

Five year

Sea Turtle Conservation Program Summary



**SINT EUSTATIUS NATIONAL
PARKS FOUNDATION
(STENAPA)**

+599 318-2884
turtles@statiapark.org



WIDECAST

Wider Caribbean Sea Turtle Conservation Network

Elizabeth Scarlett

LONDON

2021-2025

Report prepared by:

Eleanor Butler,
Felicity Jerams,
Francois Mille



Special thanks to...

The success of the sea turtle conservation program is due to the active participation, support and assistance from many individuals and organisations locally, regionally and globally. These include but are not limited to:

- STENAPA staff, interns and volunteers
- Statia Government
- The Blue Marine Foundation (BMF)
- SPAW-RAC
- Elizabeth Scarlett
- International Coastal Cleanup Campaign (Ocean Conservancy)
- Sea Turtle Recovery Action Plan for the Dutch Caribbean (STRAP)
- Wider Caribbean Sea Turtle Conservation Network (WIDECAST)
- Dutch Caribbean Nature Alliance (DCNA)
- World Wildlife Fund NL (WWF-NL)
- Sint Eustatius Volleyball Association (SEVA)
- Community volunteers & local businesses



Elizabeth Scarlett
LONDON

Annual funding from Elizabeth Scarlett's sea turtle conservation line since 2022 has allowed us to hire a dedicated person to monitor the nesting beaches year on year. This has seen us take strides in sea turtle conservation, data collection, community engagement and improved administration of the program.



 **WIDECAST**
Wider Caribbean Sea Turtle Conservation Network

STENAPA continues to work closely with the Wider Caribbean Sea Turtle Conservation Network (WIDECAST), a coalition of 40 volunteers across the wider Caribbean, seeking to bring the best available science to legislation and policy; to education, training and outreach; to conservation and advocacy; and to in situ research and population monitoring.



STRAP

Country coordinators for the Dutch Caribbean islands have been working together on the Sea Turtle Recovery Action Plan (STRAP) for the region. Through reviewing conservation activities, identifying the main threats to sea turtles and reviewing current capacity on each island, the working group, led by Casper Greer, Kaj Schut and Stacey McDonald, defined priority actions and produced a working action plan with targeted recommendations for each island. The STRAP project is funded by the Ministry of Agriculture, Nature, and Food Quality and WWF-NL and is implemented by STCB in collaboration with WWF-NL.



25 years on Statia

STENAPA has been committed to protecting sea turtles on Statia's beaches and surrounding waters since 2001 with the overarching goal:

"To promote the long-term survival of the sea turtle populations on and around the island."

The program was initiated due to concerns that the island's sea turtle populations were being threatened due to habitat degradation and destruction. The goal of the program is achieved by safeguarding critical sea turtle habitats, conducting monitoring and research efforts, providing policy and decision makers with current, relevant data on the status of sea turtles in the region.



Report aim

The aims of this five-year report include to:

- Summarize the activities and achievements of the Sea Turtle Conservation Program conducted between the years 2021 and 2025.
- Suggest recommendations for the next five-year period.
- Produce a progress report for the Island Government, program funding organizations, the local community and internal staff, interns and volunteers.
- Celebrate 25 years of Sea Turtle Conservation on St. Eustatius.



Monitoring

Over the five-year period between 2021 and 2025, during the nesting seasons, several monitoring and research activities were conducted as part of the Sea Turtle Conservation Program. Nesting beaches on Statia have remained the same since the program start and include: Zeelandia, Kay Bay, Turtle Beach, Gallows Bay, Lynch Bay. Zeelandia Beach has remained the focus site due to being the primary nesting beach and the only beach all three species use to nest. Daily surveys are carried out on Zeelandia Beach and Turtle beach during the peak nesting season. Other beaches are monitored less frequently. All activities are recorded to species level and activity type.



Day Patrols

Day patrols collected data on nesting activities:

- Number and type of activity (unconfirmed nest, true nest, false nest, false crawl, hatching signs)
- Track width
- Nest locations
- Nest relocations



Night Patrols

Night patrols were conducted on Zeelandia beach and collected data on:

- Number and type of activity (unconfirmed nest, true nest, false nest, false crawl, hatching signs)
- Turtle health, curved carapace length (CCL) and width (CCW)
- Turtle ID (through photo identification)
- Nesting behaviour
- Nest locations
- Nest relocations



Excavations

- Number of nests excavated
- Average % nest success, hatching success and emergence success
- Average % of infection and predation
- Nest result (Hatched, Unhatched, Destroyed, Washed Away, Unknown)



Violations

By end of 2025 three members of the STENAPA staff team were sworn in as BAVPOL officers (extraordinary police officers). These members of staff can now issue warnings and proces verbals to those carrying out illegal activity. On average over the five-year period the predominant human threat to nesting sea turtles is sandmining with 98 incidents recorded.

Most incidents observed were individuals collecting sand via buckets, however on a few incidents larger machinery was used.



Turtle-related violations

1. A turtle was sighted at a dive site in 2022 with propellor strikes on its carapace. The turtle was alive and resting on the sea floor but has not been resighted again since.
2. In Oct 2024 on Scubaqua beach a dog partially dug up a Hawksbill nest resulting in numerous hatchling mortalities and injuries. The nest was reburied in the same location, where it eventually hatched at 56% of 218 brood.
3. Bonfires without a permit on the beach is an offense. If a fire is started on top of a nest it can harm the eggs. There have been multiple sightings or evidence of fires on Zeelandia beach and one incident at Oranjebay in 2025 during beach patrols. New signs have been installed on Zeelandia beach to raise awareness.
4. In November 2024 GTI oil terminal reported an entangled Green Sea Turtle in a ghost fishing net. The turtle was detangled with no visible injuries and released immediately with the turtle reportedly in high energy.
5. In 2024 a juvenile sea turtle was found by an intern deceased under a ledge underwater. A necropsy of the turtle was performed in Dec 2025. No clear indication of death was found, however plastic fragments were discovered in the intestine of the turtle. Samples were taken for further toxicology analysis.
6. In 2025, jetski operators discovered a deceased sea turtle that had been entangled in a fishing net. A necropsy will be performed at a later date.



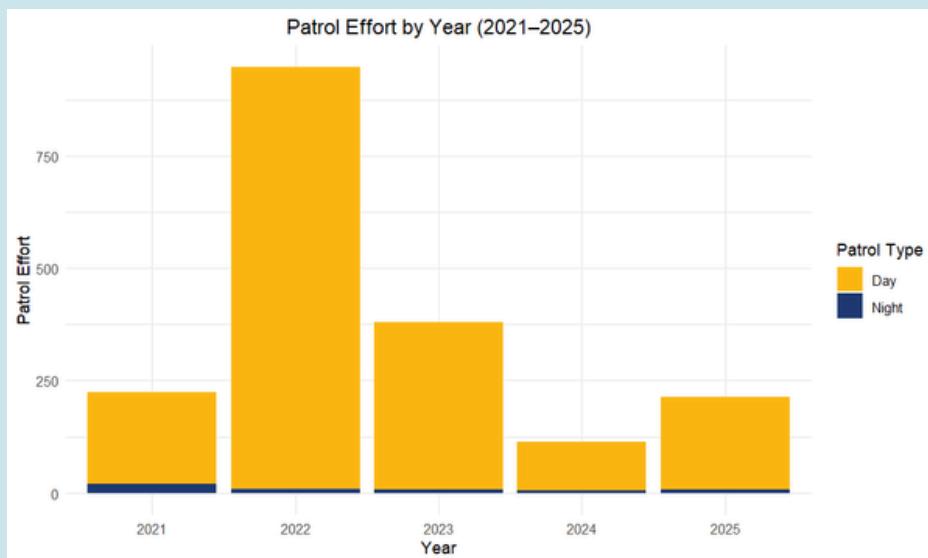
Patrols

SEA TURTLE TRENDS ON STATIA

Beach patrol surveys observed nesting activity during the below periods for each year for Green (CM) and Hawksbill (EI) and Leatherback (DC) Sea Turtles.

- **[2021]** 1 March - 30 Nov (CM); 15 Jan - 20 Nov (EI)
- **[2022]** 6 May - 10 Nov (CM); 26 April - 11 Oct (EI)
- **[2023]** 16 Aug - 23 Oct (CM); 15 Jul - 17 Oct (EI)
- **[2024]** 29 Jan - 30 Oct (CM); 4 Jan - 8 Nov (EI); 15 May - 31 May (DC)
- **[2025]** 16 Apr - 3 Nov (CM); 28 Apr (DC); 4 May - 14 Oct (EI)

NESTING ACTIVITIES





Key figures (2021-25)

NESTING ACTIVITIES

122 NESTS



**899 TURTLE
ACTIVITIES**



THE PEOPLE

1,878 patrols

494 participants
(public)

PERCENTAGES

98

hatched
nests

44%

emergence
success



301

hatchlings rescued

9,520 KG

marine litter removed from
beaches



Key trends

SEA TURTLE TRENDS ON STATIA

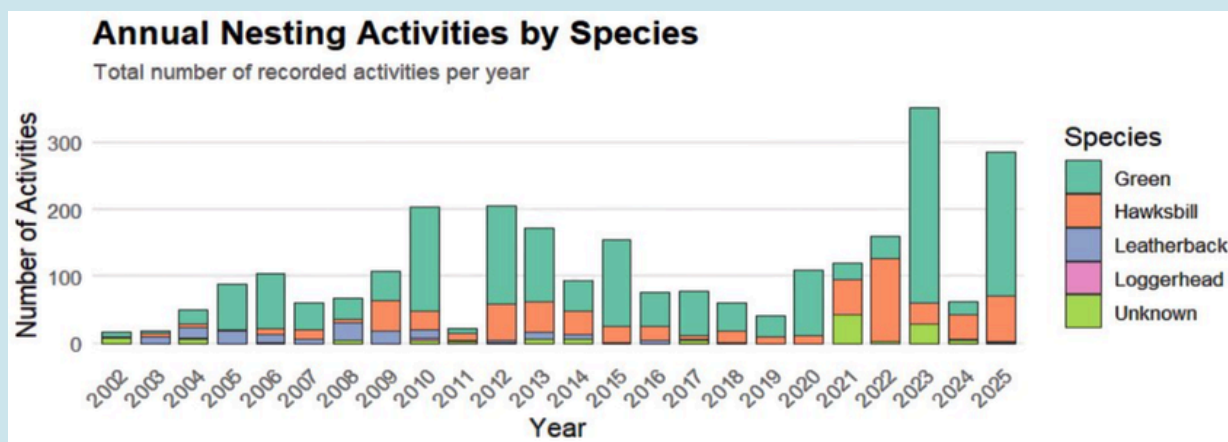
Key findings show that over the past 25 years since the program began, the number of both Green Sea Turtle activities and nests, have shown a significant increase on Statia.

The Leatherback Sea Turtle, however, has shown a significant decline, which is in line with the trend for the Caribbean Region.

Hawksbill activities have been variable; no significant decline or increase has been observed.

Two of the past five seasons (2023 and 2025) have been the highest on record since the program began with 32 (Hawksbill) and 291 (Green) activities in 2023, and 68 (Hawksbill), 214 (Green) and 1 (Leatherback) activities in 2025.

NESTING ACTIVITIES





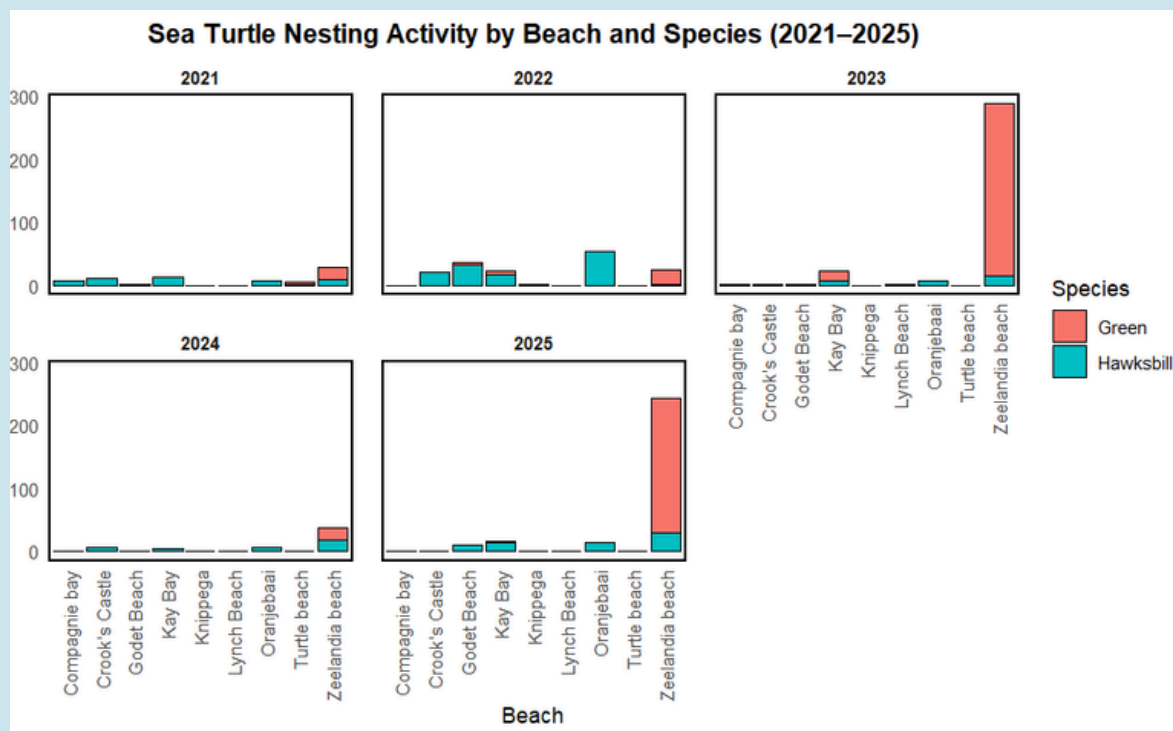
Beaches

SEA TURTLE TRENDS ON STATIA

Beach preference by species has remained consistent over time, with the majority of Green Turtle nests occurring at Zeelandia and Turtle Beach. For Leatherbacks, the preference is a small section of Zeelandia beach, and for Hawksbills the beaches located on the leeward side of the island (Oranjebaai).

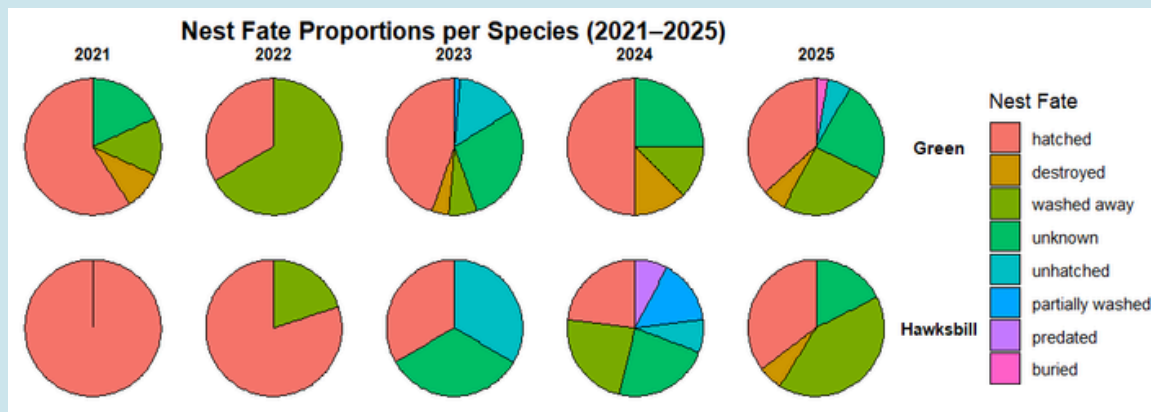
Sporadic nesting occurs, mainly by Hawksbills, on other beaches such as Compagnie Bay and Godet Beach.

NESTING ACTIVITIES



Excavations

NEST SUCCESS



Nest excavations are carried out to gain further information on survival and hatching success. Nests are monitored throughout the incubation period for predation, disturbance (e.g. washing away, cliff fall). 72 hours post-hatching, the nest is excavated to determine key data.

For the years 2021 - 2025, the below key information was found:

- Mean clutch size (per species, over time) was for Green: 117, Hawksbill: 142, and Leatherback: 113
- Hawksbill “hatched” nests show a statistically significant decrease over the years 2021–2025.



Excavations

DISTRIBUTION OF SUCCESS PER YEAR

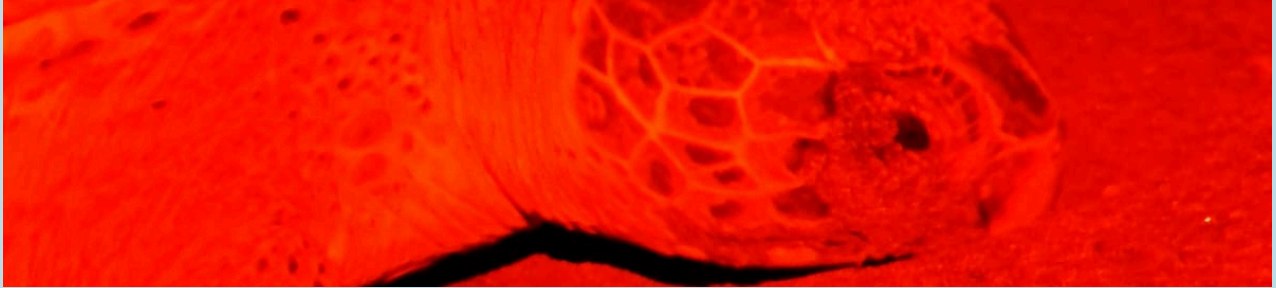
There's a small increasing trend in cooked nests on Statia, especially for Hawksbill turtles, but there is no statistically significant trend over the past 5 years.

Over 2021–2025, hatching success has remained relatively stable for both species, with no statistically significant trend.





Special projects



SPAW-RAC

Between Nov 2024 and June 2025, a project in partnership with SPAW-RAC was implemented. It aimed to enhance monitoring of turtle nesting activity using drone technology and reduce artificial lighting impacts on nesting beaches through collaboration with local businesses.

Two businesses located adjacent to the island's most popular hawksbill nesting beach (Scubaqua and Barrel House) were selected to participate in a turtle-friendly lighting initiative. Both businesses were provided with turtle-friendly lighting fixtures for installation and a certificate recognizing them as turtle-friendly establishments.

Findings found several benefits of using the drone compared to the foot patrols, most notably a significant saving of time, requiring 30 minutes to survey the beach compared to the 1.5 hours required for foot patrols. Additionally, it provides consistent, high-resolution aerial imagery that enables broader spatial analysis and can be beneficial for long-term management of sea turtle nesting activities to gain better insight into the beach dynamics on Statia.

Several limitations were also found during drone flights, such as weather dependency and airport restrictions. Furthermore, the drone may miss fine-scale activity such as hatchling tracks, signs of rat predation, and other subtle indicators that are more easily detected during on-the-ground surveys.



Special projects



Temperature studies

In 2025, a temperature study of Zeelandia beach was carried out by researchers from the University of Swansea, to compare mean sand temperatures from an experiment carried out in in 2012 to present.

In addition to this, shading trials were carried out to determine the most practical method of cooling the sand.

A controlled shading trial during the 2026 nesting season will be implemented, using palm fronds as with previous studies carried out in Statia, combined with monitoring of sand temperatures throughout incubation, and continued data collection on emergence success.





Outreach and education



Education

- Junior Rangers Program: Engaged 10–20 youth participants annually.
- School Sessions: Conducted 33 sessions, reaching approximately 300 children per year



Outreach

- Community Cleanups: Organized 7 cleanup events, removing 8,531 large items and an additional 464 smaller items.
- Public Turtle Nest Excavations: Hosted interactive sessions with some events attracting 50+ participants.
- Public Engagement: Collected community input for the MPMP (Management Plan and Policy) update with Sea Turtles being one of the key species.

Recommendations



Reduce Sandmining Incidents

- Strengthen education and outreach programs to raise awareness of the impacts of sandmining.

Increase Drone Usage

- Continue and increase drone operations for monitoring and mapping beach erosion and turtle activities.

Monitoring and Research

- Conduct further studies in key areas, including toxicology, temperature trends, and erosion mitigation measures.
- For the 2026 season there will be an additional sea turtle personnel. Furthermore, the position will change from an intern position to a staff position (seasonal) and be renamed 'Sea Turtle Field Assistant' instead of 'Sea Turtle Coordinator' to more accurately reflect the roles duties and responsibilities.

Volunteering program

- Expand the local volunteer program to involve more residents of the island in public excavations, routine patrols and night patrols.