

Mapping Ocean Wealth in St. Vincent & the Grenadines

Overview

The chain of islands comprising St. Vincent & the Grenadines is home to many secluded lagoons and bays making this a favored destination for those looking to enjoy snorkeling, diving, and white sand beaches, and also very popular for yachting. Historically, its remote locale allowed it escape many of the detrimental environmental impacts of mass tourism; however, with its rising popularity, the country is working to ensure sustainable practices are incorporated into its growing tourism economy. In St. Vincent and the Grenadines, many people rely on reef fisheries for food and income, and there has been an increasing recognition in the region to better manage these resources, especially in the face of climate change. The value of coastal and marine resources are often overlooked, but can be considerable as highlighted below.

The maps and statistics highlighted here are only a brief synthesis but point to the utility of both enumerating and mapping tourism value. Such maps and numbers may be critical in building a Blue Economy in the region, providing guidance on the location of key national assets, enabling such assets to be fully incorporated into planning, empowering communities and other users.

Coral Reef Tourism

Diving and snorkeling activities on coral reefs are estimated to bring in over \$10 million (USD) in tourism expenditures annually. On the island of St. Vincent, the highest tourism values (up to \$10,000 per ha per year) can be found between Kingstown and Layou. These diving and snorkeling hot spots are generally in small, shallows bays located close to shore, and are easily accessible to tourists. Bat Cave and Petit Byahut are popular dive spots within this area.

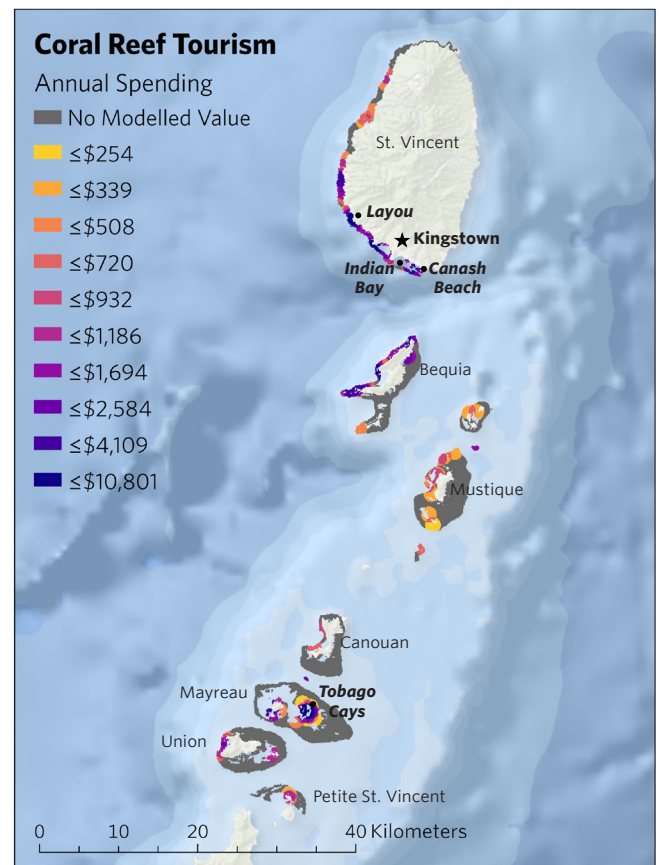
The reefs on the south coast of St. Vincent between Indian Bay and Canash Beaches, are also popular, attracting ~700 visitors annually especially around the five known dive sites clustered around Young Island.

A Note on Covid-19

The pandemic has had a dramatic impact on tourism, and will likely have also impacted patterns and effort in fisheries. The longer-term impacts are too early to predict. It is likely that national dependence on reef fisheries may have increased, raising the urgency for active management to ensure long-term stability of these. For tourism, it seems likely that the natural values, especially in low density tourism areas, will prove a key driver in tourism recovery.



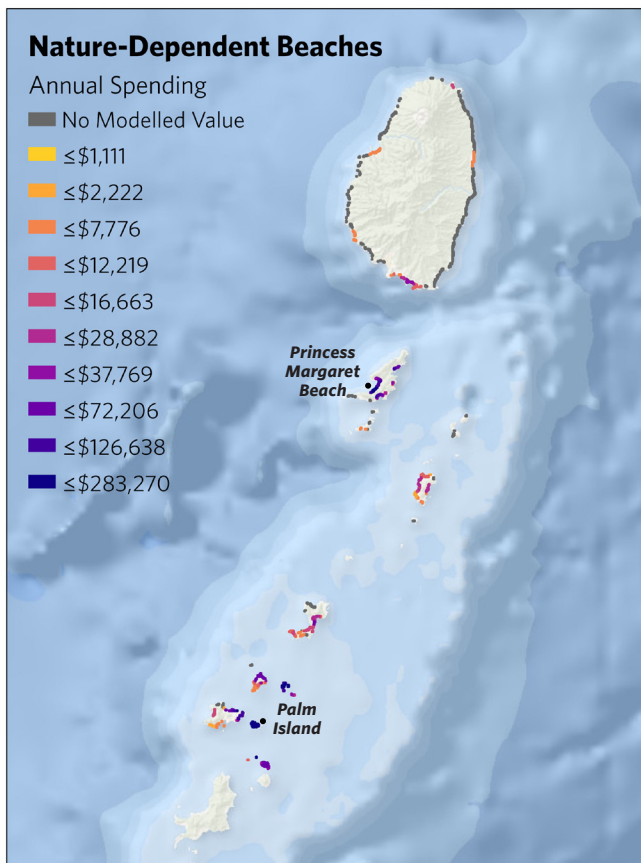
On Bequia, there is another hot spot off of Fort Hamillookout, and this site is near two dive centers and a protected embayment. Tobago Cays also shows up as a popular area, and indeed this location is known to be a prime locations for viewing sea turtles in the wild. The value of coral reef tourism around Tobago Cays is ~\$1.5 million/year.





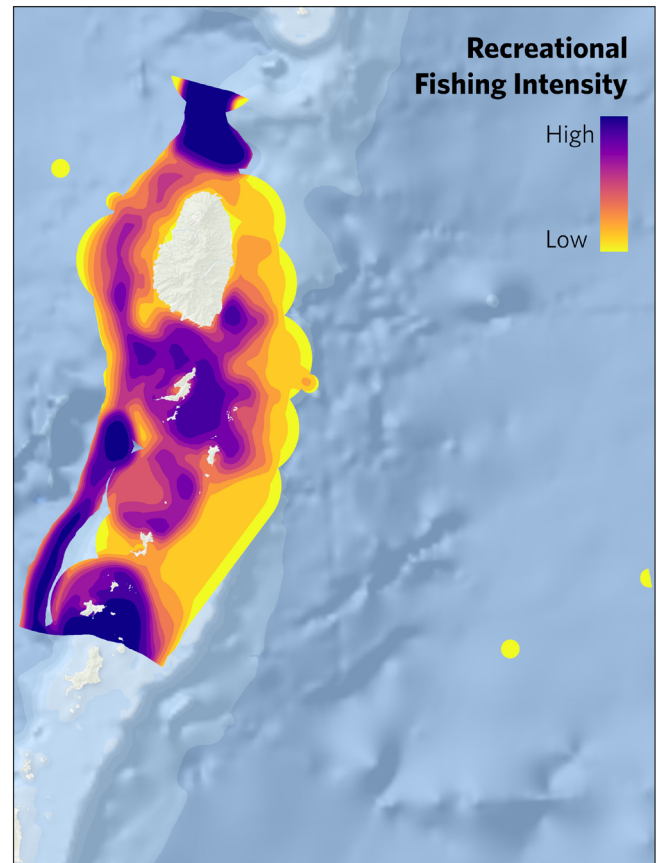
Nature-Dependent Beaches

The beaches of Palm Island exemplify the features that the nature-dependent beach tourism model was intended to capture specifically in-tact natural features, white sands, and turquoise waters, and indeed the natural values of the beaches on this island alone are generating over \$173,000 per ha per year, among the highest in the country. Other high values are on Bequia, specifically Princess Margaret Beach, which is especially popular with cruise tourists, and the nearby Lower Bay Beach. These are wide, white-sand beaches favored for swimming and snorkeling.



Recreational Fishing

This work documented the activities of seven recreational fishing charter operators distributed across the island chain. These trips generate ~\$230,000

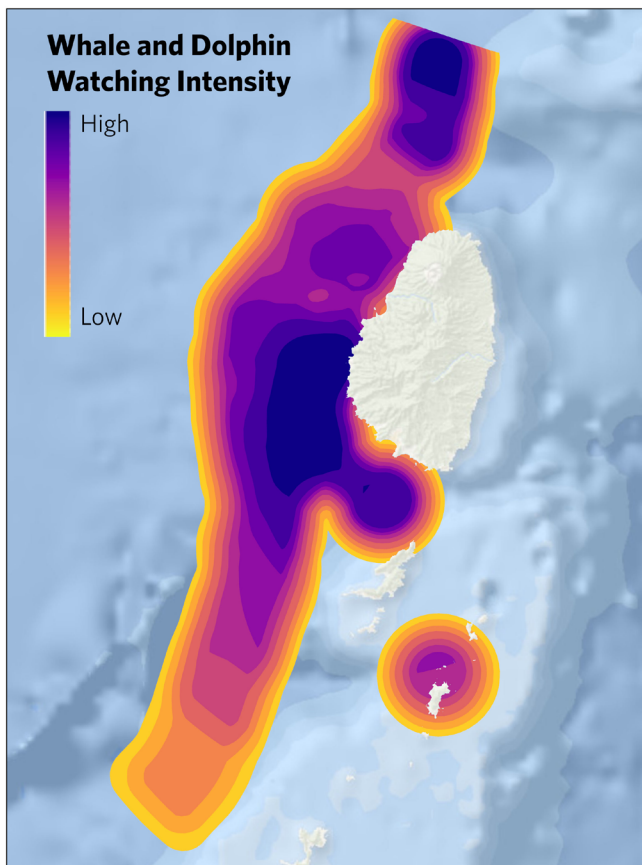
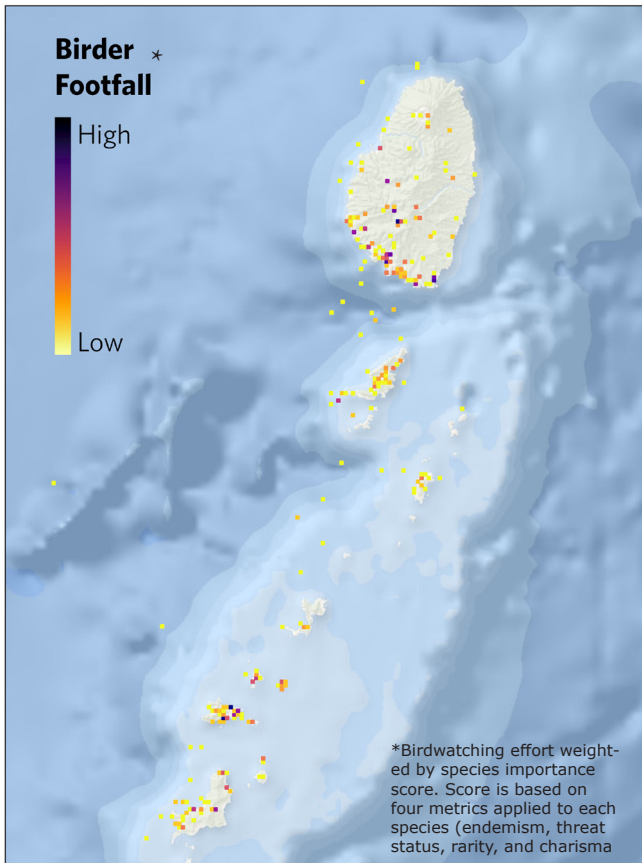


in direct tourism expenditures annually. The highest levels of intensity for this activity are found to the west of Bequia. Passengers aboard these trips fish for barracuda, sailfish, dolphin (mahi mahi), blue marlin, wahoo, yellowfin tuna, skipjack tuna, and rainbow runner.

Wildlife Viewing

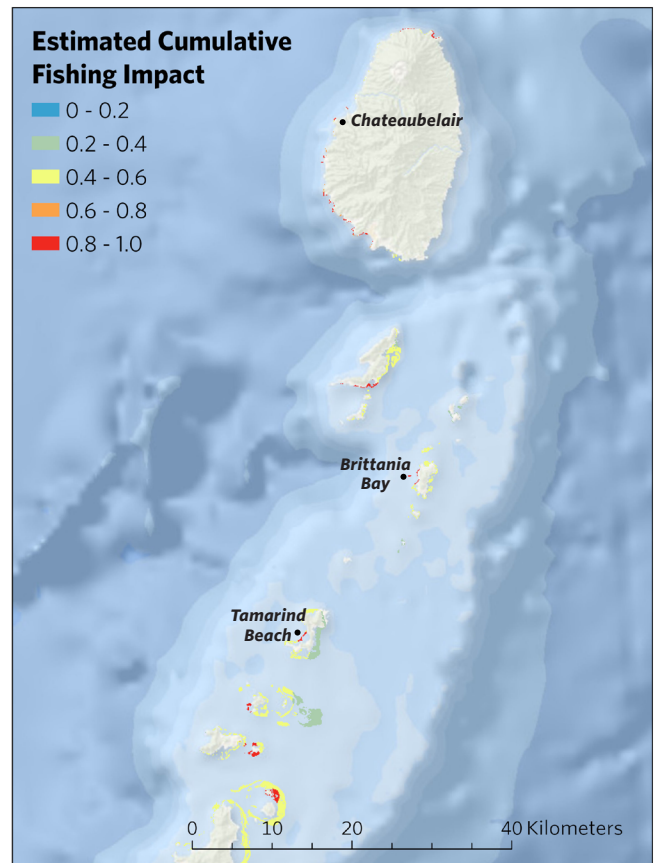
In St. Vincent and the Grenadines, the bird-watching community have recorded 118 bird species from almost 12,000 reported observations. Birdwatchers look for endemic species, which include the Saint Vincent amazon and the whistling warbler. The Grenadines are known for their impressive seabird colonies, and while these are not easily accessed by tourists, there may be an opportunity to increase interest in this activity through boat-based tours that limit any negative impact on these species.

There is a growing effort to promote whale watching as a preferable economic opportunity compared to whaling. There are currently five whale and dolphin tour operators in the country, and direct expenditures from tourists for this activity are estimated at over \$650k/year. Whale and dolphin watchers can sometimes see humpback whales, and bottlenose and spinner dolphins can be seen year-round. Most of the activity is concentrated off the southwest coast of St. Vincent.



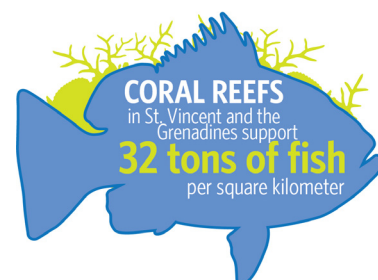
g/m² for all surveyed species). The reef areas with the highest fishing impact in the country are located on the nearshore reefs on the western coast of St. Vincent between Kingstown north to Chateaubelair. Other high impact areas throughout the island chain include reefs near Friendship Bay in Bequia, near Britannia Bay on Mustique, off of Tamarind Beach in Canouan, and around Palm Island and Petit St. Vincent.

The mean predicted gain in snapper grouper species that could be achieved across the country's reef tracts is 41%; however these opportunities are spatially distributed over the country's large area. Discrete patches of reef that would show the most benefit to snapper grouper species from reduced fishing impact can be found near Friendship Bay in Bequia and on the offshore reefs near Mustique's Britannia Bay. Reducing the impacts on those reef areas could increase snapper grouper species stocks by up to 99%. Such efforts have the potential to benefit both the reef habitats and the fishers who rely on them.



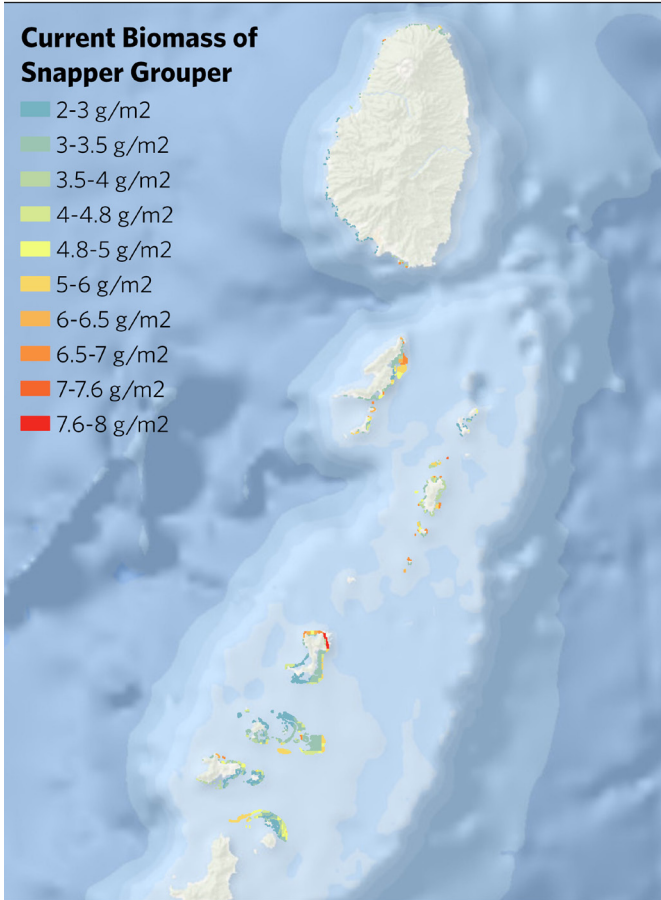
Coral Reef Fisheries

The coral reefs of St. Vincent and the Grenadines support an estimated mean value of 4 g/m² for snapper-grouper species and 6 g/m² for parrotfish (35



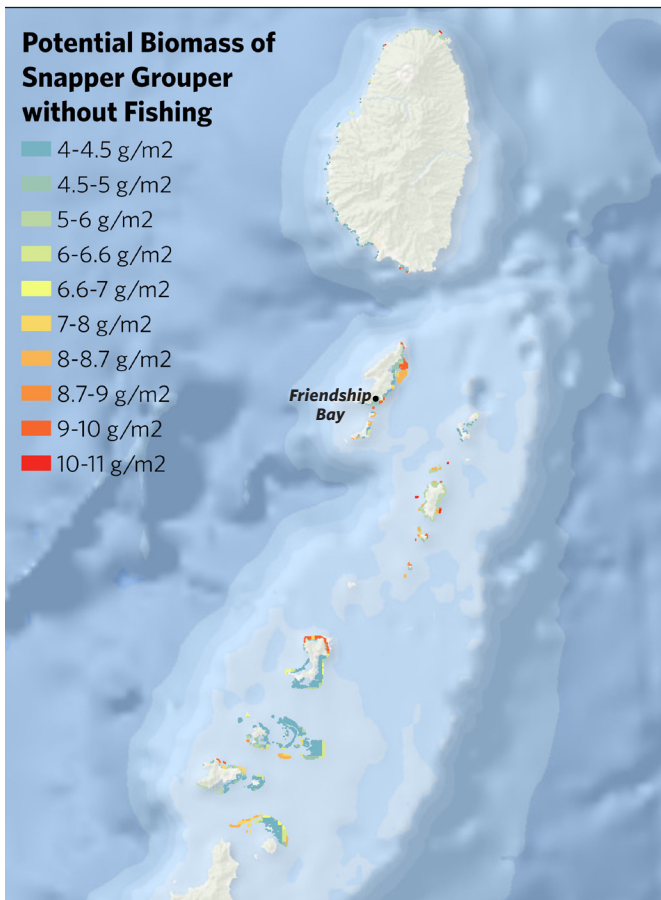
Current Biomass of Snapper Grouper

- 2-3 g/m²
- 3-3.5 g/m²
- 3.5-4 g/m²
- 4-4.8 g/m²
- 4.8-5 g/m²
- 5-6 g/m²
- 6-6.5 g/m²
- 6.5-7 g/m²
- 7-7.6 g/m²
- 7.6-8 g/m²



Potential Biomass of Snapper Grouper without Fishing

- 4-4.5 g/m²
- 4.5-5 g/m²
- 5-6 g/m²
- 6-6.6 g/m²
- 6.6-7 g/m²
- 7-8 g/m²
- 8-8.7 g/m²
- 8.7-9 g/m²
- 9-10 g/m²
- 10-11 g/m²



Highlighted Statistics*



On reef tourism such as snorkeling and SCUBA draws **19,000** visitors and over **\$10 million** in spending, annually



Calm, turquoise waters, lush vegetation and other natural features of St. Vincent & the Grenadines' beaches are responsible for over **60,000** visitors and some **\$26.7 million** in annual spending



St. Vincent & the Grenadines have at least **7** sportfishing charter operators. Tourists spend some **\$230,000** on sportfishing tours annually



St. Vincent & the Grenadines have **16** endemic bird species, and birdwatchers have logged almost **12,000** observations



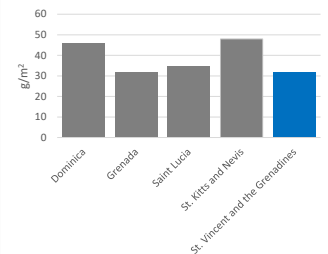
The country's reefs support **32 g/m²** in fishable biomass when accounting for all surveyed species. The average predicted gain in snapper-group biomass under reduced fishing measures across all reef areas in **41%**

St. Vincent and the Grenadines Contribution to Regional On-Reef Tourism Expenditures



■ St. Vincent & the Grenadines ■ Other Countries in Study**

Current Coral Reef Fish Biomass for All Surveyed Species



*Models and statistics were built to reflect values for the period immediately preceding Covid-19 (2019). Models have been built from multi-year summaries up until this date. See technical reports for details.

** Dominica, Grenada, Saint Lucia, and St. Kitts & Nevis

About This Project

The Global Environment Facility (GEF), the Organisation of Eastern Caribbean States (OECS) Commission, in partnership with the World Bank, is implementing the Caribbean Regional Oceanscape Project (CROP) to improve systems and put relevant structures in place in an effort to foster a Blue Economy and to promote greater consideration of the ecosystem functions and services which the ocean provides for member states. The project timeline was October 2017 - December 2021.

Under this project, The Nature Conservancy used the Mapping Ocean Wealth approach to develop ecosystem service models and maps at the scale of the Eastern Caribbean in support of CROP. The figures and statistics referenced in this summary are derived from the technical reports and datasets found at: oceanwealth.org/project-areas/caribbean/CROP

CROP Project Overview: <https://oeecs.org/en/crop>
Map Viewer: maps.oceanwealth.org/oeecs