

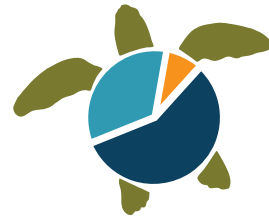
BONAIRE TURTLES BY THE NUMBERS

STCB YEAR REPORT 2019



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BONAIRE TURTLES BY THE NUMBERS STCB YEAR REPORT 2019



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Editorial design: **bonsai**

Text: Kaj Schut & Fernando Simal.

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CALL OUR DEDICATED

HOTLINE: +599 780-0433

SAVE A SEA TURTLE!

Report any problems and also please call us if you see or have seen people harassing sea turtles.

WE'RE ON A MISSION!

Sea Turtle Conservation Bonaire's mission is to ensure that Bonaire's sea turtles have a secure future, and to connect people to sea turtle conservation in ways that inspire caring for nature.



GOOD FOR TURTLES, GOOD FOR HUMANS

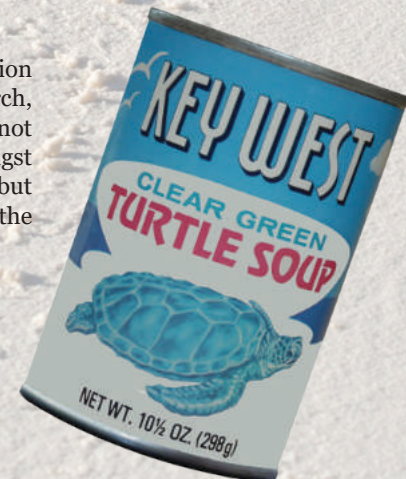
Just like our community, sea turtles on Bonaire can only thrive when our ecosystems are healthy. That's why STCB addresses issues that directly affect sea turtles as well as biodiversity in general and social well-being on our island.



RESHAPING TRADITIONAL CULTURAL VALUES

Almost three decades of sea turtle conservation on Bonaire, including scientific research, monitoring, education and advocacy, has not only resulted in increased awareness amongst the local community and island visitors, but has also led to their direct involvement in the protection of sea turtles.

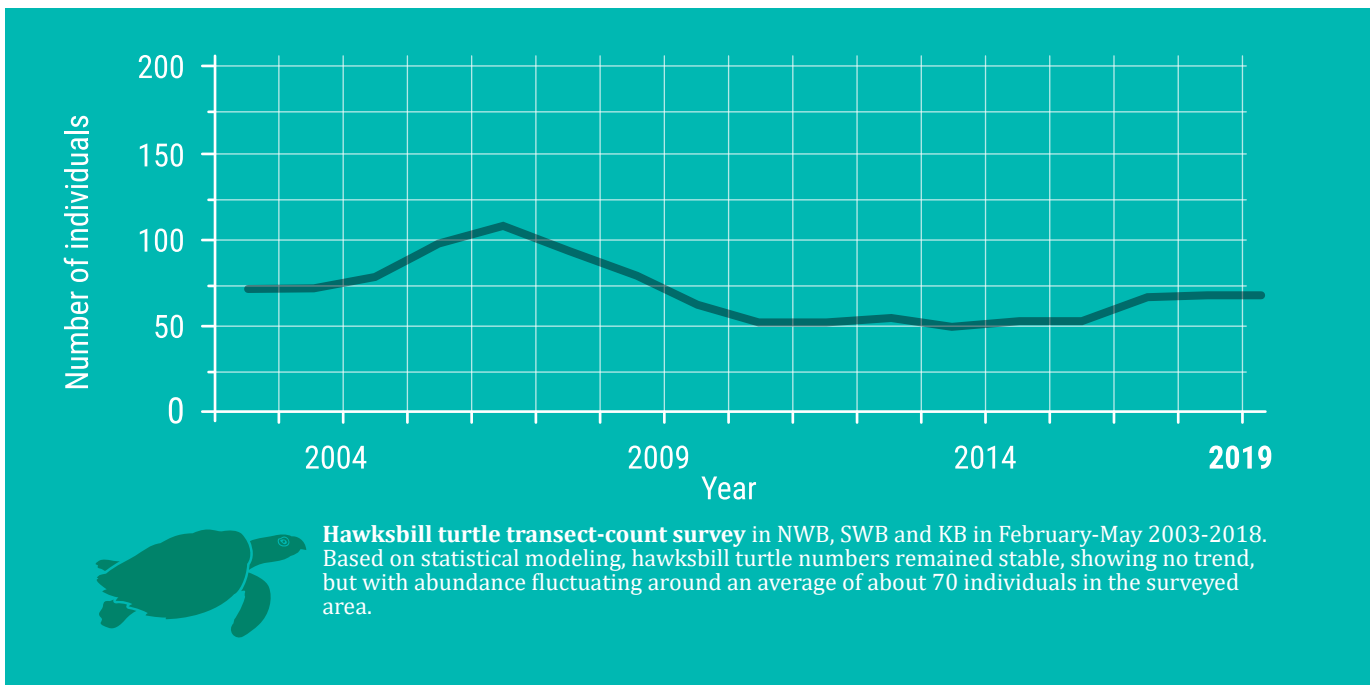
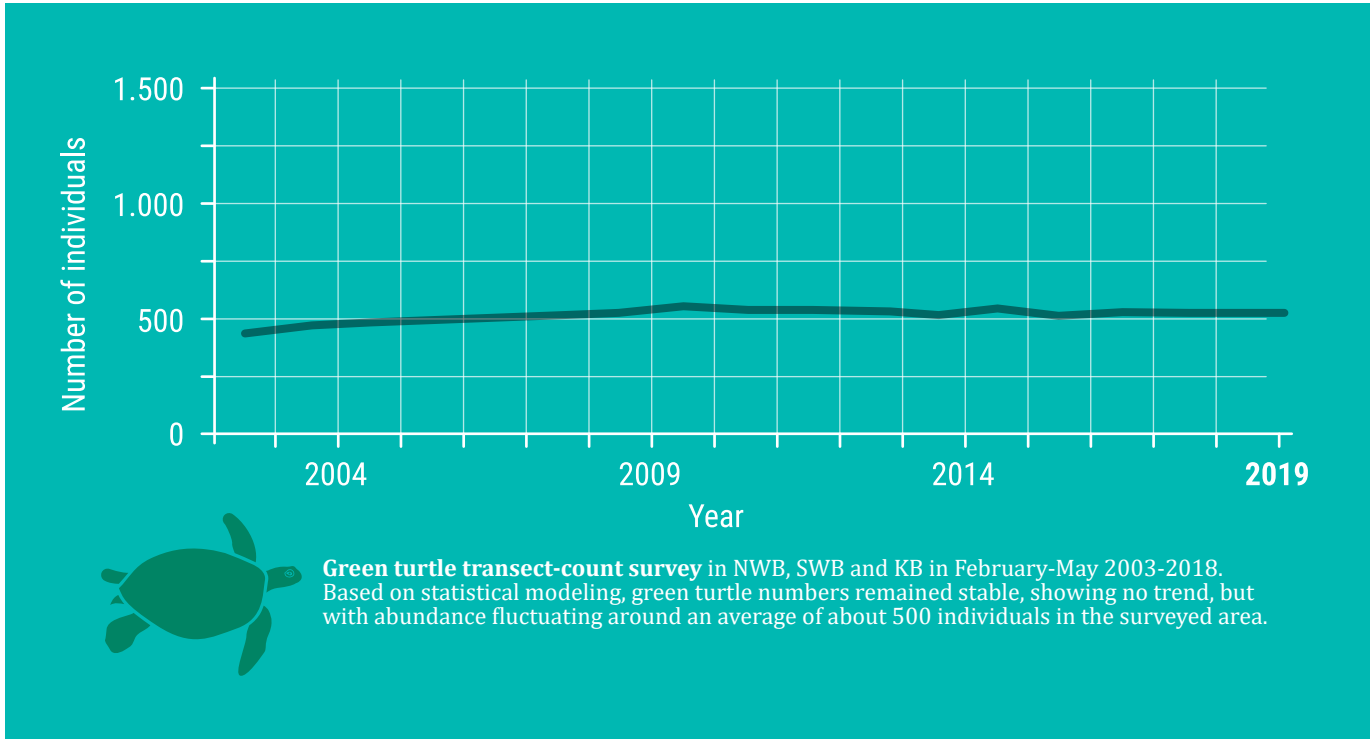
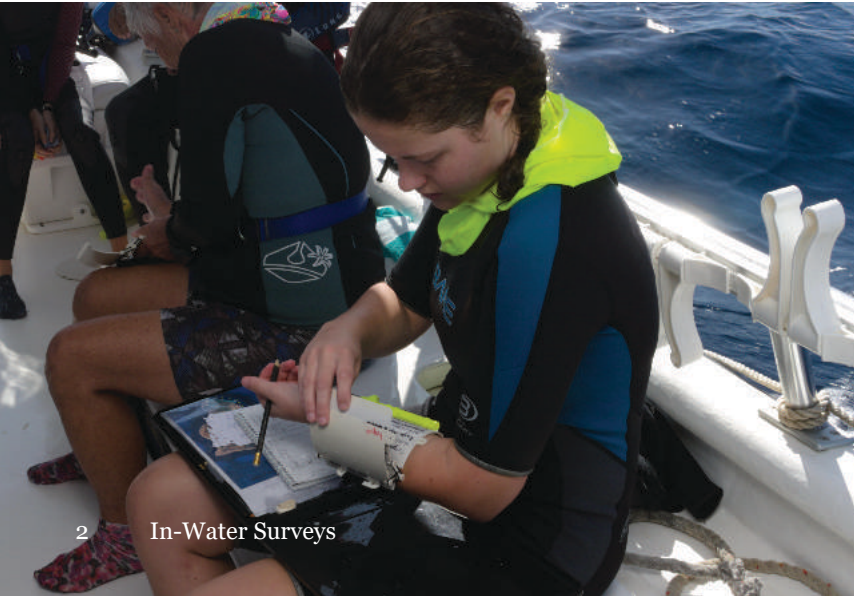
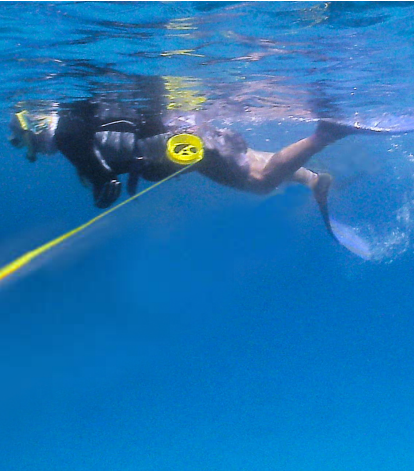
Fortunately for the turtles, this particular exotic meat fad didn't last long. Unfortunately for the turtles, the overharvesting of these shelled reptiles in the past is why they are still threatened with extinction today.

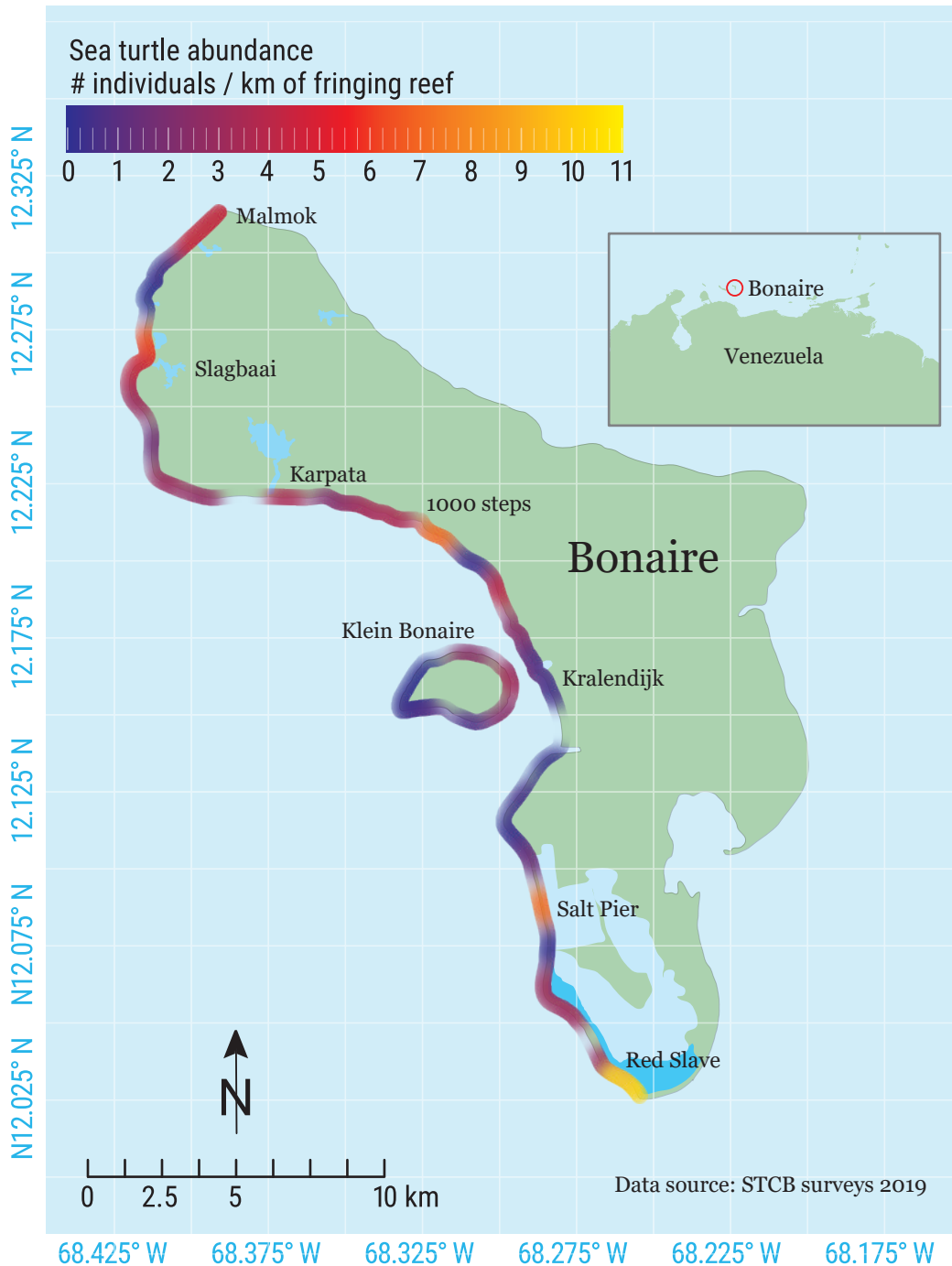


THE JOB

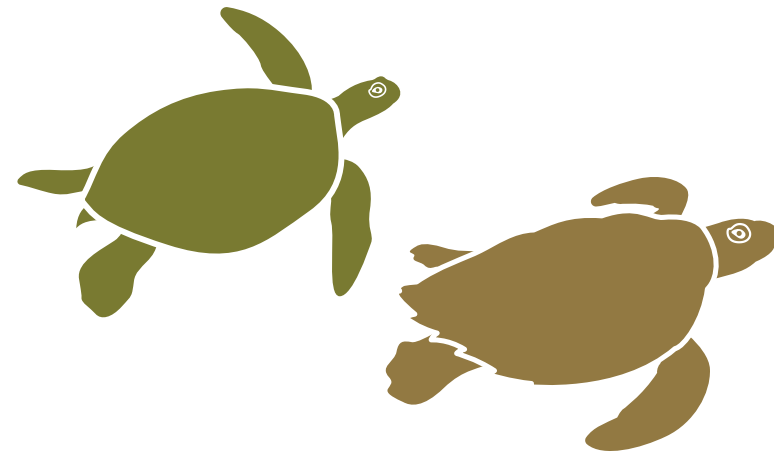
In-water surveys are one of the scientific methodologies that we use to collect data on resident populations of green and hawksbill sea turtles. This data allows us to estimate yearly sea turtle abundance and long-term population trends. In 2019, these surveys were conducted on the west coast of Bonaire and around Klein Bonaire by STCB staff and volunteers.

**1,008
KM SWAM**
7 OBSERVERS X 144 X 1-KM TRANSECTS





HOW MANY TURTLES LIVE ON BONAIRE?



555
GREEN TURTLES

70
HAWKSBILL TURTLES

**@ WEST BONAIRE
& KLEIN BONAIRE**

Based on a solid data set of 16 years, cutting-edge field methodology, data analysis and modeling, STCB estimates sea turtle abundance to be 555 green and 70 hawksbill turtles along the west coast of Bonaire and around Klein Bonaire. There is no trend for green and hawksbill turtles in western Bonaire. Clearly, the east coast of Bonaire still needs to be surveyed and STCB is working out the logistics of this challenging task for 2020.

BIODIVERSITY AND COMMUNITY

To address other biodiversity and social issues, STCB also collects data on species that are important for our local fishing community and the coral reefs, the base of our economy. For instance, in 2019 we collected population data on barracudas, rainbow and midnight parrotfish, sharks and rays.

65.5
Rainbow Parrotfish

13.25
Tarpon

174
Barracuda

8.75
Eagle Ray

Average number of individuals
observed per round of surveys
@ West coast of Bonaire & Klein Bonaire.

3.25
Shark

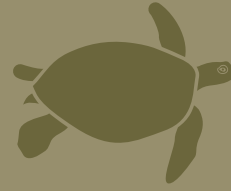
CAPTURE-TAG-RECAPTURE

Recapture(s) of individually marked sea turtles provide us with valuable information for their conservation. This includes growth rate, approximate age, presence/absence of disease, human and/or natural induced injuries and overall health of the resident population. Additionally, by taking DNA samples of captured turtles, we get a better insight in the distribution and composition of Caribbean Sea turtle populations.

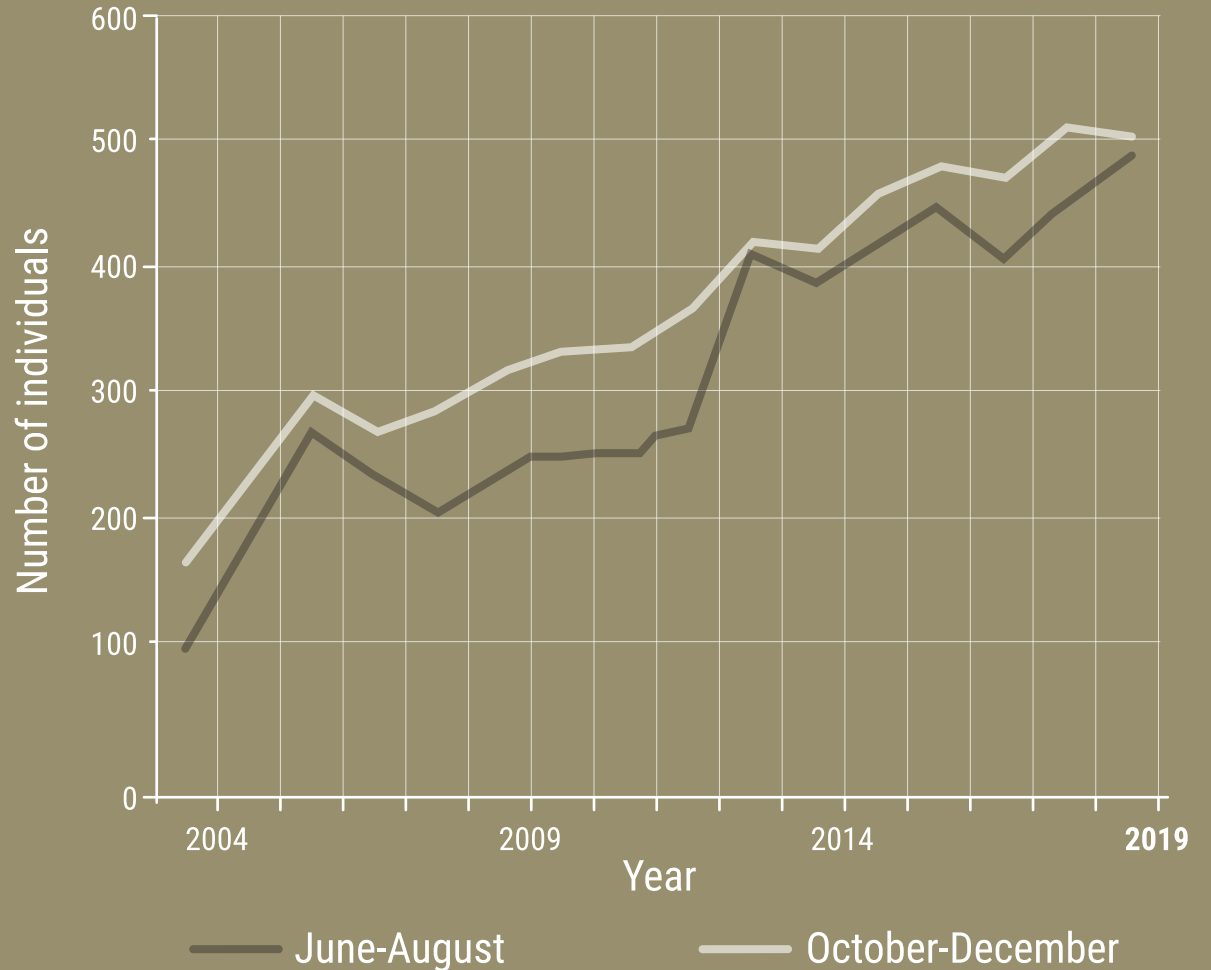
9.6
KM OF DEPLOYED NET

768
MAN HOURS IN WATER

>3,300
TAGGED TURTLES AS OF 2019



Green turtle net-capture surveys inside Lac Bay between 2003 and 2018. Based on statistical modeling, green turtle numbers increased, showing a significant trend, with abundance reaching about 500 green turtles in 2018.



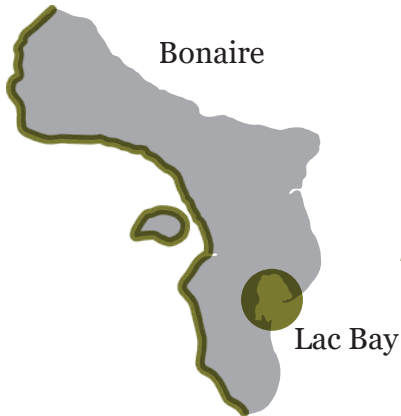
SAFETY FIRST: Due to hazardous conditions to human health associated with the influx of sargassum in Lac Bay in June, STCB could not collect sufficient data in 2019 to compare population numbers with previous years. We suspect the putrefaction of dead organisms in the large amount of sargassum that entered the bay to be the cause of these hazardous conditions.

LAC BAY #1 FEEDING GROUND IN BONAIRE!

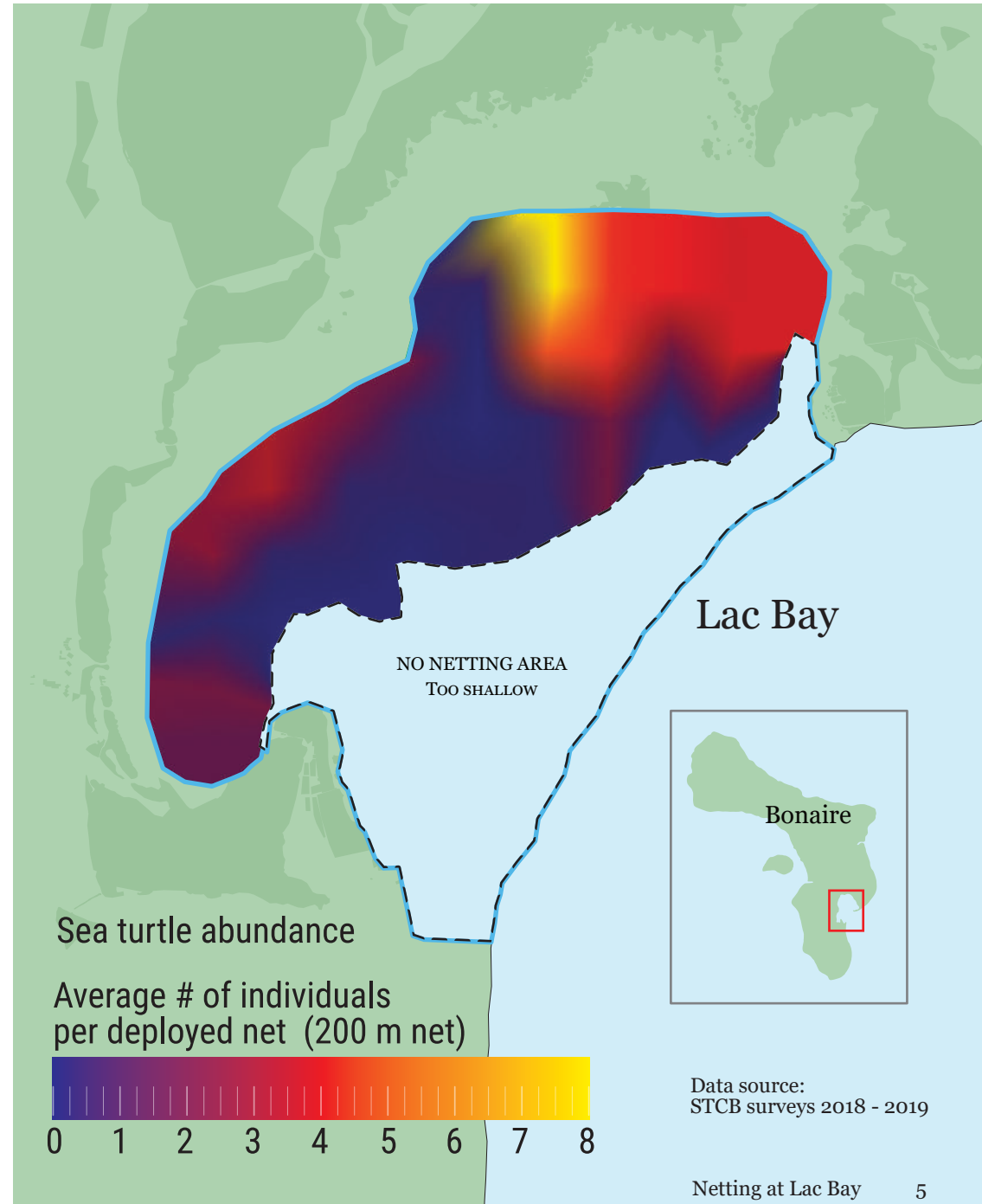
Bonaire is a developmental habitat for green and hawksbill sea turtles, meaning that juveniles and sub-adults permanently forage in our waters. The area on Bonaire with the highest density of green sea turtles is Lac Bay, a shallow lagoon on the east coast and also the biggest Ramsar site on the island. This bay is an exceptional habitat for our foraging sea turtles. Our capture-tag-recapture research from the last five years shows that green turtles in Lac Bay grow an average of 5.65 centimeters per year, compared to 2.44 centimeters for green turtles on the west coast. Green sea turtles reach sexual maturity between the ages of 25 and 40 years, when their carapaces are 76 - 91 centimeters in length.



2.44
ANNUAL AVERAGE GROWTH IN CM
OF GREEN TURTLES AT WEST COAST

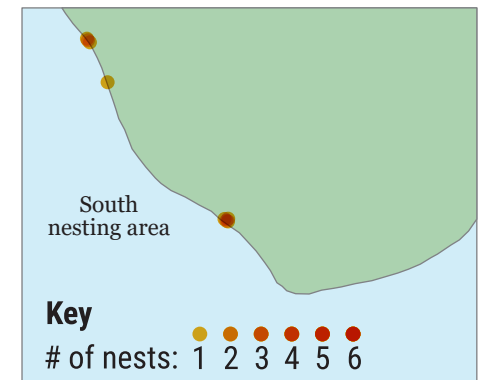
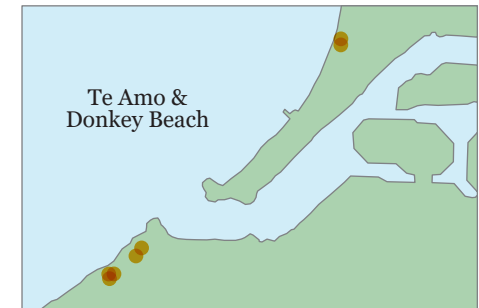
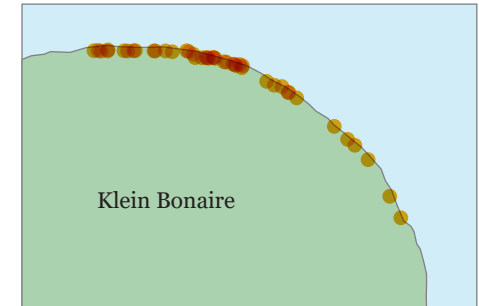
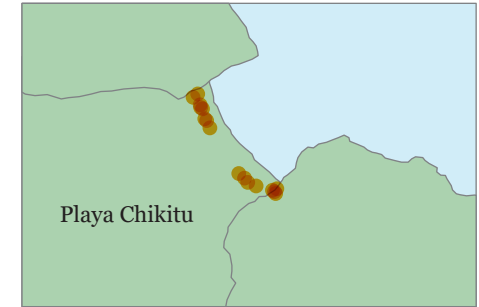
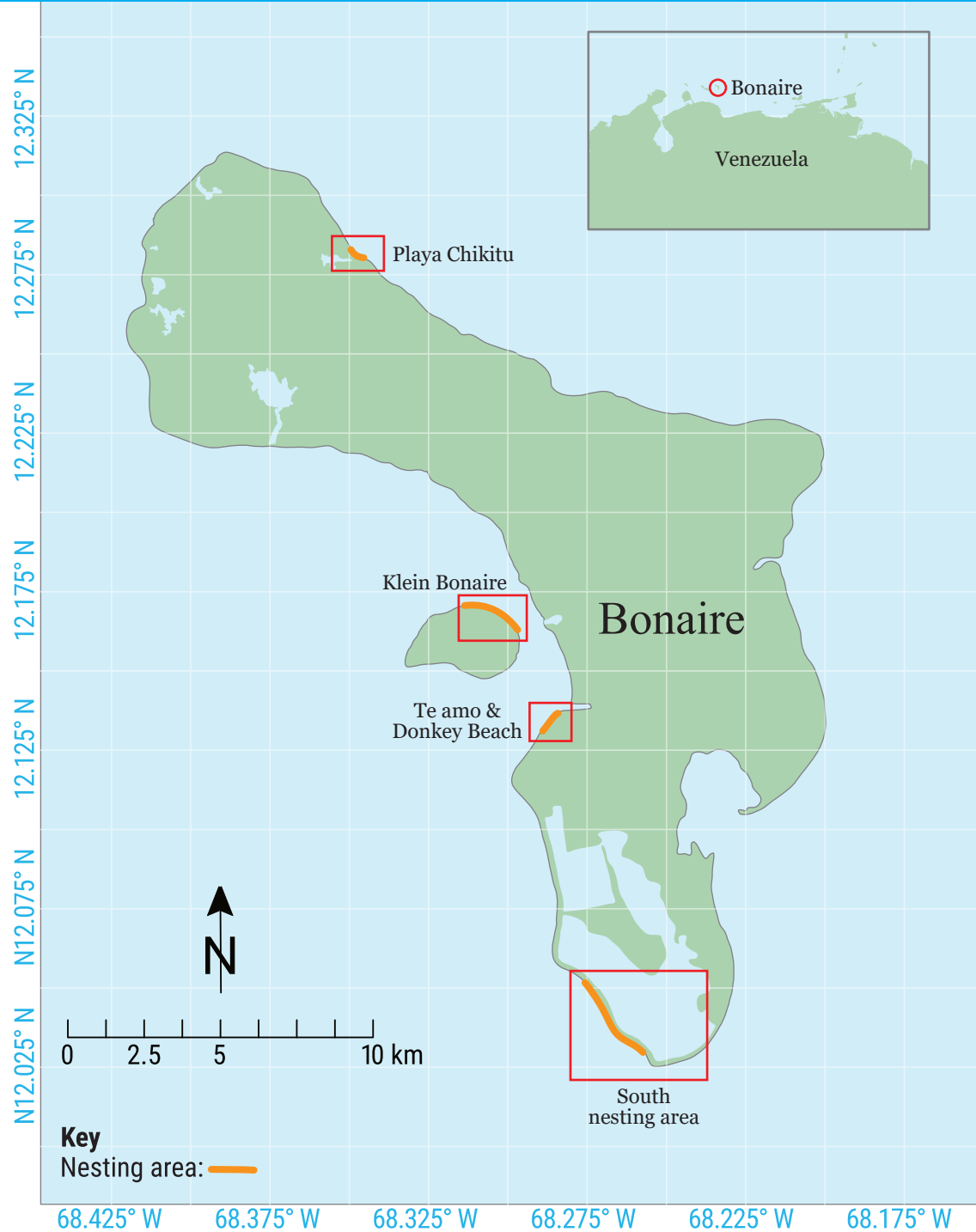


5.65
ANNUAL AVERAGE GROWTH IN CM
OF GREEN TURTLES AT LAC BAY



THE JOB

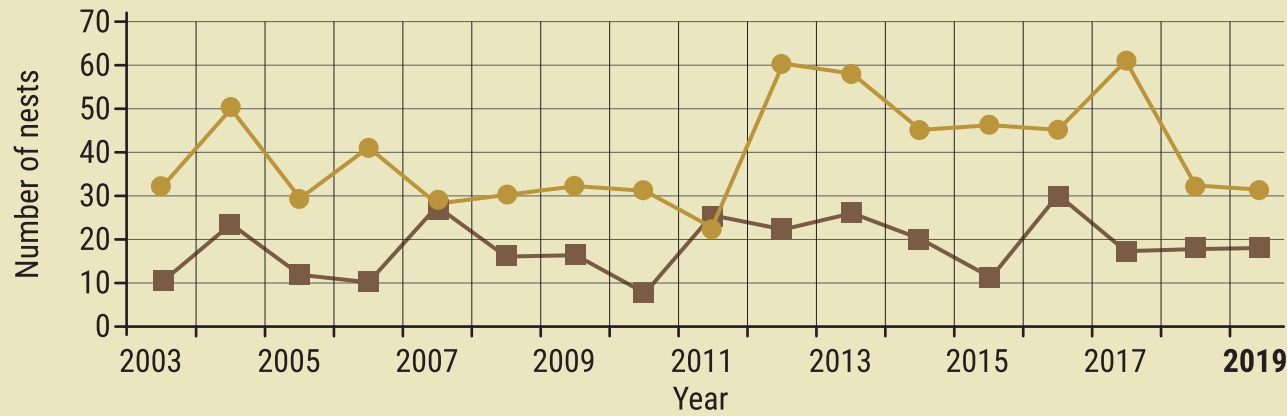
Between May and December, every morning staff and volunteers patrol the beaches most used by nesting turtles to record activities, including false crawls (unsuccessful nesting attempt, no eggs laid), confirmed nests (eggs were located) and suspected nests (eggs could not be observed, but site disturbance suggests that a nest was laid). Finally, after each hatching event, the nest is excavated and an inventory of the contents is made to calculate hatching success.





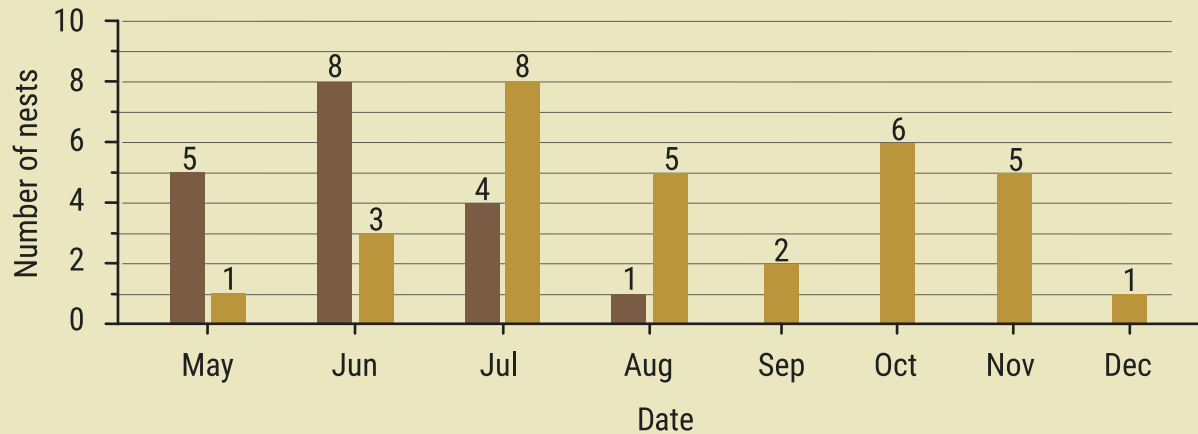
TRENDS

The long-term trend in nesting for both hawksbills and loggerheads remain stable and continue to suggest that the populations are fluctuating around an average of 18 nests for loggerheads and 40 nests for hawksbills on our index beach.



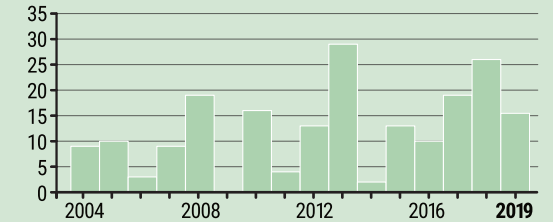
Number of hawkbill and loggerhead turtle nests found in Klein Bonaire's No Name Beach between 2003 and 2019.

■ Loggerhead ● Hawkbill

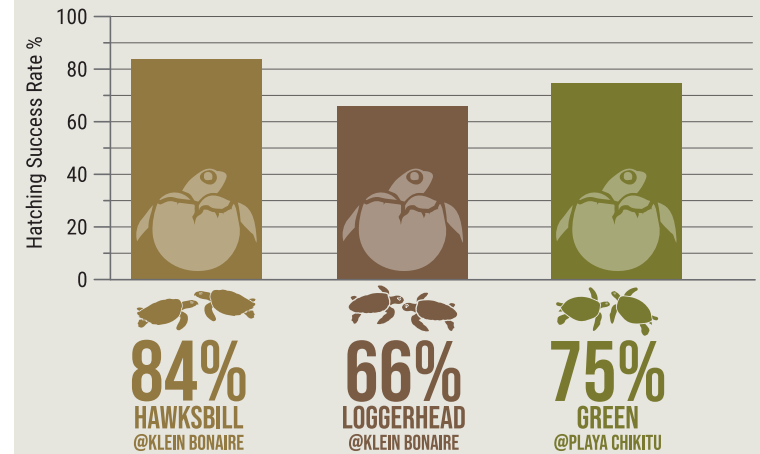


Bar plot of standardized searches in Klein Bonaire's No Name Beach resulted in 31 hawkbill turtle nests and 18 loggerhead turtle nests found between May and December 2019.

■ Loggerhead ■ Hawkbill



Number of green turtle nests recorded on Bonaire & Klein Bonaire, 2004-2019



Average hatching success rate



Average number of eggs per nest



TRAVELING ABROAD

Sea turtles are migratory throughout their entire life. The information received from the satellite transmitters provides valuable insight into the turtles' foraging and breeding habits. Identifying sea turtles' migratory routes and distant foraging grounds also aids understanding the regional patterns of the species and provides valuable information in support of regional strategies for conservation.

3,135
MAX DISTANCE IN KM
TRAVELED BY A SINGLE TURTLE
(RANGE: 197-3,135 KM)



10

OF COUNTRIES
VISITED BY TURTLES
WITH TRANSMITTER

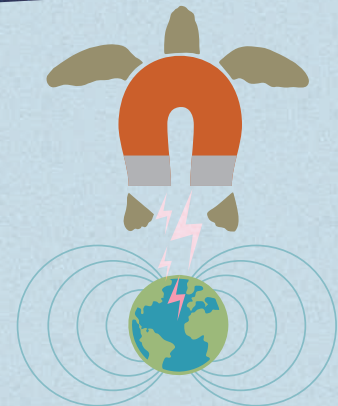


26

SATELLITE TRANSMITTERS
PLACED BY STCB

MAGNETIC CUES

Studies with young sea turtles suggest that a turtle's navigational skill involves **magnetoreception** — the **ability to detect the Earth's magnetic field**. The Earth's field is one of several cues that guide newly hatched turtles. Farther out to sea, magnetic fields unique to different geographic areas function as navigational markers. Older juveniles learn the magnetic topography of the area where they live and develop 'magnetic maps' which permit navigation toward specific target areas. A recent study has confirmed for the first time that adult turtles, like hatchlings and juveniles, **use the Earth's magnetic field to guide their movement**.



SPREADING THE MESSAGE

Each year, STCB organizes a minimum of 24 public presentations and workshops to educate the general public, volunteers and schoolchildren about endangered sea turtles and their habitats. An essential part of endangered species conservation is simply to help people to understand the species and their importance, not only to their habitat, but to our lives as well.

31
PUBLIC PRESENTATIONS
IN 2019

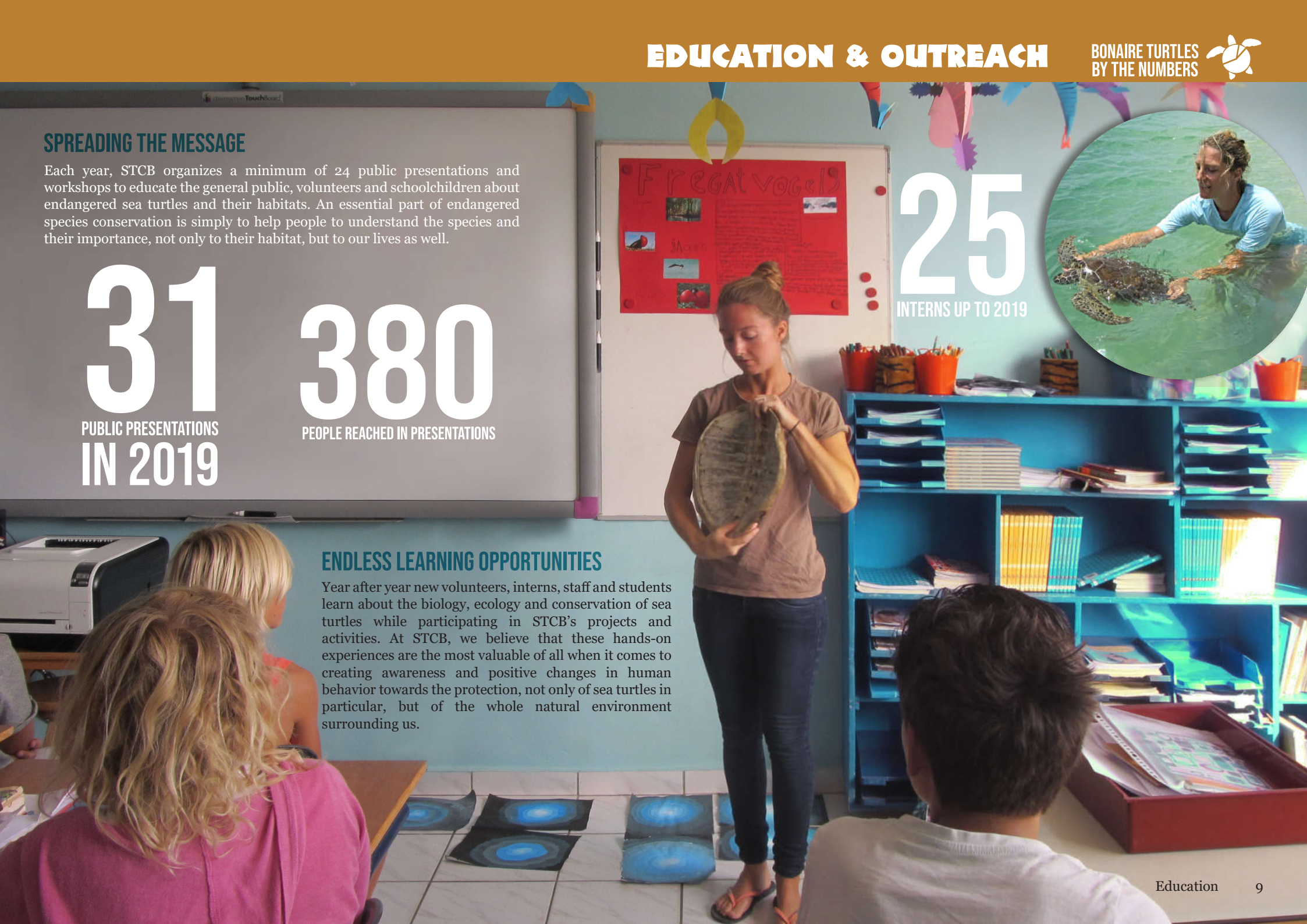
380
PEOPLE REACHED IN PRESENTATIONS

25
INTERNS UP TO 2019



ENDLESS LEARNING OPPORTUNITIES

Year after year new volunteers, interns, staff and students learn about the biology, ecology and conservation of sea turtles while participating in STCB's projects and activities. At STCB, we believe that these hands-on experiences are the most valuable of all when it comes to creating awareness and positive changes in human behavior towards the protection, not only of sea turtles in particular, but of the whole natural environment surrounding us.



GLOBAL THREATS



The International Union for the Conservation of Nature (IUCN) has identified five major hazards to sea turtles: fisheries bycatch, direct take, coastal development, pollution in the form of plastics /discarded fishing gear and, of course, climate change.

LOCAL THREATS

The most serious challenges facing Bonaire’s sea turtles are not direct threats like fisheries. Instead, they are indirect and mostly related to a rapidly increasing human population and, consequently development. These indirect threats to sea turtles are also the major hazards to Bonaire’s rich ecosystems, biodiversity, and our quality of life.

SIX LUCKY SEA TURTLES

2019 was a lucky year for six sea turtles on Bonaire. Two of them were saved/rescued by fishermen and one by kite surfers. These individuals were freed from their entanglement with the cooperation of STCB staff and escaped a certain awful death either by drowning or starvation. A huge thanks to all the people that reported entangled and/or injured sea turtles in 2019!



**6
RESCUED**

TOO MANY “NOT-SO-LUCKY” TURTLES

Unfortunately, we also had a total of 6 juvenile and adult sea turtles dying in Bonaire waters during 2019. Main causes include boat strikes and entanglement. Additionally, we had a curious case of a decapitated sea turtle which we can only explain at this point as a foil surfing accident. Yet, we cannot be certain of this being the cause.



**6
DEATHS**

INTERNATIONAL PARTNERS

Wider Caribbean Sea Turtle
Conservation Network (WIDECAST)
World Wildlife Fund Netherlands (WWF-NL)

REGIONAL/RESEARCH PARTNERS

CARMABI (Curaçao)
Dutch Caribbean Nature Alliance (DCNA)
Groningen University
Loggerhead Marinelifelife Center
Nature Foundation St. Maarten
Parke Nacional Arikok (Aruba)
Saba Conservation Foundation
Sea Turtle Conservation Curacao
St. Eustatius National Parks Foundation
Turtugaruba
Wageningen University

LOCAL PARTNERS

Bonaire Department of Environment
and Natural Resources (DRO)
Echo Bonaire
EZ Ministry of Economic Affairs
Jong Bonaire
NGO Platform
Openbaar Lichaam Bonaire (OLB)
STINAPA Bonaire
WILDCONSCIENCE B.V.

LOCAL BUSINESS PARTNERS AND SUPPORTERS

These businesses provide ongoing support to STCB programs and activities through the donation of in-kind materials and/or services:

Administratiekantoor Brandaris
Adventure Makers Bonaire
Beyond the Corals
Bonaire Marine Center B.V.
Bonaire East Coast Diving
Carib Inn (Bruce Bowker)
Cargill Salt Bonaire
Coral Paradise
Dive Friends Bonaire
Div'Ocean
Elements
Harbour Village Beach Resort
Harbour Village Marina
Mangrove Info Center
Nautico Marina
Nos Consuelo
SELIBON
VIP Diving
Wil's Grill

2019 VOLUNTEERS

BEACHKEEPER PROGRAM VOLUNTEERS

Aja Radl & Scott Gilchrist, Andrea Merino, Angela Ditters, Annabelle Feuerstein, Astrid Roedoe, Bill & Bunny Horton, Brigitte Boekhoudt, Bruce and Karen Zavan, Carine Van Riel-Murijn, Catrien van Manen, Chantal van Balen, Ger Bakker, Gerdijanne Leestemaker, Hans & Jannie Koning, Hellen Volmerink, Linda Maas, Lizette Navantieri, Loek & Vera Maartens, Lothar A Schwarte, Marian Sonneveldt, Marianne Scholtz, Nicole & Noa Roomer, Paul Berezinski, Paul & Emma Turner, Rob Hulsbergen, Sue O'Brien, Viktor Wijnand, Wouter van Rossum.

FISHING LINE PROJECT CORE VOLUNTEERS

Hans & Jannie Koning

IN-WATER SURVEY/NETTING VOLUNTEERS

Aja Radl, Angelica Byrne, Anna Karlsson, Annabelle Feuerstein, Bill & Bunny Horton, Brenda Free & John Magruder, Chantal van Balen, Daan Zeegers, Dahlia Hassell, Dasha Wels, Dianna Rybak, Fernando Simal, Ger Bakker, Hans & Jannie Koning, Hettie Holian, Hilde Bakker, Jenna Fletcher, Jim Cooke, Jon, Julia van Duijnhoven, Lucia Poggi, Mignon & Bas, Patti Dougherty, Rob Hulsbergen, Samantha Tse, Scott Gilchrist, Scott Johnson, Sharon Gelmers, Sophie Zeegers, Sue O'Brien, Yvon.

OFFICE & PRESENTATION VOLUNTEERS

Audrey Zamkow
Hans & Jannie Koning
Loek Maartens

60
PRESENTATION
HOURS

2016
IN WATER SURVEYS HOURS

1622
NEST MONITORING HOURS

768
NETTING HOURS

120
CLEANUP HOURS

= 4,586
TOTAL VOLUNTEER HOURS

STCB is a non-profit, non-governmental organization. We raise funds through conservation and research grants and contracts, merchandise sales and from individual and business donors.

FLAGSHIP FUNDER 2008 – 2019

Since 2008, **WWF - Netherlands** has been the flagship funder for STCB's sea turtle conservation work on Bonaire.



MAJOR FUNDERS



Ministry of Economic Affairs
and Climate Policy



Blue Jay bv

PLATINUM FUNDERS/DONORS [\$1000+]

Barbara Chu
Blue Jay Holding B.V.
Casa Presioso
Cargill Salt Bonaire
ContourGlobal Bonaire
Dive Friends Bonaire
Gijs, Mieke, Daan, Sam & Florine Botman
Parrot Island Divers
Rob Hulsbergen

GOLD FUNDERS/DONORS [\$500 - \$999]

Administratiekantoor Brandaris
Alain de Brouwer & Dinska Dohmen
Best Cellars Bonaire
Bonaire Office Systems
Brave Water Foundation
Bruce Brabec & Marlene Robinson
Buts Technical Consultancy
Cadushy Distillery
Dan & Christine Fisher
dNM Interim
Doris & Martin Elle
Dr. Robert Andrew Rutherford Trust
Hamlet Oasis Resort
Harbour Village Beach Resort
Harbourtown Real Estate
HVK Stevens
International Tax Advisors BV
Jim & Judy Kewley
Joan & Alan Zale
Labor Omnia Vincit BV
Loek & Vera Maartens
Michael & Anne Contratto
Moon Tower
Mrs. Van Lede
Nagico Insurances
Nederlands-Belgische
Schildpaddenvereniging
Patricia Coe
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RE/MAX Paradise Homes
Sand Dollar Ca'nesta'
Sand Dollar Turtle Lovers Club 1
Sand Dollar Turtle Lovers Club 2
Sunbelt Realty Bonaire
Sundhevy & Stijn
The Laughing Seahorse
Villa Kiki
VIP Diving
Wadyckis Family

SILVER DONORS [\$100 - \$499]

Anja Siegert
Barbara Larkin
Basic Bars Soap LLC
Claude Caron
Christopher Merton
Devon Beaupre
Family Gehlen
Growth Consultants
Jennifer Patterson
Jenny Stewart
Moira Goulmy
Paul Hoetjes
Peter Ollendorf
Robert & Simone
Scott & Carole Johnson
Thorsten Albrecht

BRONZE DONORS [\$50 - \$99]

Alan Scott
Barbara Richardson
Bonnie Severine
Damian Sprangers
Greg & Rachelle Oppenhuizen
Eelke & Anje van Kleffens
Jackie Christerson
Jan, Paul, Derk, Hans & Hans
Kevin & Sue O'Brien
Lea Diem
Lindsey Johnson
M. Liedorp
Marcus Ollinger
Marinus de Wilde
Simone Penders
Anonymous donors

DONATE

STCB SHOP

Available only on Bonaire, STCB clothing is made from soft, earth-friendly 100% organic cotton & recycled plastic bottles. STCB pendant necklaces are made from bone, beach seed & horn. They are the product of artisans in Costa Rica & Bonaire.



TEES - HATS - NECKLACES

You can buy original STCB T-shirts, research hats and jewelry at the Mangrove Info Center, Dive Inn, VIP Diving, Dive Friends Bonaire Retail Store, Harbour Village Beach Club, Dive Friends @Courtyard by Marriott, Delfins Beach Resort and at our office. Because these businesses donate their retail services, 100% of the profits from every STCB item you buy go directly to sea turtle conservation.

Our office is open on weekdays between 9:00 a.m. and 5:00 p.m.
We are located at Kaya Korona 53, Kralendijk, Bonaire,
Caribbean Netherlands.

You can help protect Bonaire's sea turtles by donating to STCB. We welcome – and depend on – the financial support of people like you.

YOU CAN MAKE A DIFFERENCE!

Whether it's \$5, \$100, or \$5,000, whatever you give makes an important difference. 100% of funds received online will go directly to the protection of Bonaire's endangered sea turtles (only the Paypal fee will be deducted).

Your donation will help fund the following programs: nest monitoring, in-water surveys, clean-up events, turtle rescues, education and awareness pro-grams, training, advocacy and satellite tracking.

DUTCH CHARITABLE STATUS

As of January 1st 2015, the Dutch Tax Service (Belastingdienst) has granted to Sea Turtle Conservation Bonaire ANBI status. ANBI status also favors STCB's Donors in countries that grant tax concessions to foreign registered charities, as well as those based in the Netherlands. Donors who have made a donation to STCB may be able to deduct the amount from taxable income.

[More information regarding STCB's ANBI status here.](#)

WAYS TO DONATE

DONATE ONLINE THROUGH PAYPAL

Please be advised that donations to STCB are processed via PayPal by Dutch Caribbean Nature Alliance (DCNA) of which STCB is a member.

DONATE BY BANK TRANSFER

BANK TRANSFER ON BONAIRE

Maduro & Curiel's Bank Bonaire
Account name: Sea Turtle
Conservation Bonaire
Account number: 101169209

BANK TRANSFER IN USD OUTSIDE BONAIRE

Beneficiary: Sea Turtle
Conservation Bonaire
Account number: 101169209
Beneficiary Bank: Maduro &
Curiel's Bank Bonaire
Swift code: MCBKBQBN
Correspondent Bank: Standard
Chartered Bank
Aba # 026002561
Swift Code: SCBLUS33

BANK TRANSFER IN EUR FROM THE NETHERLANDS

Beneficiary: Sea Turtle
Conservation Bonaire
Account number: NL71 RABO
0313 2425 26
Beneficiary Bank: Rabobank

BANK TRANSFER FROM EUROPE

Beneficiary: Sea Turtle
Conservation Bonaire
Account number: 101.169.209
Beneficiary Bank: Maduro &
Curiel's Bank (Bonaire) N.V.
Address: Kaya L.D. Gerharts #81
City: Kralendijk
Country: Bonaire, Caribbean
Netherlands
Telephone number: +599-715-
5520
Fax number: +599-717-7249
Swift code: MCBKBQBN
Correspondent Bank for Euro:
Ing Belgium SA NV
City: 24 Avenue Marnix, B-1000,
Brussels
Country: Belgium
Swift Code: BBRUBEBB

When making a direct transfer, please mention your e-mail address in the comments as we would like to thank you for your donation.

ADOPT-A-NEST

Sea Turtle Conservation Bonaire offers companies and individuals on Bonaire and further afield the opportunity to Adopt-A-Nest. Adopting a nest is a meaningful way to link your company's brand or your name to the protection of Bonaire's most iconic wildlife. You can Adopt-A-Nest by donating \$600, thereby investing in a sustainable future for Bonaire's sea turtles.

NEST ADOPTION BENEFITS

Supporting Bonaire's widely-loved sea turtles by adopting a nest allows for prominent visibility: through press, word of mouth and social media STCB puts the nest adopters' name and logo in the spotlight. But that's not all: the adopters also receive a unique Adopt-A-Nest certificate, and their name and/or logo are displayed on STCB's Nest-O-Meter.

EACH ADOPTION INCLUDES:

- A certificate of adoption.
- A summary of your adopted nest (e.g. species, number of hatchlings).
- Increased exposure for your company.
- A more secure future for Bonaire's sea turtles.

HOW A SYMBOLIC NEST ADOPTION HELPS BONAIRE'S SEA TURTLES

Your donation for our Adopt-A-Nest program helps us to protect the nests that are laid on Bonaire's beaches in the interests of sea turtle survival. Your support enables us to:

- Relocate nests that are in danger of drowning.
- Rescue newborn turtles that become wrapped in roots during hatching.
- Sustain the popular Beachkeeper program.
- Collect data that will help us protect nests better, as well as reveal the health status of Bonaire's sea turtles.

For more information, please contact STCB at stcb@bonaireturtles.org or +599 717 2225

