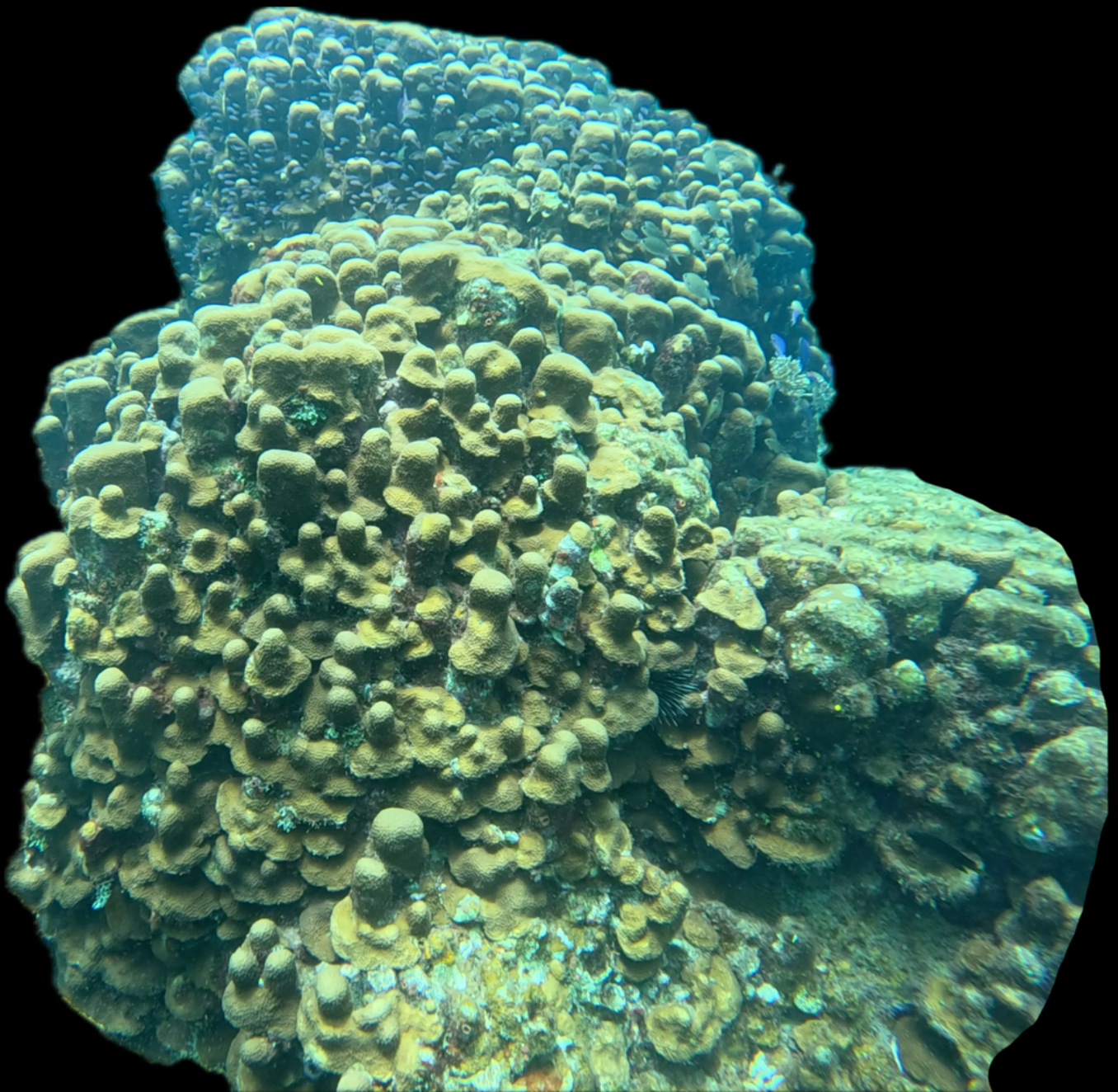




Great Isles Initiative

Mid year Report 2026

January - June 2026





Our Mission

Great Isles Initiative is a marine conservation organisation dedicated to protecting and restoring Saint Lucia's marine ecosystems through research, citizen science and environmental education.

Our Current Projects

Coral Reef Monitoring

Using underwater imagery, 3D mapping and AI-assisted analysis to support coral reef conservation, long-term monitoring and future restoration efforts.

Sea Turtle Monitoring

Building a photo-identification catalogue and testing automated recognition tools to better understand local sea turtle populations.

Citizen Science

Creating opportunities for locals and visitors to contribute to marine conservation through citizen science.



Sea Turtle Monitoring and Identification

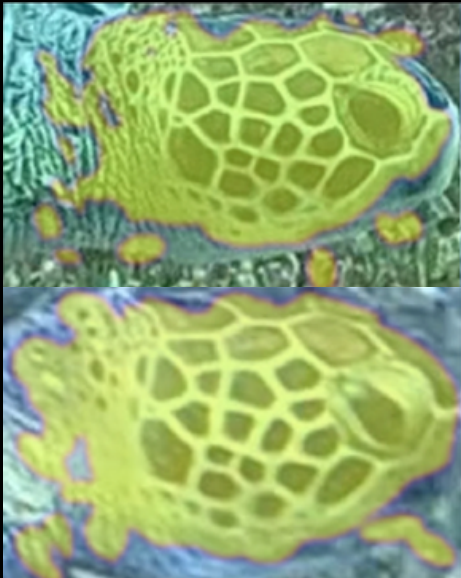


Fig. 1: Example of AI-assisted turtle identification.

Similar to a fingerprint, each sea turtle has a unique pattern of facial scales. Photographs collected during surveys allow us to recognise previously recorded individuals and expand Saint Lucia's growing turtle photo-ID catalogue.

Thanks to the generous support of local dive operators, Great Isles Initiative successfully launched its sea turtle photo-identification programme in Saint Lucia. During the first months, we expanded the a photo-ID catalogue and established the foundation for long-term population monitoring.

Current Photo ID catalogue:

 58 turtle encounters documented

 37 identified individuals

*The catalogue combines previously recorded turtle sightings with new observations collected by Great Isles Initiative.



Fig. 2: Re-identified green turtle (SLU-ENC-0055). AI-assisted analysis confirmed 3 previous sightings here in recent months, suggesting high site fidelity.

Every photograph submitted contributes to a better understanding of Saint Lucia's sea turtle population. By matching new sightings with previously recorded individuals, we can study habitat use, movement patterns and site fidelity while engaging local communities through citizen science.

Coral Reef Monitoring

During the first six months, GII established a baseline coral reef monitoring programme across Saint Lucia using underwater photogrammetry. Surveys were conducted at ten reef sites, creating the foundation for long-term monitoring of coral health, bleaching events and future restoration effort



Fig. 3: Healthy and bleached hard coral colonies growing side by side. The presence of healthy and bleached colonies side by side may indicate naturally resilient corals, providing valuable candidates for future restoration efforts.

Photogrammetry provides a novel and resource-efficient approach to coral reef monitoring. By creating detailed maps and 3D models from overlapping underwater photographs, we can track reef health over time, detect bleaching and disease, and identify resilient coral colonies for future restoration efforts

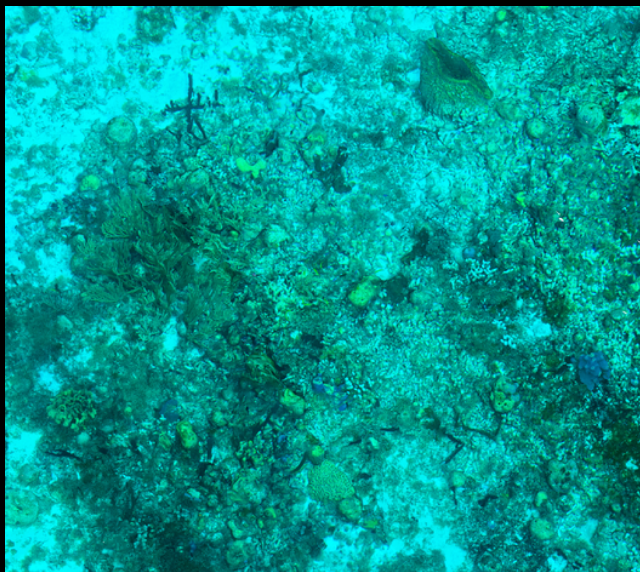


Fig. 4: Section of an orthomosaic showing different coral colonies and sponges.

Key Results

-  10 reef sites surveyed
-  20,000+ images collected
-  First orthomosaics and 3D models produced
-  Healthy and degraded colonies documented at multiple sites
-  Baseline dataset established for AI-assisted reef analysis

Looking ahead

Over the coming months, we aim to revisit key reef sites on a monthly basis to track changes in reef health, particularly as elevated ocean temperatures associated with the developing El Niño are expected to place additional stress on coral reefs.

-  Monitoring coral health and bleaching trends across key reef sites
-  Identifying resilient coral colonies that continue to thrive despite environmental stress
-  Expanding and refining our AI-assisted image analysis tools to quantify reef composition
-  Expanding the Saint Lucia Turtle ID Catalogue through continued field observations and citizen science contributions
-  Strengthening citizen science engagement through refined outreach materials



Fig. 5: Newly identified green turtle (SLU-ENC-0065) at Turtle Reef.

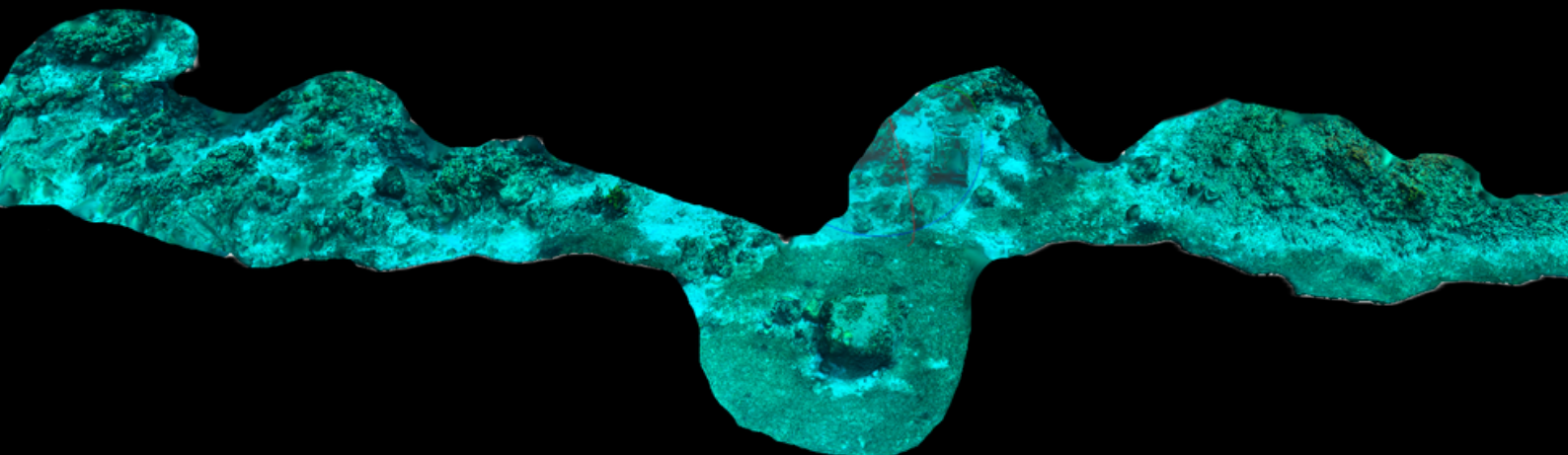


Fig. 6: 3D digital reconstruction of a reef section at Anse Cochon North.



Thank you!

Greta Blome
Founder & Director
Great Isles Initiative

