

BONACCAN PRIDE

Sea Turtle Nest Defense Program

Summary 2018-2020



Introduction

The Green Island Challenge was formed four years ago to fill a void of conservation action on the island of Guanaja.

Co-founded and led by Anuar Romero, a Honduran forestry engineer with over ten years of experience in managing national parks, reforesting mangroves, and protecting marine ecosystems, and Crystal Vance Guerra, an educator, journalist, and historian with over 5 years of experience in the Bay Islands, the GIC has taken on the challenge of establishing an active, responsible, and dedicated conservation organization on Guanaja.

The GIC encourages the proactive protection of Guanaja's ecosystems via community organizing, training, education, and the creation of stipend opportunities in conservation for islanders. The four central projects of GIC focus on yellow naped parrots, sea turtles, environmental education, and ecotourism.

The Turtle Nest Protection Program runs from June- November every year, and involves nightly foot patrols of high school volunteers, former poachers, boat captains, and local mentors.

From December- May, we run a similar project to protect Guanaja's wild population of Yellow Naped Parrots (except the patrols are by day and through the island's mountainous inland). This parrot species, like the marine turtles found on Guanaja, are on the IUCN's Red List of Endangered Species.

Importantly, about 90% of all species nesting in Guanaja are Hawksbills: the second most critically endangered sea turtle in the Atlantic.

Following the recommendations of the International Union on Nature Conservation (IUNC), the GIC understands that the proactive monitoring of sea turtle nests, and data collection are key to restoring this endangered species to healthy population levels.

The education program runs year-long, is integrated into the island's public education curriculum, and reaches all age groups, including adults.

The GIC's mission is to stabilize the populations of Guanaja's endangered species, protect its unique ecosystems, provide alternative livelihoods for adults, uplift youth via educational opportunities, and nurture environmental consciousness in the community, thereby targeting the root of ecological harm, and aiming for long-term, sustainable conservation on Guanaja.

Project Details

Guanaja is one of three Bay Islands of Honduras. Unlike its sister islands (Roatan and Utila) which have been overwhelmed by tourism, Guanaja is largely undeveloped. This has allowed sea turtles and parrots to continue nesting.

The lack of tourism means there is also a lack of income for islanders beyond unregulated industrial fishing. This economic need fuels the blackmarket trafficking and poaching of Guanaja's most endangered, high-value species like marine turtles and their eggs.

Though already declared a Marine Protected Area, Guanaja has no active conservation efforts to protect marine turtles at the local government level. Since 2018, the GIC has trained youth volunteers and adult team leaders to patrol Guanaja's beaches by night to ensure the wellbeing of the next generation of sea turtles.

All participants are trained and required to pass a test regarding the proper handling, tagging, identification and measurements/data to record. Former poachers, boat captains, student volunteers, and Green Island Challenge members patrol both the East End and West End and Half Moon Cay beaches by foot, every night from June-November. (Boat captains are required because these beaches are only accessible by boat.)

The GIC keeps records on turtles and their nests, and share our data on citizen science platforms. The project also includes the participation of local government, the Navy, and the council of several biologists active in the region.

The Turtle Nest Defense Program encourages conservation and prevents poaching at its root while maintaining the community's cultural connection with sea turtles by focusing on education to bring youth into conservation, and creating stipends for former poachers.

Objectives

The Turtle Nest Defense Program has six main objectives:

- Guarantee the successful hatching of all documented nests
- Provide an alternative livelihood for poachers in conservation
- Uplift youth by providing internships and education advancement opportunities

- Collect data to better tailor conservation efforts
- Generate island-wide environmental consciousness and participation in conservation initiatives regarding the need to protect sea turtles.
- Establish two formal turtle nesting sanctuaries on the east and west end's of the island

Methodology and Tracking Success

Our indicators of success are simple yet quantifiable: # of nests poached, # of turtles poached, # of successful nests, # of total turtles (not all turtles nest), and the # of eggs laid compared to previous years. We now have three years of data on marine turtles nesting on Guanaja.

Turtle Patrols Timeline (Repeated Annually)							
	May	Jun	Jul	Aug	Sep	Oct	Nov
Turtle Patrols	Training workshops to prep patrols.	Install signs marking protected beaches. Daily night patrols. Joint, monthly check-ins to monitor patrol success.					
Education Program	Two schools per month, every month. Volunteers organized after curriculum and training. Field trips for young students.				<i>Turtle Fair:</i> Data from the year's Turtle Nest Defense Program is shared publicly. Each school prepares a report and art project reflecting on their volunteer work.		

May-June: Organize participating former poachers and boat captains. Host training workshop in June to begin patrols in July. Education program begins so student volunteers are ready for July. Based on our data from 2018 and 2019, turtles on Guanaja tend to lay from July-October.

June- October: Patrol beaches every night by foot from 5:30pm- 1:00am. Data sheets are completed for all crawls (false crawl, half-moon, true nest, etc), and we tag and measure all nesting turtles. Education program continues at two schools per month, allowing each school to send student volunteers to both East End and West End beaches.

October- November: Final weeks of patrols. Data sheets are collected and input into an excel spreadsheet, maps are generated, and the final report is drafted.

Yearly Summaries: 2018, 2019, 2020

In 2018, the first night patrols were organized by the community with the support of generous individuals who lent their boats and provided fuel. We documented: 26 nests of which 3 were not viable and 2 were looted. Roughly 4,000 hatchlings made it to sea.

In 2019, we extended our patrol months, increased former poachers' participation and added a stipend, again, thanks to the support of several donors. None of the 20 nests recorded were looted, though we lost one to ants. We witnessed the hatching and entry to sea of just over 3,000 young turtles.

In 2020, we counted 37 nests, two that were lost to looting, three were not viable and roughly 6,000 hatchlings made it to sea.

Education Program

An essential part of this project is our integrated environmental education program. A month-long curriculum is implemented to all juniors and seniors after which they help patrol the beaches. We rotate between grades and schools monthly to ensure the participation of all youth.

Our education program, like our field work, is continuously growing and this year, given Covid we have reached beyond the classroom to organize environmental workshops for local patronatos, congregations and fishery associations.

The community support generated both through the education program and our social media presence offers a substantial push towards achieving our desired results. Our in-school curriculum is paired with field-work allowing students to put into practice their knowledge and reconnect with their island. Teachers and school directors trust the Green Island Challenge with volunteers and, in turn, the students teach their parents about the importance of conservation.

When the Green Island Challenge first began to patrol the beaches, we did not know Guanaja is a nesting site for Hawksbills, the second most endangered marine turtle species. Four years later, we are now nurturing island-wide pride to protect this symbol of Guanaja.

Conclusion

Turtles are a key-stone species in reef ecosystems. Given the effects of climate change, sea turtles are all the more important since they feed on sponges that suffocate reef growth, jellyfish whose overpopulation negatively impacts fish diversity and quantity, and macroalgae which similarly threaten reef and fish survival as ocean temperatures rise.

A healthy population of sea turtles on Guanaja is intrinsic to improving the health of the island's reef, and maintaining tourist interest in the island.

This project combines alternative livelihoods with citizen science, and community development. By employing former poachers we show that protecting is profitable both now and in the long term. Through citizen science platforms, we generate a sense of pride and regional collaboration within the Caribbean as well as data for scientists around the world.

Via job creation, internships for the youth, and the diverse educational programming, we engage islanders of all ages to get involved proactively in the protection of species that also call Guanaja their home and stem "brain drain" from the island by creating careers in science and conservation.

Our goal is for the Turtle Nest Defense Program to be self-sustaining by 2022. We are working with universities, local hotels and dive shops to help make this possible.

Photos

