

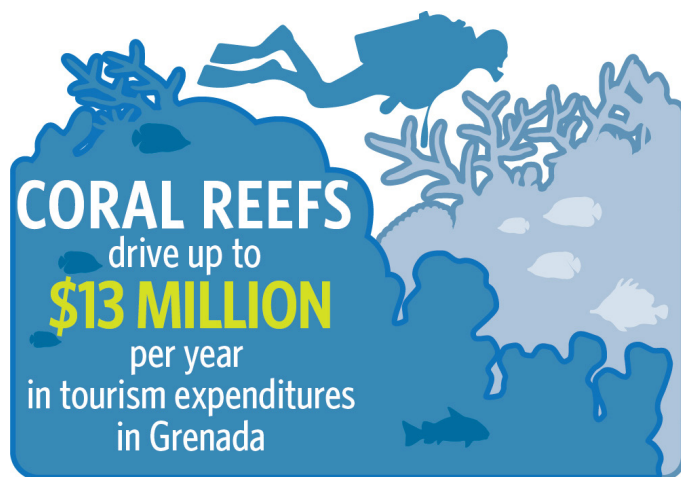
Mapping Ocean Wealth in Grenada

Overview

Grenada, known as the “Spice Isle” is made up of three inhabited islands. Grenada is the main island, and Carriacou and Petite Martinique are part of the southern Grenadine Island chain to the north. Grenada’s large natural harbor in St. George’s is a popular area for yachting and boating, and tourists are also drawn to the area’s beaches and coral reefs. Carriacou is especially renowned for its white sand beaches and diving opportunities. In Grenada, many people rely on reef fisheries for food and income, and there has been an increasing recognition in the region to 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.

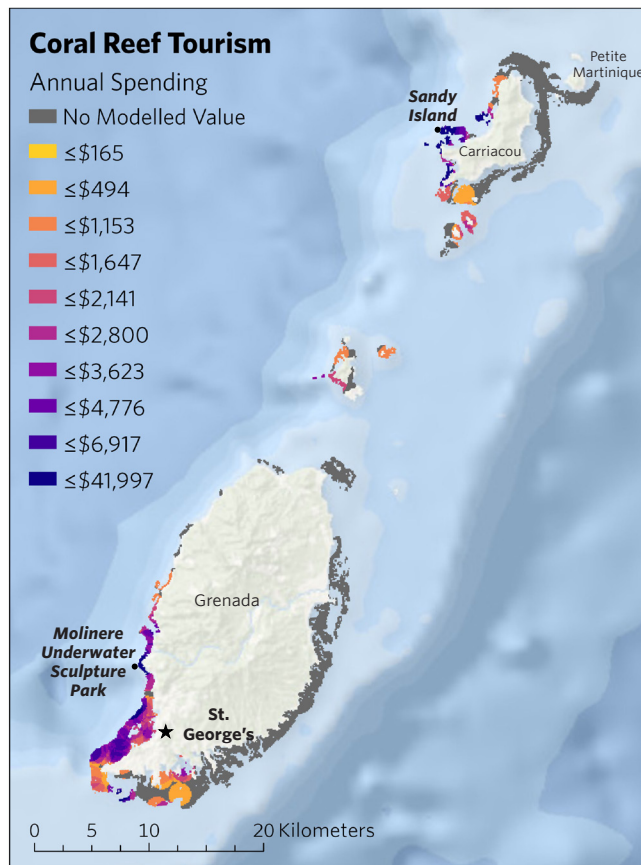


The maps and statistics highlighted here are only a brief synthesis but point to the utility of both enumerating and mapping tourism value. Such maps and numbers may be critical in building a Blue Economy in the region, providing guidance on the location of key national assets, enabling such assets to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



Coral Reef Tourism

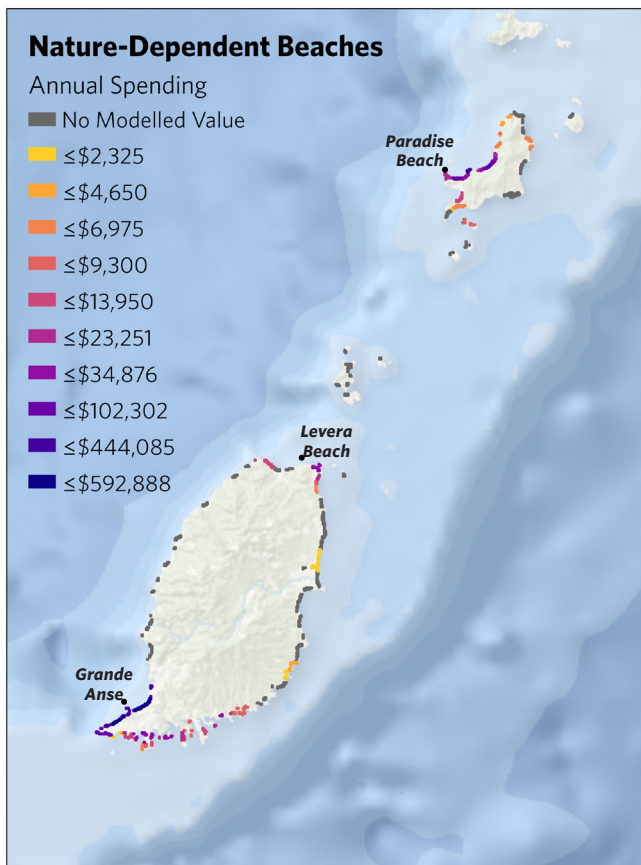
Diving and snorkeling activities on coral reefs are estimated to bring in over \$13 million (\$USD) in tourism expenditures annually. Coral reef tourism is high on most of the reefs near Saint George’s parish, which attract ~17,000 visitors per year. The highest concentration of these activities can be found around



the Molinere Underwater Sculpture Park. Within this area, tourism expenditures can reach up to ~\$1.4 million/year. Sandy Island off of Carriacou also attracts a high level of coral reef tourism and recreation, with values exceeding \$40,000 per ha per year on some reef tracts.

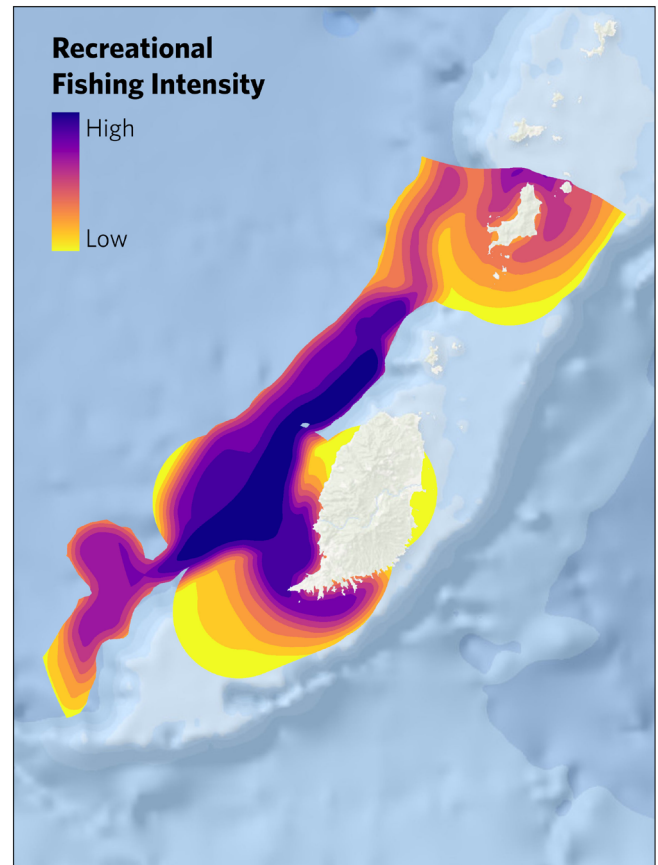
Nature-Dependent Beaches

The natural values of Grand Anse Beach, are some of the highest in the country (over \$17 million/year), and correspond with the high number of tourists visiting this area who enjoy easy access to wide white sand beaches and calm waters. It is also popular for snorkeling and non-motorized watersports and benefits from protection by a nearby coral reef. This stretch of beach is 3km long and its natural values attract almost 40,000 visitors per year. To the north, Levera Beach, known for its isolated white sand beaches and turtle nesting habitat generates over \$24,000 per ha per year. Other notable beaches include Paradise Beach on Carriacou. Although not on the scale of Grande Anse, the natural values of this beach still generate significant visitor numbers and some \$300,000 per ha per year.



Recreational Fishing

Charter fishing tours are popular with visitors and draw over \$1 million in tourist spending every year. This work documented the activities of 22 operators, and most trips leave out of St. George's and the surrounding areas. Passengers fish for barracuda, sailfish, dolphin (mahi mahi), blue marlin, white marlin, wahoo, yellowfin tuna, and skipjack tuna. In addition to charters, the model captures activity from the Spice Island Billfish and Spicy Tuna sportfishing tournaments, during which participants head towards deep sea fishing grounds to the west of the island to



a productive area around a seamount. Recreational fishing activities are otherwise concentrated around the 1000 and 2000 m depth contours to the west of the islands.

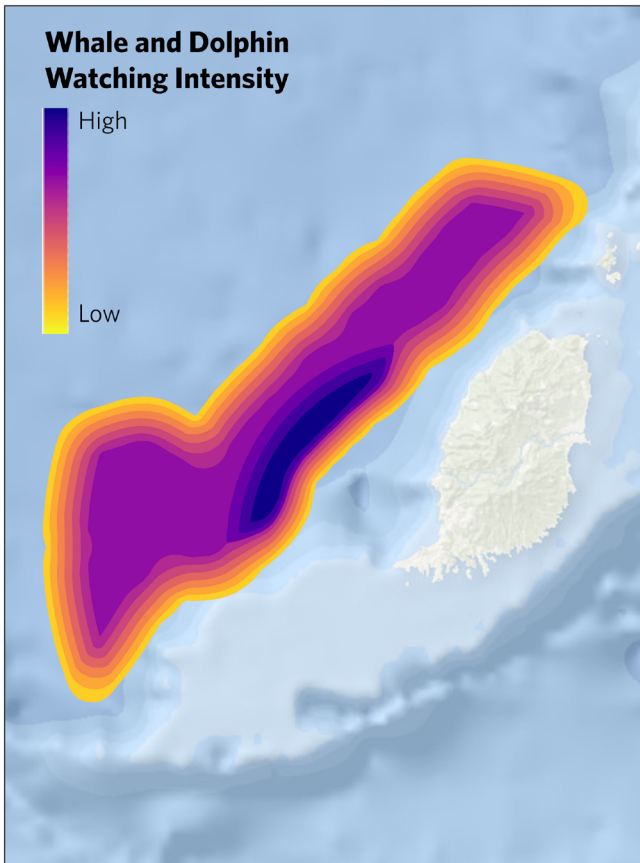
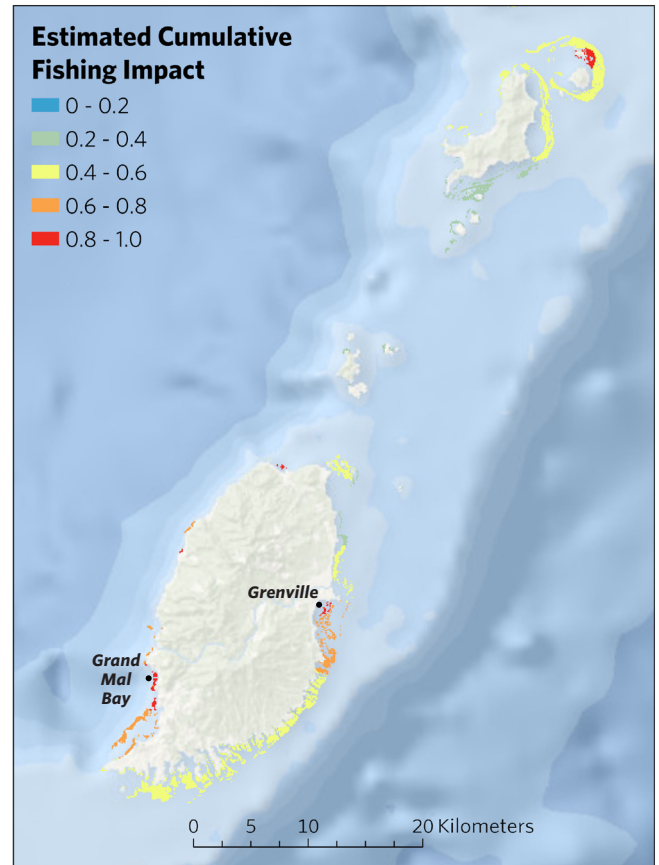
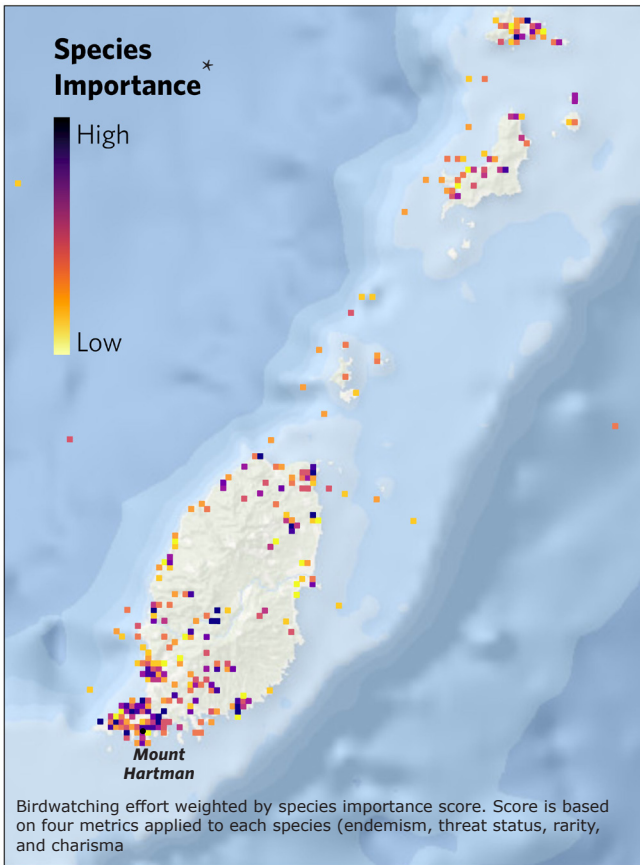
Wildlife

In Grenada, the bird-watching community recorded 131 bird species from over 19,000 reported observations. Birdwatchers are often on the lookout for the endemic Grenada dove. Carriacou is known for its 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. The Mount Hartman area is popular with birdwatchers, who have recorded has 71 species and over 4,000 observations near that location.

There are two known whale and dolphin watching operators in St. Georges, and most sightings are in the deeper waters off the west coast. western coast of the island.

Coral Reef Fisheries

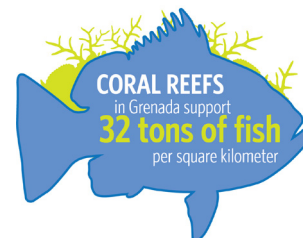
The coral reefs of Grenada support an estimated mean value of 4 g/m² for snapper and -grouper species and 8 g/m² for parrotfish (32 g/m² for all surveyed species). The reef areas with the highest fishing impact are found off of St. George's, especially to the north in Grand Mal Bay. On the east coast, reefs



near the Grenville area are also heavily fished.

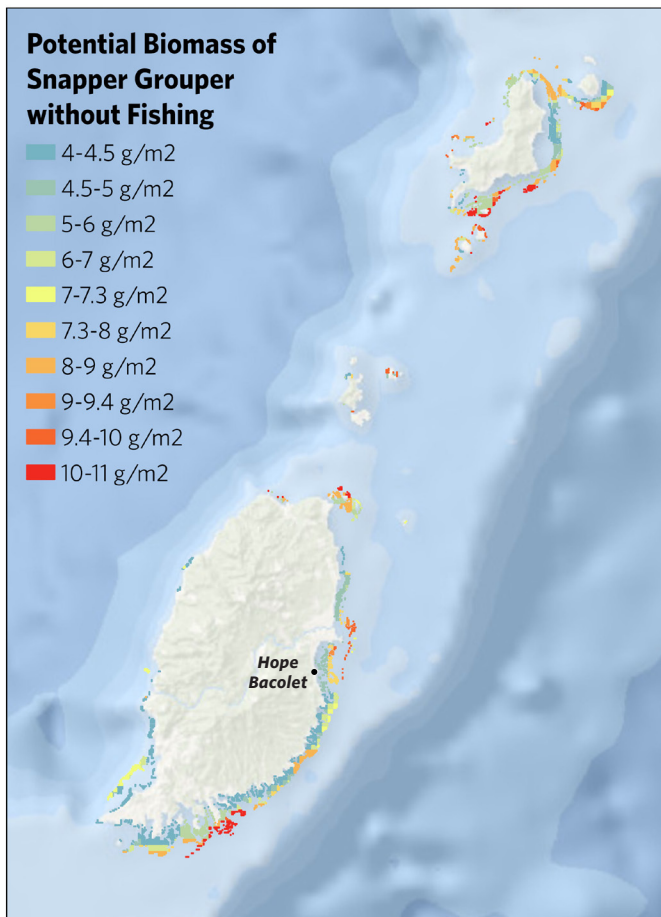
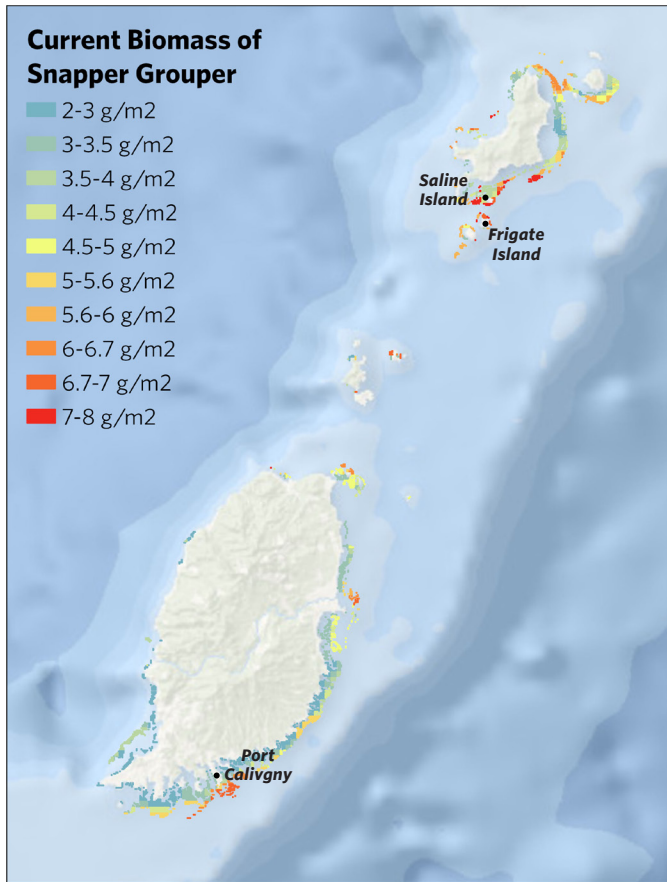
The areas with the highest snapper and grouper species biomass in Grenada can be found off Petit Calivigny off the south coast of Grenada, and off of southern Carriacou, especially between Saline Island and Frigate Island. This is also an area where high parrotfish biomass can be found, with the high parrotfish biomass area extending to reefs around Large Island. Other areas of high parrotfish biomass can be found on the reefs furthest from Grenada's shore. This may reflect challenges of access, or be due to favorable environmental conditions.

The models show opportunities for increasing the biomass of snapper and grouper species in several locations, most notably on the outer reefs north of Hope Bacolet and St. George's. Reducing fishing impacts on these reefs has the potential to double snapper-grouper snapper and grouper species stocks. In the case of St. George's, such changes could very likely have positive outcomes for the diving industry already active in the area, in addition to the benefits to fishers and the habitats on which they rely.



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.



Highlighted Statistics*



On reef tourism such as snorkeling and SCUBA draws almost **23,000** visitors and **\$13 Million** in spending, annually



Calm, turquoise waters, lush vegetation and other natural features of Grenada's beaches are responsible for **85,000** visitors and almost **\$40 Million** in annual spending



Grenada has at least 22 sportfishing charter operators. Tourists spend **\$1,060,800** on sportfishing tours annually

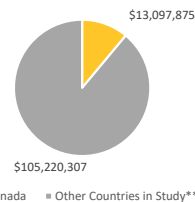


Grenada has **10** endemic bird species, and birdwatchers have logged over **19,000** observations

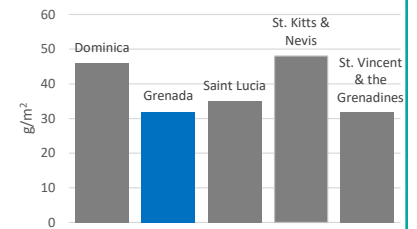


Grenada's reefs support **32 g/m²** in fishable biomass when accounting for all surveyed species. The average predicted gain in snapper-group biomass under reduced fishing measures across all reef areas in **52%**

Grenada's Contribution to Regional On-Reef Tourism Expenditures



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, Saint Lucia, St. Kitts & Nevis, and St. Vincent and the Grenadines

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