: Frank van Slobbe CARIBSS: Fernando Simal
Nature communication	Campaign environment and nature on Bonaire	BON	DRO: Frank van Slobbe, Peter Montanus
Agriculture	Horticultral Project	SAB	Government of Saba: Randall Johnson
Recreation	Hiking trails	SAB	Government of Saba: Robert Zagers
Pollution	Tent Reef Protection	SAB	Government of Saba: Robert Zagers
Invasive species	Goat buy-back program	SAB	Government of Saba: Randall Johnson
	Yacht mooring project	SAB	Government of Saba SCF: Kai Wulf
	Saba national park	SAB	Government of Saba SCF: Kai Wulf SABARC: Ryan Espersen
	Crispeen trail project	SAB	Government of Saba: Robert Zagers SCF: Kai Wulf
Community outreach	Nature Awareness project	EUX	Government of St Eustatius STENAPA: Clarisse Buma CNSI: Johan Stapel, Hannah Madden
Nature management	Strengthening management of nature	EUX	Government of St Eustatius STENAPA: Clarisse Buma

Long Term Projects

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Invasive species	Rodent assessment and control	EUX	Government of St Eustatius CNSI: Johan Stapel, Hannah Madden ECPHF: Teresa Leslie
Coral ecosystems	Coral restoration	EUX	Government of St Eustatius STENAPA: Jessica Berkel CNSI: Johan Stapel
Erosion	Erosion control	EUX	Government of St Eustatius CNSI: Johan Stapel
EU-BEST funded Projects in the Dutch Caribbean			
Marine ecosystems	Marine Park Aruba	AUA	Directie Natuur en Milieu: Gisbert Boekhoudt TNO: Kris Kats
Coral Reef Restoration	Pop-Up Nursery and Coral Restoration (Oil Slick Leap)	BON	CRF: Francesca Viridis
Coral Reef Restoration	Restoration Ecosystem Services and Coral Reef Quality (Project RESCQ)	SAB, EUX	WUR: Erik Meesters SCF (SBMU): Ayumi Kuramae Izioka STENAPA: Clarisse Buma Turks & Caicos Reef Fund
Conservation	Watershed & Biodiversity Conservation of Roi Sangu valley	BON	Echo: Julianka Clarenda
Ecosystem services	MOVE, Facilitating MAES (Mapping and Assessing the state of Ecosystems and their Services) to support regional policy in Overseas Europe: mobilizing stakeholders and pooling resources	AUA, BON, SAB, EUX	Fundo Regional para a Ciência e Tecnologia, Portugal (consortium leader) Wolfs Company: Esther Wolfs
Reptiles	Enacting a news regional recovery plan for the Lesser Antillean iguana:an endangered ecological keystone species	EUX	STENAPA: Clarisse Buma
Terrestrial ecosystems	North Saba National Park, Phase I	SAB	Government of Saba: Menno van der Velde SCF: Kai Wulf SABARC, Naturez: Kalli De Meyer Coastal Zone Management: Duncan MacRae

Monitoring Overview

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Birds	Flamingo Abundance	BON	DRO: Frank van Slobbe Cargill STINAPA: Paulo Bertuol
Birds	Monitoring vulnerable parrot nests (remote camera sensing work)	BON	Echo: Julianka Clarenda, Sam Williams
Birds	Yellow-shouldered Amazon parrot roost counts	BON	Echo: Julianka Clarenda DRO: Peter Montanus STINAPA: Albert Christiaan
Birds	Bird Monitoring (Caribbean Waterbird Census)	BON SXM	STINAPA: Paulo Bertuol EPIC: Adam Brown
Birds	Tern monitoring (artificial nesting islands)	BON	STINAPA: Paulo Bertuol Cargill DRO WUR: Dolfi Debrot
Birds	Terrestrial Bird and Habitat Monitoring	BON CUR SAB SXM EUX	Echo: Julianka Clarenda STINAPA: Paulo Bertuol, Caren Eckrich STENAPA Curassavica: Michelle da Costa Gomes Nature Foundation: Binkie van Es
Birds	Red-billed Tropicbird monitoring	SAB EUX	STENAPA SCF: Kai Wulf
Birds	Pelican monitoring	SXM	NFSXM: Melanie Meijer zu Schlochtern
Coral reef ecosystems	Global Coral Reef Monitoring Network	BON CUR SAB EUX SXM	STINAPA: Caren Eckrich CARMABI: Mark Vermeij SCF (SBMU): Ayumi Kuramae Izioka STENAPA: Jessica Berkel NFSXM: Tadzio Bervoets CNSI: Johan Stapel, Kimani Kitson-Walters

Monitoring Overview

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Coral reef ecosystems	Monitoring and research of the longest coral reef time-series in the world (since 1973) (Part of BO-11-019.02-022 –Inventory corals)	BON CUR	WUR: Erik Meesters, Didier de Bakker (PhD student) NIOZ: Fleur van Duyl, Rolf Bak
Environmental	Water quality testing	SXM	NFSXM: Tadzio Bervoets EPIC: Natalia Collier
Environmental	Nutrient (phosphate, ammonium, nitrate and nitrite) monitoring of St Eustatius' coastal waters	EUX	CNSI: Johan Stapel
Fish	Shark monitoring: -Shark sightings - Shark Abundance, distribution and movements (tagging, acoustic telemetry)	AUA BON CUR SAB SXM EUX	WUR: Erwin Winter, Dolfi Debrot, Martin de Graaf FPNA: Giancarlo Nunes STINAPA: Caren Eckrich CARMABI: Mark Vermeij SCF(SBMU): Ayumi Kuramae Izioka, Guido Leurs STENAPA: Jessica Berkel NFSXM: Tadzio Bervoets
Fish	Spawning monitoring: Red hind surveys on Moonfish Bank	SAB	SCF (SBMU): Ayumi Kuramae Izioka
Fish	Fish and fishery monitoring (Barracuda's, sharks and eagle rays, tarpons, marine mammals, (fishing) boats, fisherman)	BON	STCB: Mabel Nava
Insects	Bee tracking	BON	Echo: Julianka Clarenda
Invasive species	Goat and/or donkey removal: -Washington Slagbaai National Park - Lac Bay area (exclusion plots) - Quill National Park (exclusion plots)	BON EUX	STINAPA: Paulo Bertuol WUR: Dolfi Debrot DRO: Frank van Slobbe STENAPA
Invasive species	Lionfish abundance and control	BON CUR SXM SAB EUX	STINAPA: Paulo Bertuol (50 meter traps) CARMABI: Mark Vermeij NFSXM: Tadzio Bervoets SCF (SBMU): Ayumi Kuramae Izioka STENAPA: Jessica Berkel
Invasive species	Feral pig population assessment (trapping)	BON	Echo

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Mammals	Bat monitoring	AUA BON	FPNA WildConscience: Fernando Simal, Linda Garcia
Mammals	Dolphin monitoring (since 1999)	BON	Ron Sewell
Mammals	Marine Mammal Monitoring (noise loggers Saba Bank)	AUA SAB EUX SXM	WUR: Dick de Haan, Dolfi Debrot SCF (SBMU): Ayumi Kuramae Izioka AMMF: Angiolina Henriquez STENAPA: Jessica Berkel (sighting forms) NFSXM: Tazio Bervoets (sighting forms) SCCN
Molluscs	Conch (<i>Strombus gigas</i>) on St. Eustatius, Saba Bank, Anguilla	SAB EUX	WUR: Martin de Graaf, Erik Boman (PhD student) SCF (SBMU): Ayumi Kuramae Izioka
Plants	Monitoring of tree growth and survivorship in reforestation areas	BON	Echo: Juliana Clarenda
Reptiles	Lesser Antillean Iguana: Monitoring population density & removing invasive Green Iguana and hybrids (Mohamed bin Zayed Species Conservation Fund)	EUX	STENAPA: Clarisse Buma RAVON: Tim van Wagensveld UvA: Thijs van den Burg
Reptiles	Boa and Cascabel Monitoring	AUA	FPNA Toledo Zoological Society: Andrew Odum
Reptiles	Red-bellied racer snake monitoring	EUX	CNSI: Kimani Kitson-Walters
Reptiles	Behavior of the endemic Aruban Whiptail lizard	AUA	FPNA, Auburn University: Jeff Goessling
Seagrass and mangrove ecosystems	Seagrass and mangrove monitoring (BON: also conch and benthic fauna)	BON EUX SXM	STINAPA: Sabine Engel, Caren Eckrich WUR: Klaas Metselaar NFSXM: Tazio Bervoets CNSI: Kimani Kitson-Walters
Reptiles	Sea turtle monitoring: -Satellite tracking -Nest monitoring -In water surveys (BON, CUR, SXM) -Fibropapillomatosis presence (BON)	AUA, BON, CUR, SAB, EUX, SXM	TurtugAruba Foundation STCB: Mabel Nava CARMABI (STCC): Sabine Berendse STENAPA: Jessica Berkel, SCF: Kai Wulf NFSXM: Tazio Bervoets