2025 ERIC Tobago Turtle Survey Results

prepared by:

Environmental Research Institute Charlotteville

2026

Man-O-War Bay Cottages, Charlotteville
Tobago, W.I.
Phone: +1-868-788-3550
E-mail: info@eric-tobago.org

Web: https://www.eric-tobago.org/
YouTube: ERIC Tobago
Instagram: ERIC Tobago
Facebook: ERIC Tobago

a. Background

With the assistance of Green Fund, the Environmental Research Institute Charlotteville conducted 96 Turtle Survey Dives between late January 2025 and early January 2026 (a 12-month period). This work builds on ERIC's ongoing commitment to marine turtle monitoring, continuing the underwater (UW) turtle monitoring programme originally initiated in 2017. The survey method was developed in collaboration with Dr Michelle Cazabon-Mannette and is described in the attached document titled: "2024-09-01 ERIC General Underwater Turtle Visual Census Method".

The main objective for this component of a wider Green Fund supported project is to provide continuity of intelligible marine turtle data to the existing Turtle Village Trust (TVT) Underwater Turtle Survey Database for meaningful decision-making by key stakeholders. It also aligns with broader conservation initiatives by governmental and non-governmental stakeholders and contributes to the emerging framework of the North-east Tobago UNESCO Biosphere Reserve, including future coordination through the Tobago Biosphere Management Alliance (TOBIMA).

b. Need

Marine turtles play a vital role in both ecological and human systems in Tobago. They are key indicators of reef health and the sustainability of associated ecosystem services, while also contributing to local livelihoods through eco-tourism and conservation-related activities.

All marine turtle species recorded in Tobago are listed on the IUCN Red List of Threatened Species, highlighting their conservation importance at local, regional, and global scales:

Species	IUCN Status
Hawksbill Turtle	Critically Endangered
Green Turtle	Least Concern
Loggerhead Turtle	Vulnerable
Olive Ridley Turtle	Vulnerable
Leatherback Turtle	Vulnerable

Despite ongoing conservation efforts, there remains a critical need for consistent, standardised, and intelligible long-term monitoring data.

Such data is essential to inform evidence-based decision-making by key stakeholders, track population trends and habitat use, assess the effectiveness of conservation interventions, and strengthen the linkage between marine conservation and sustainable livelihoods in Tobago.

Continued monitoring efforts, such as those undertaken by ERIC, are therefore necessary to ensure that marine turtle conservation remains adaptive, informed, and impactful.

Survey Sites

North-east Tobago:

Man-o-War Bay Charlotteville:

a) Hermitage

b) Landslide

Speyside:

c) Kelleston Drain (Coral Garden)

d) Japanese Garden (Angel Reef)

South-west Tobago:

a) Divers Dream/Divers Thirst: Divers Dream

b) Mt Irvine: Mt Irvine SW Reef

c) Flying Reef: Flying Reef

d) Cove: Cove Ledge

Figure 1. Site locations

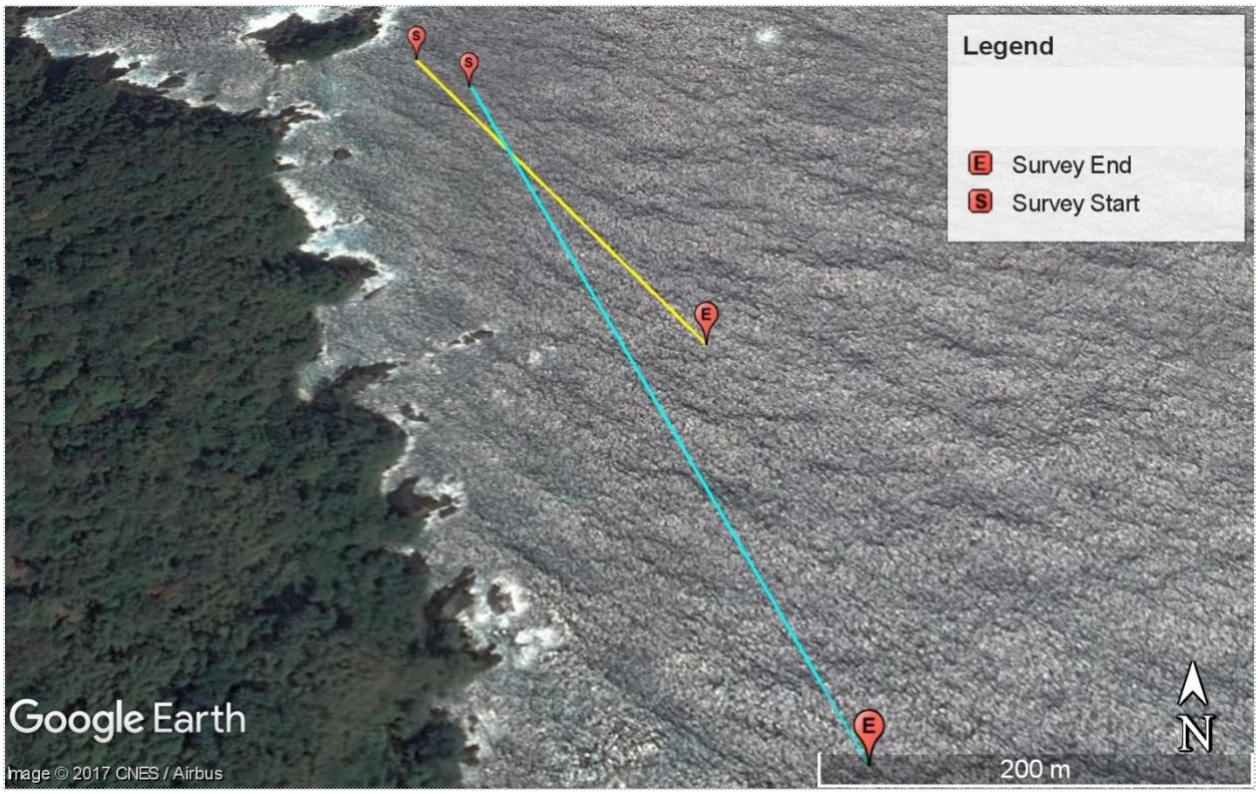

Figure 2. Typical survey paths at Hermitage

Figure 3. Typical survey paths at Landslide

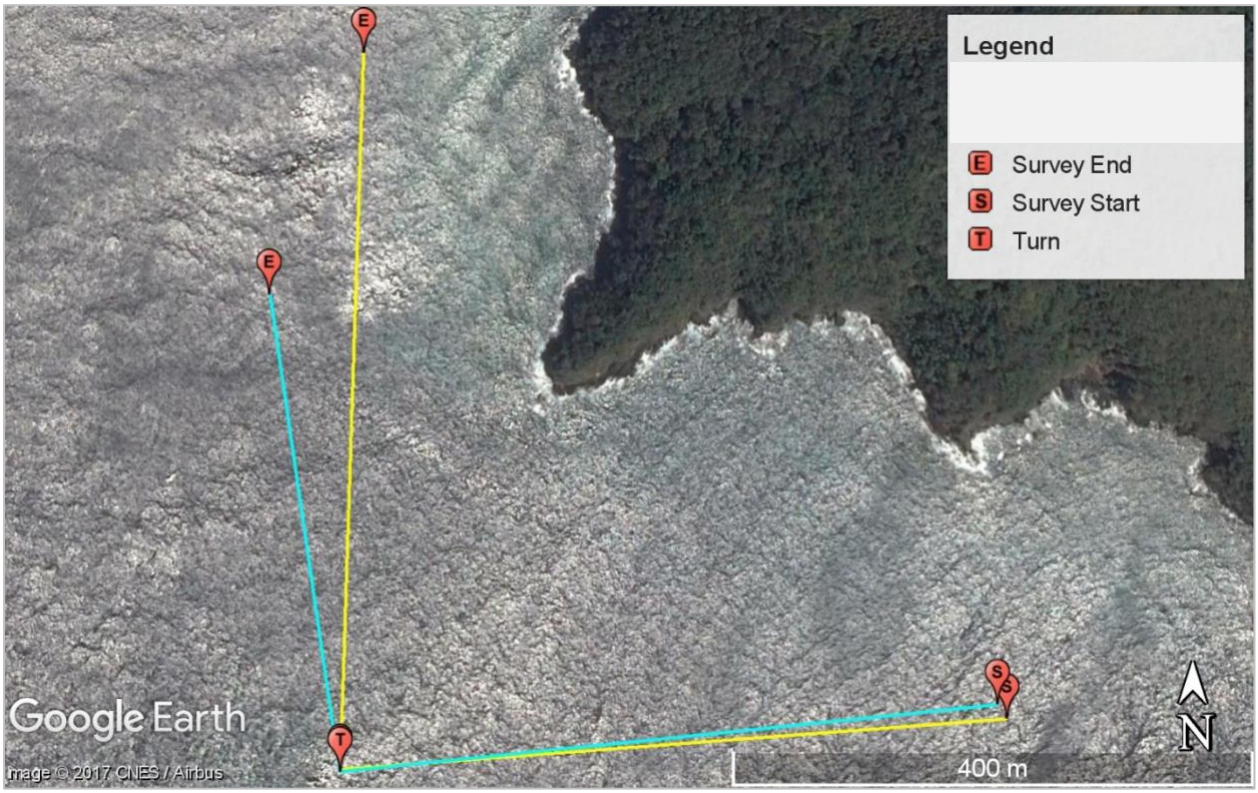

Figure 4. Typical survey paths at Coral Garden

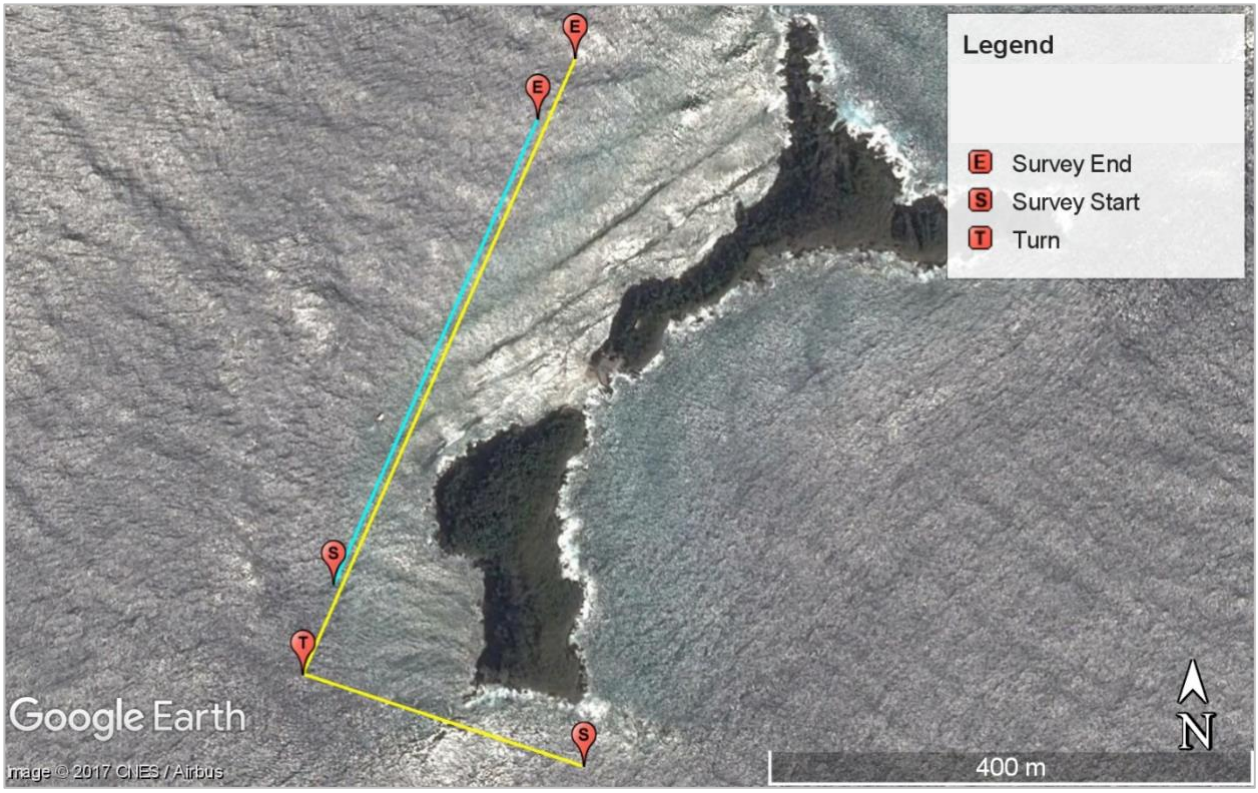

Figure 5. Typical survey paths at Japanese Garden

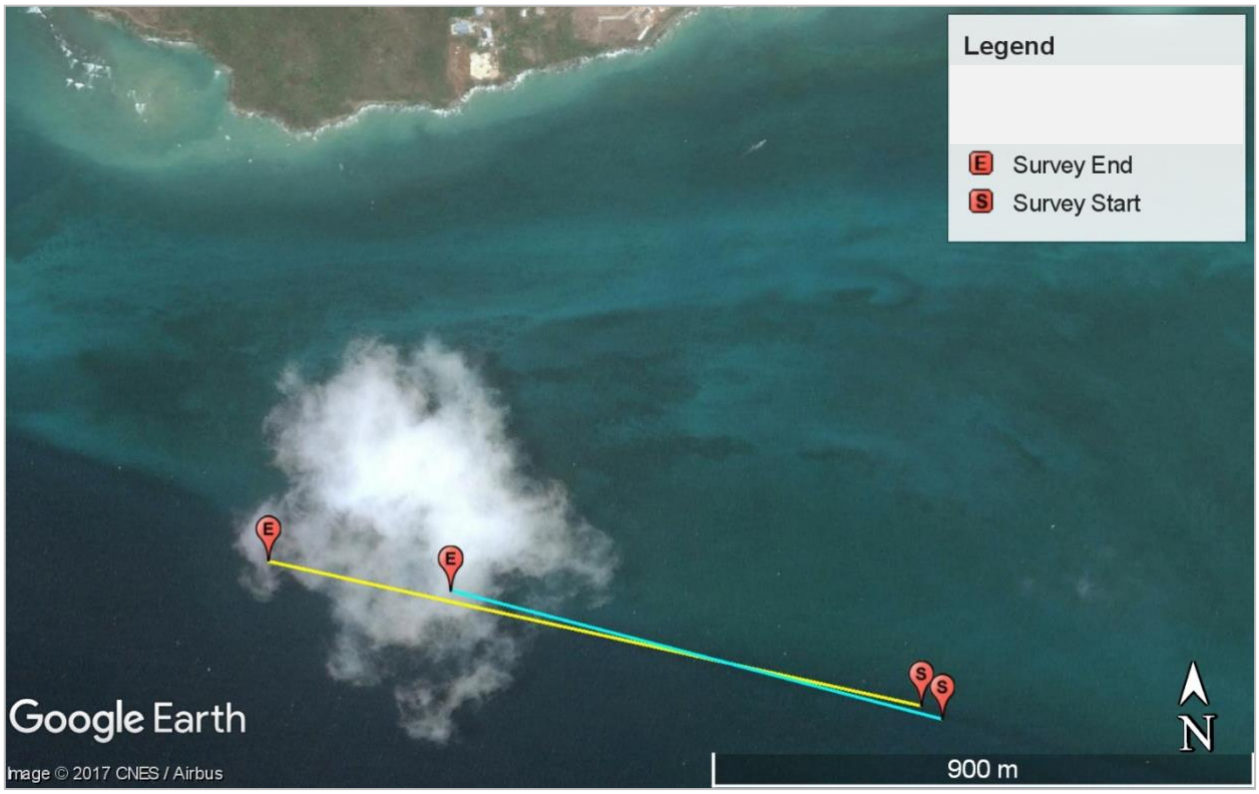

Figure 6. Typical survey paths at Flying Reef

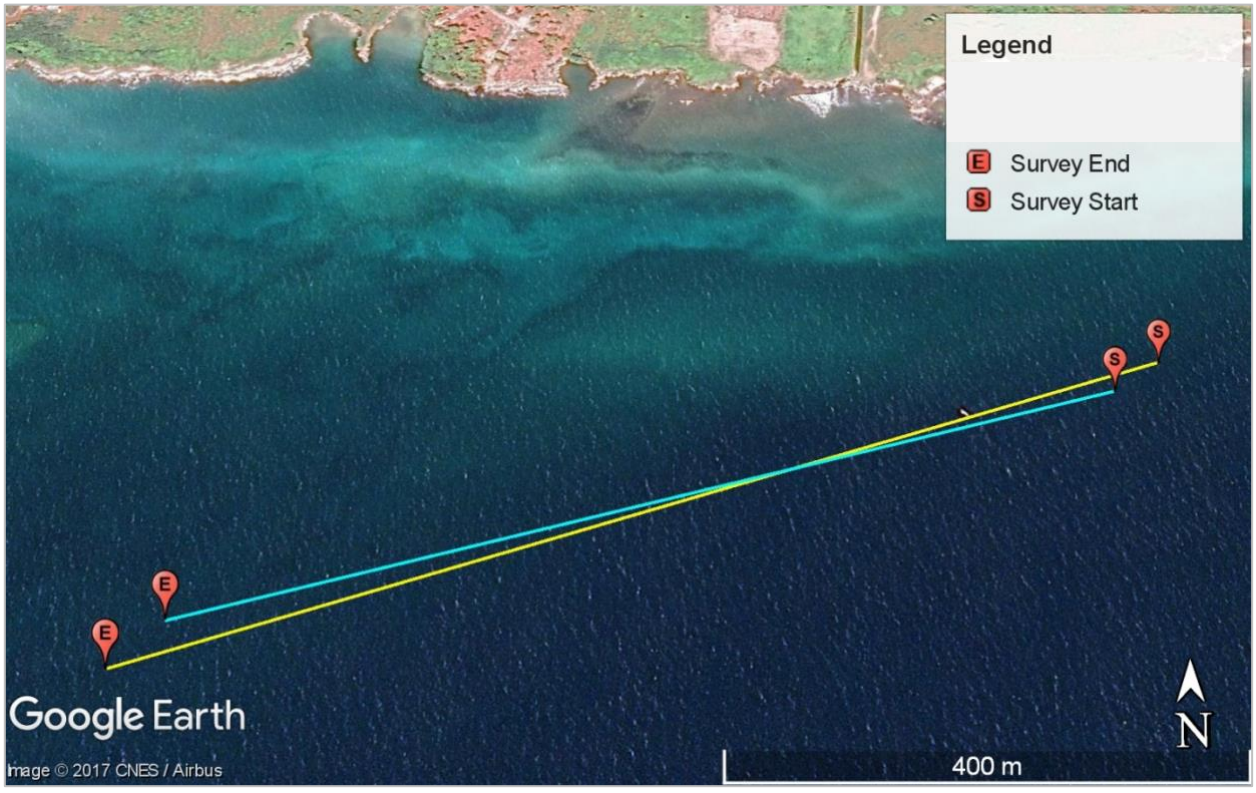

Figure 7. Typical survey paths at Cove Ledge

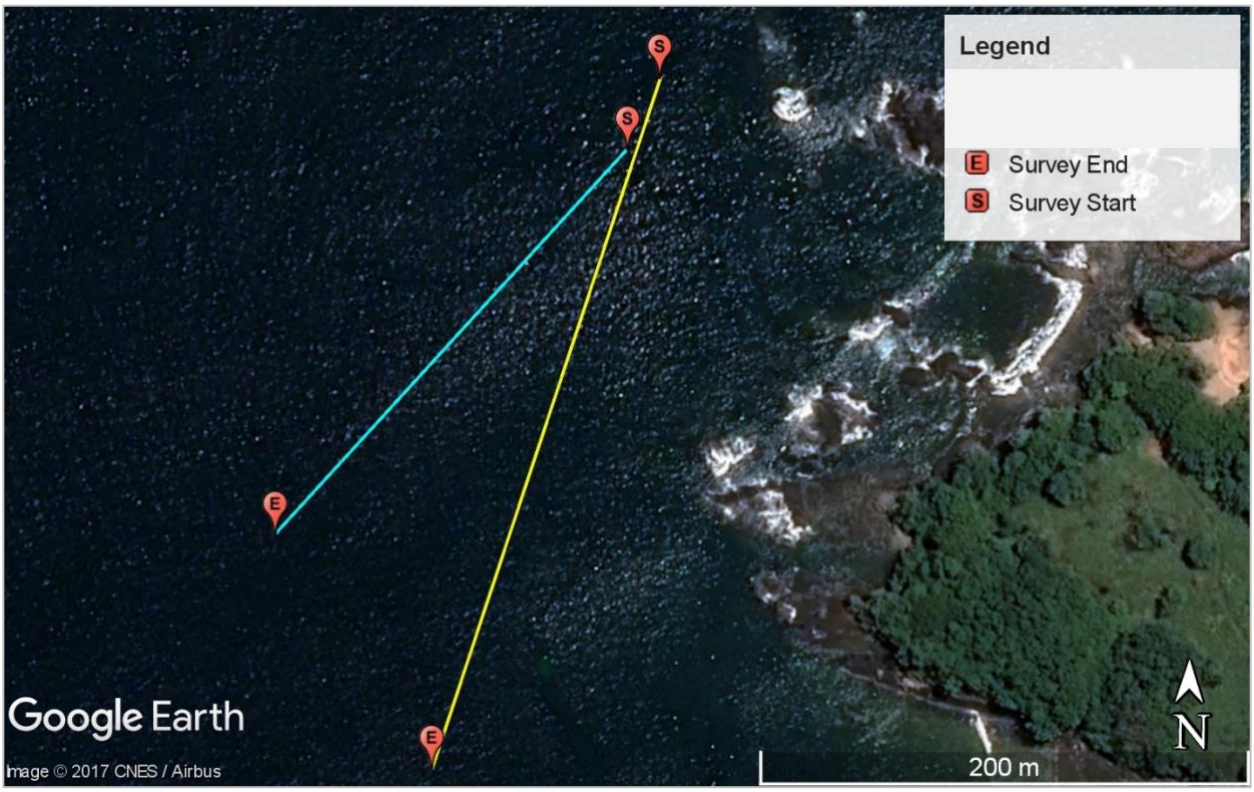

Figure 8. Typical survey paths at Mt. Irvine

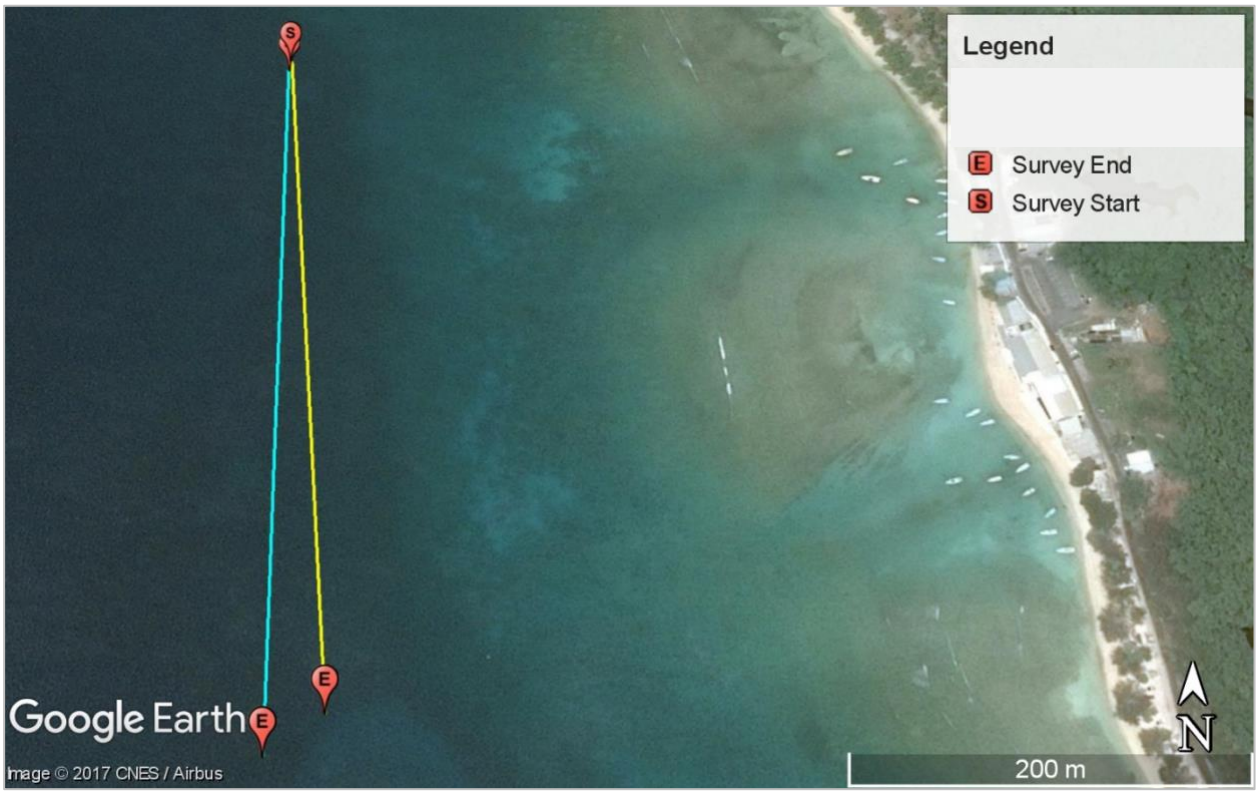

Figure 9. Typical survey paths at Bopez

c. Findings

The associated data records are attached as a document titled: "2026-03-16 ERIC Turtle Monitoring Data ERIC 2025".

a. Species and abundance

Hawksbill sea turtles dominated the sightings, with 37 individuals versus 2 green turtles. No other turtle species was recorded. This suggests that all eight survey sites are primarily hawksbill populated by the Hawksbill sea turtles.

Month	Hawksbill	Green	Total
Jan 25	3	0	3
Feb 25	2	0	2
Mar 25	6	0	6
Apr 25	4	0	4
May 25	4	0	4
Jun 25	1	0	1
Jul 25	2	0	2
Aug 25	8	2	10
Sep 25	3	0	3
Oct 25	0	0	0
Nov 25	4	0	4
Dec 25/ Jan 26	0	0	0
Total	**37**	**2**	**39**

The December 2025 survey dives (8) had to be stretched into January 2026 due to weather conditions and staff availability.

b. Seasonality

Hawksbill sea turtle encounters were relatively frequent, with approximately every third dive recording a sighting, although fewer turtles were observed during the final five months of the year. This decline late in the year could relate to seasonal movements or reduced detectability linked to lower visibility or changing currents; however, more data would be required. Too few green turtles were recorded to conclude any seasonal trends.

c. Site-specific patterns

	Dive Site	Hawksbill	Green	Total	
NE Tobago	Japanese Garden	6	0	6	18
	Kelleston Drain	3	0	3	
	Landslide	5	0	5	
	Hermitage	4	0	4	
SW Tobago	Flying Reef	8	0	8	21
	Cove	3	0	3	
	Bopez	6	2	8	
	Mt Irvine	2	0	2	
	Total	**37**	**2**	**39**	

Overall, the number of sightings in North-east and South-west Tobago is quite similar, with hawksbill sea turtles recorded at all survey sites, indicating a population distributed around the entire island. Interestingly, Bopez was among the sites with the most turtle observations even though this site has a relative high human interference.

At a few sites, e.g., Japanese Garden, Mt Irvine, Bopez, turtles were spotted repeatedly across several months, which suggests they are consistent using these sites as resting and foraging areas.

The two juvenile green turtles, which could be distinctly differentiated, were observed during the same dive at Bopez in August 2025.

d. Life stage and size patterns

Sizes ranges are categorised from 20-50 cm “Juvenile”, 51-65cm “Sub-adults”, and 66-110 cm “adults”.

- Juveniles (20–50 cm) occur at several sites including Landslide, Japanese Garden, Flying Reef, and Bopez, while very large adults (≥95 cm) are rarer and mostly observed at Japanese Garden.
- Sub-adults (50–65 cm) were more common at sites like Mt Irvine, Bopez, Flying Reef, and Cove, suggesting these may be important developmental habitats.
- Adults dominate early (67% of Jan–Mar sightings). Juveniles rise later (75% of Oct–Dec), suggesting seasonal recruitment or adult migration away.
- Through late spring and summer (Apr–Aug 2025) juveniles and sub-adults become more common in the records, with adults still present but not as dominant as in the first quarter.

Month	Juveniles	Sub-adults	Adults	Total
Jan 25	0	1	2	3
Feb 25	0	0	2	2
Mar 25	1	1	4	6
Apr 25	0	3	1	4
May 25	1	2	1	4
Jun 25	0	1	0	1
Jul 25	0	1	1	2
Aug 25	**5**	2	3	10
Sep 25	0	0	3	3
Oct 25	0	0	0	0
Nov 25	4	0	0	4
Dec 25	0	0	0	0
Jan 26	0	0	0	0
Total	**11**	**11**	**17**	**39**

Size Class	Range	Count	% of Total
Juvenile	20-50 cm	11	28%
Sub-adult	51-65 cm	11	28%
Adult	66-110 cm	17	44%
	Total	**39**	**100%**

e. Sex

Of the 37 observed hawksbill turtles, 10 were identified as male and 8 as female, while the sex of 19 individuals could not be determined. The two juvenile green turtles were also not sexed. As a result, the available data are insufficient to draw any conclusions regarding seasonal gender distribution.

f. Other observations

- Turtles were recorded both in the water column (swimming) and on the bottom (resting or assisted resting). This mix could indicate that transects cut across both travelling/foraging water column behaviour and benthic resting areas.
- Assisted resting on the bottom appears several times at Landslide, Bopez, and Flying Reef, which may indicate favoured shelter or cleaning spots.
- Sightings per dive were highest in August (1.25 turtles per dive), when water temperatures averaged 28-29°C, and lower in cooler months such as January (~27°C), suggesting that hawksbill sea turtles may be more present in the area during warmer periods.
- Flying Reef (66% of all dives) has 1.7 times higher encounter rate than average sites (average 40% of all dives).

- Juveniles cluster can be seen at Flying Reef as well. Five out of eight turtles spotted in Flying Reef were juveniles, possibly indicating developmental hotspots.
- November's four juveniles sighting made up all of the months sightings, possibly indicating further migration patterns of adults during this time of the year and possibly new recruits from distant nesting beaches arriving as waters cools.

Comparison to 2017 data and Discussion

The previous turtle survey conducted in 2017 took place between May and September, during which each site was surveyed twice per month, resulting in a total of 80 dives. A total of 91 turtles were recorded, comprising 80 hawksbill turtles, 9 green turtles, and 2 unidentified juveniles, equating to approximately 1.14 turtles per dive. During the same period in 2025, a total of 40 dives were conducted, recording 20 turtles overall, corresponding to 0.50 turtles per dive.

This represents a substantial decline in the probability of encountering a turtle per dive and may be a cause for concern. However, other environmental and methodological factors, such as differences in visibility, slight variations in dive patterns or timing, and potential observer error due to challenging water conditions, cannot be ruled out, despite efforts to standardise survey methods and minimise bias.

Additional observations from the 2025 dataset indicate that all recorded turtles appeared healthy. Sightings were most frequent from January to September and declined from October onwards. Observations were distributed relatively evenly between North-east and South-west Tobago, suggesting island-wide presence. In terms of life stages, adults dominated earlier in the year, while juvenile sightings increased later, with an overall size distribution that was relatively balanced between adults, sub-adults, and juveniles.

Data on size, maturity, carapace length, and observed behaviour did not show any significant differences between the two survey periods.

This type of research is of clear regional significance, given the ecological importance and conservation status of marine turtles in the Caribbean. In light of the observed discrepancy in encounter rates, and the apparent decline in sightings, it is strongly recommended to continue and expand long-term monitoring of these critically endangered populations. Sustained, standardised data collection is essential to enable informed decision-making, assess population trends over time, and guide effective conservation and management measures.