



# 2023 TOP 100 GOOD PRACTICE STORY

**Title:** “Reef Rebirth: How Conservationists are Reviving Saba’s Coral Ecosystems”

**Destination, Country:** Saba, Dutch Caribbean

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**In the category:**  Destination Management     Environment & Climate     Thriving Communities  
 Nature & Scenery     Culture & Tradition     Business & Marketing

**The Story in a picture:**  
Coral Nursery



**Summary:**

In the heart of the Dutch Caribbean lies Saba, the Unspoiled Queen, a breathtaking island facing the challenges of restoring its coral reefs. Spanning 5 square miles, Saba boasts the largest submerged atoll in the Atlantic Ocean, the Saba Bank, teeming with extraordinary marine life. Saba's National Marine Park, established in 1987, safeguards the vibrant coral reefs and marine ecosystems, crucial for the island's nature-oriented tourism contributing 27% to its economy. However, the park has faced significant coral decline mainly due to Stony Coral Tissue Loss Disease (SCTLD) and climate change. This has impacted tourism, fishing, and biodiversity.

To combat this decline, the Saba Conservation Foundation (SCF), a dedicated non-profit, leads efforts to rehabilitate the coral reefs. Their Coral Nursery project nurtures and transplants corals, the SCF collaborates with various stakeholders, fostering youth leadership and sustainable tourism. While





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**GOOD PRACTICE STORY**

SCF

progress has been made, the  
emphasizes the need for  
continuous funding and  
capacity expansion to realize its ambitious plans, restoring Saba's coral ecosystems to their former  
glory.



## Good Practice Story:

### Destination description

*Brief background of the destination.*

Located in the northern portion of the leeward islands in the Dutch Caribbean, the Unspoiled Queen of the Caribbean awaits your arrival. This breathtaking island, known as Saba, spans 5 square miles and is a Dutch municipality, forming part of the BES islands alongside St. Eustatius and Bonaire. Within its borders, Saba comprises the main land mass as well as the magnificent Saba Bank, a vast submerged atoll. Renowned as the largest submarine atoll in the Atlantic Ocean, the Saba Bank boasts an extraordinary array of marine life, making it a true gem of the Caribbean. Positioned 2.7 miles southwest of Saba, this underwater marvel showcases an unparalleled diversity of species.

Surrounding the coastal waters of Saba, the Saba National Marine Park offers an awe-inspiring sanctuary. Established in 1987, the park was safeguarded by the Marine Environment Ordinance, a legislation aimed at protecting the vibrant coral reefs and other marine ecosystems within its boundaries. Encircling the entire island, from the high-water mark to a depth of 200 feet, the park encompasses 30 permanently moored dive sites, enchanting visitors with its remarkable underwater wonders. Moreover, it serves as a vital habitat for wildlife that holds great importance to the local Saban community. Not only does this cherished marine park enhance the island's natural beauty, but it also plays a pivotal role in driving Saba's economic development, contributing a substantial 27% to nature-oriented tourism.

### Issues faced

*Problems/issues solved with the Good Practice Story.*

Over the past years, the Marine Park has witnessed significant changes in its marine ecosystems, particularly in coral coverage. The decline of coral reefs is a widespread issue throughout the Caribbean, with one of the main culprits being Stony Coral Tissue Loss Disease (SCTLD). Coral reef decline negatively affects the social fabric of the Saban community in several ways. On Saba, we depend on tourism, fishing, and recreational activities that are associated with healthy coral reefs. Each year, approximately 22500 visitors come to enjoy the island's natural treasure with the majority of these visitors taking part in hiking and diving activities. Coral degradation could lead to reduced tourism revenues and diminished employment and income generation opportunities.

To quantify the decrease in coral coverage, in the early 1990s, the Marine Park had a mean hard coral cover ranging from 7.8% to 21.9%, reaching as high as 29% in certain reef areas. The dominant coral species were *Orbicella annularis*, followed by *Agaricia* spp., *Millepora* spp., and *Diploria strigosa*. However, by 1999, the coral cover had decreased to 18% according to the AGRRA assessment, and by 2008, it was reported to be less than 10%. The trend of declining coral coverage is evident, and the lowest recorded level was in 2021, with only 3-4% coral coverage in the Saba Marine Park.

On the fishery level, coral reefs provide habitats for many species of fish. If these species continue to disappear, the loss of essential food, shelter, and spawning grounds for fish and other marine organisms would be devastating, resulting in a significant decline in biodiversity. With only 3-4% of coral coverage left in our waters, it is imperative to address these issues to ensure the long-term

sustainability and health of the marine ecosystem in Saba Marine Park as it is a crucial part of the eco-tourism industry.

### Methods, steps, and tools applied

*Solutions implemented to address the sustainability problems or issues.*

At the heart of the management and preservation efforts for this remarkable location stands the Saba Conservation Foundation (SCF), a dedicated non-profit organization. Comprising a ten-member board representing both the local and global community, SCF is entrusted with the responsibility of safeguarding Saba's natural and cultural heritage. Over the course of 35 years, this foundation has tirelessly pursued its mission, employing a combination of project grants, public subsidies, donations, and support from the Dutch Caribbean Nature Alliance (DCNA) to ensure the sustainable future of this cherished paradise. Through their unwavering commitment, the SCF continues to nurture and protect the breathtaking wonders of Saba, preserving its unique charm for generations to come.

The Saba Conservation Foundation (SCF) is actively taking steps to prevent the complete decline of coral coverage. They have initiated a special project to facilitate the rehabilitation of coral reefs in the area. They have partnered with their sister island St. Eustatius to reduce erosion and safeguard the endangered reefs around the islands. This project has been dubbed "Healthy and Resilient Marine and Coastal Ecosystems through Reforestation of St. Eustatius and Saba. This project is being funded by the European Union and the Dutch Ministry of Agriculture, Nature & Food Quality.

To better understand the current status of Saba's reefs, a yearly monitoring survey began in 2015. They also established a project, known as Saba's Coral Nursery, in 2015. This innovative approach aims to support the creation and growth of new reefs and aid in the recovery of coral reefs damaged by SCTL and coral bleaching caused by climate change. Coral fragments are hung on various types of structures called "trees," constructed from bamboo and PVC pipes, to facilitate their growth. These corals can later be transplanted back onto the reefs, creating new habitats for marine life.

Additionally, SCF has set up mesocosms, and controlled outdoor labs that mimic the natural habitat, to collect and micro-fragment specific corals affected by the disease outbreak. The goal is to maintain genetic diversity within their lab and eventually outplant the corals when the disease subsides. By cultivating and releasing fast-growing and resilient coral species, the project aims to create a new habitat that supports a diverse range of marine organisms.

### Key success factors

*Critical elements that led to successfully solving the issues.*

Among the many key success factors is the survival of the coral reefs. Despite being in the early stages, the Saba Conservation Foundation has made significant progress. Fortunately, thus far the coral locations tested in this study experienced 100% fragment survival and 0% tissue loss within the first 70 days after out planting. Other out-planting efforts on Saba reported lower survival and health (Fairhurst, 2018), this indicated the suitability of the chosen locations considering the direct mortality response. To gain further insight into the suitability of the tested locations, in December 2023 survival rates will be assessed again.

At the start of the project, the marine lab capacity was very limited, and therefore the scope of the project was limited as well. Fortunately, in February 2023, they inaugurated the "Saba Research Center," the first marine lab in the Windward Islands of the Dutch Caribbean, facilitating applied research. The lab includes mesocosms for close monitoring of these organisms. The survival rate of the organisms is a key factor for the success of these projects. To further increase local coral reefs, important coral nurseries were established, including the deployment of 95 artificial reefs "Moreef" balls that boost a 95% coral survival rate.

Moreover, the Saba Conservation Foundation has established and maintained strong relationships with various stakeholders in the community leading to an increase in the number of volunteers and interns supporting both projects over the years. This organization works closely with educational institutions on the island and has offered youth leadership programs where students are given the opportunity to explore the coral nursery and learn about future reef conservation projects and the care and propagation of coral in the nursery.

Additionally, the promotion of sustainable tourism is further bolstered by collaboration with other tourism stakeholders, such as Sea Saba, a local dive operator. As part of their services, they provide snorkeling and guided tours of the coral nurseries, allowing visitors to observe the corals' growth and development. Moreover, they conduct diving sessions where divers actively participate in cleaning algae from the corals, ensuring their healthy growth. This proactive approach not only benefits the tourist industry but also demonstrates a commitment to giving back to the island and preserving its natural resources for future generations.

### Lessons learned

*Challenges faced while implementing the Good Practice and their solutions.*

The road to restoring the coral coverage around Saba is undoubtedly challenging and filled with obstacles that demand careful navigation. While growth and progress are essential, the Saba Conservation Foundation (SCF) recognizes the potential financial pitfalls that lie ahead in the coming year. Efforts to improve the island's nature and environmental state are anchored by a comprehensive Nature and Environmental Policy Plan (NEPP) for the BES island, focusing on transformative projects. However, these ambitious plans demand proper funding and increased capacity to realize their potential. Despite witnessing a rise in the number of interns contributing to the island's efforts, the need for external staff remains crucial, as numerous projects require expanded resources.

The vision laid out in the NEPP is undoubtedly vital for the future of Saba, but its realization hinges on serious and sustained investments. Without such commitment, the island risks falling short of its aspirations and the potential to restore its coral ecosystems to their former glory.

### Achievements and Results

*Direct and indirect results of the Good Practice.*

As a non-profit foundation operating on a 5 square mile, Saba Conservation Foundation still has made some tangible and noteworthy achievements including:

- The introduction of Coral Nurseries 2015
- Thus far the coral locations tested in this study experienced 100% fragment survival and 0% tissue loss within the first 70 days after out planting
- Coral Relocation Trial in process
- Youth Environmental Leadership Program
- 1<sup>st</sup> Marine Lab in the Windward Islands opened in February 2023
- Saba and the Saban Bank was declared a hope spot by Mission Blue
- Saba is one of only eight locations around the world to score 99 on their Ocean Health Index.

### Tips for other destinations

*Your suggestions or recommendations for other destinations facing the same issues or implementing similar solutions*

The decline of marine life is not an isolated problem limited to the Saba Marine Park; it is a global phenomenon stemming from overfishing, seaborne diseases, pollution, and climate change, among other factors. Fortunately, this project was funded by the Dutch Ministry and the European Union. As funding is sometimes limited, we recommend that other organizations also embrace the power of volunteer work and interns, as they have played a significant role in the success of our project. We also encourage countries to lobby for funding as without it it is near impossible to fulfill the aims of these projects.

Additionally, fostering collaboration with global stakeholders is essential. The exchange of ideas and joint efforts prove to be invaluable in achieving success in these conservation initiatives. By working together, we can make a meaningful impact in safeguarding marine ecosystems worldwide.

### Recognitions and Additional references

*Recognitions and awards the Good Practice received and supporting evidence.*

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