

Mapping Ocean Wealth in Dominica

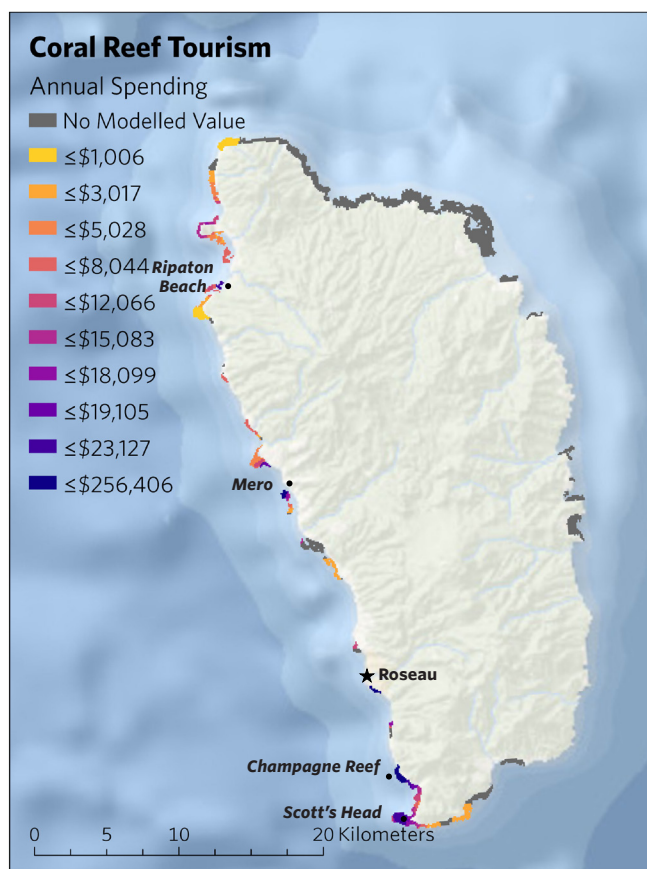
Overview

Dominica, sometimes called “The Nature Island” is nation rich in natural resources. It is known for its lush rainforests, mountainous terrain, towering waterfalls like Trafalgar Falls, and geothermal activity, which is responsible for the volcanically heated Boiling Lake in Morne Trois Pitons National Park. Its diverse marine habitats draw divers and whale watchers alike, while its inland rainforests and large national parks provide many opportunities for birdwatching. The country is recovering from the impacts of Hurricane Maria in 2017, and in doing so is striving to become a climate resilient nation. In Dominica, 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.

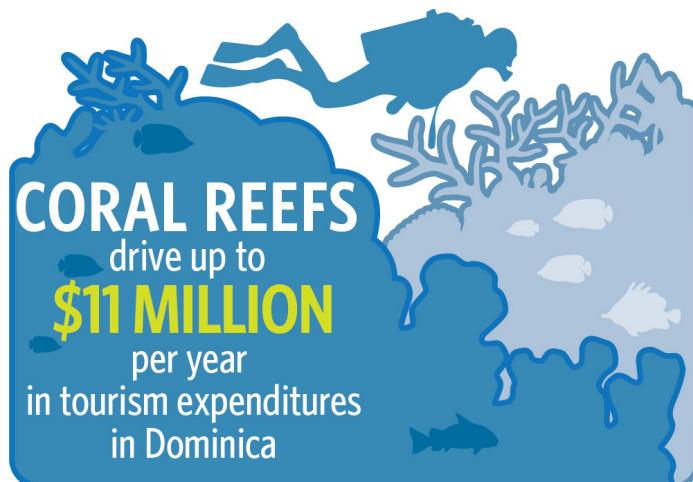


Photo Credit: Romain Barats



Coral Reef Tourism

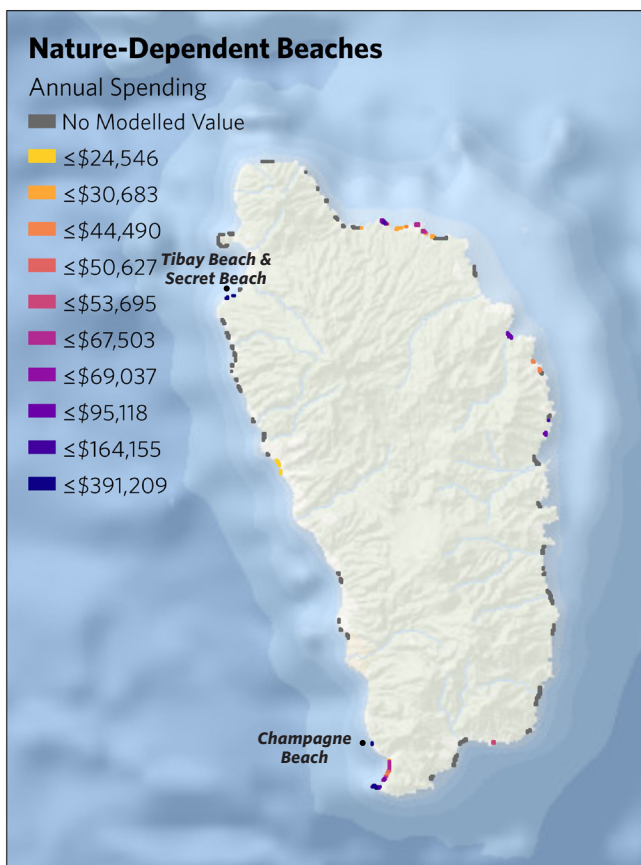
Dominica is considered one of the top diving destinations in the Caribbean, and diving and snorkeling activities on coral reefs are estimated to bring in over \$11 million in tourism expenditures annually. The highest values can be found near the Port of Soufriere in the southwest, where there are at least 17 known dive sites within 5km of the port. This highly used area includes Champagne Reef, where divers and snorkelers can swim among bubbles from thermal vents and the nearby volcano. Scotts Head, and the Volcanic Crater, both located within the Soufriere/Scotts Head Marine Reserve, are additional high value coral reefs, drawing in values of over \$200k per ha per year. Smaller coral reef



tourism hot spots can be found off the coast of Mero, near the Maggie's Point dive sites, as well as in Portsmouth off of Ripaton Beach and Secret Bay, where snorkelers can access underwater coral habitats from shore.

Nature-Dependent Beaches

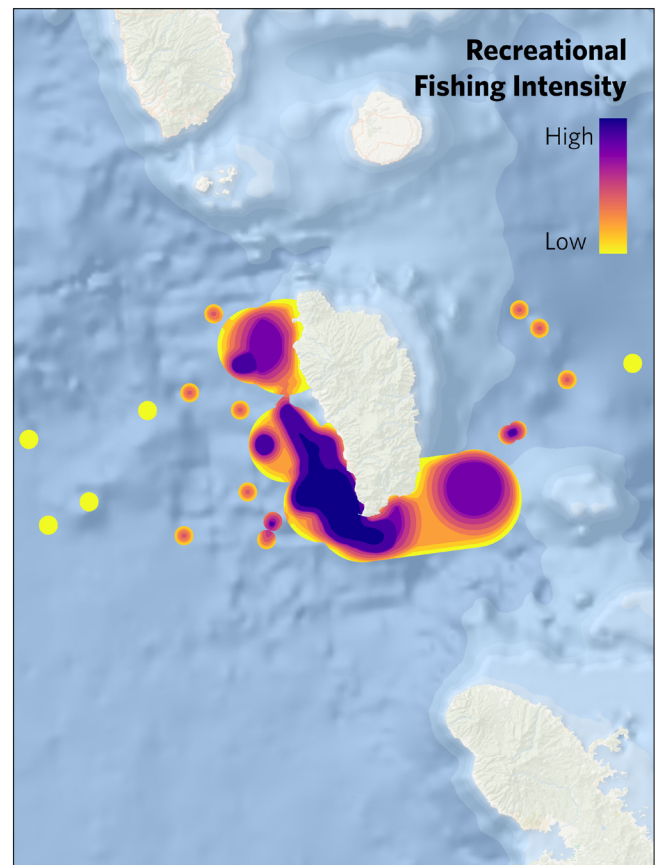
The models show a small but intense nature-dependent beach-going hot spot around Secret Beach and Tibay Beach. Secret Beach is only accessible by boat and offers white sand and calm swimming waters in a shallow lagoon. Tibay Beach also secluded (only accessible through resort or by water) is a popular setting off point for kayaking and paddleboarding. These natural values of these beaches are estimated to generate over \$1.8 million/year in tourism spending combined. Further south, Champagne Beach is another hot spot. The beach's close proximity to the volcano means that visitors can enjoy naturally warm and effervescent pools created by nearby hot springs. It is



also close to popular snorkeling and diving locations. Compared to other Eastern Caribbean countries, Dominica is not as well known for its beaches; however, the black sand beaches associated with the island's volcanoes constitute a unique tourism draw.

Recreational Fishing

We detailed the activities of six known charter fishing operators in Dominica and found that this activity generates over \$400k in direct tourism spending every year. Most tours leave from Roseau and fishing activities are concentrated along the west coast of the island, mostly towards the south. In some cases, operators take fishers to Fish

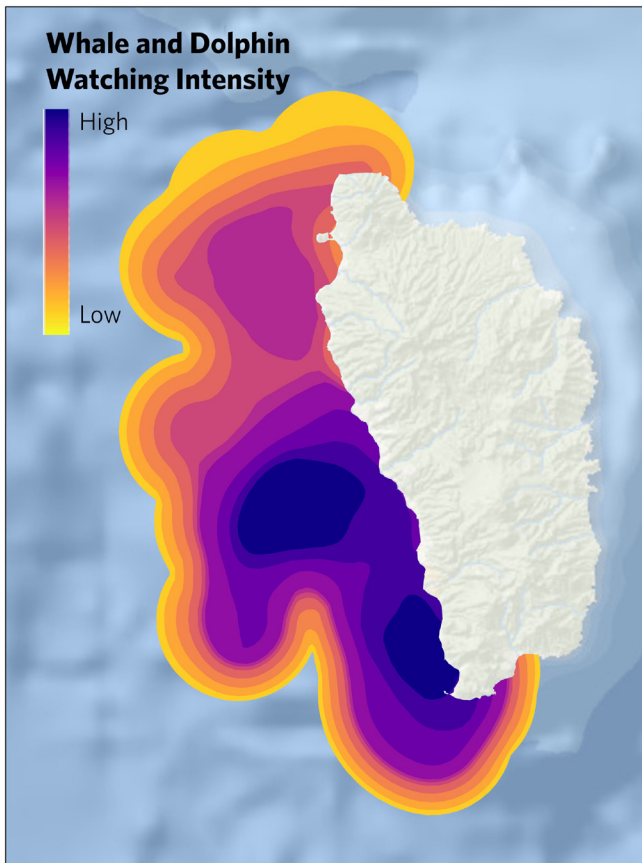
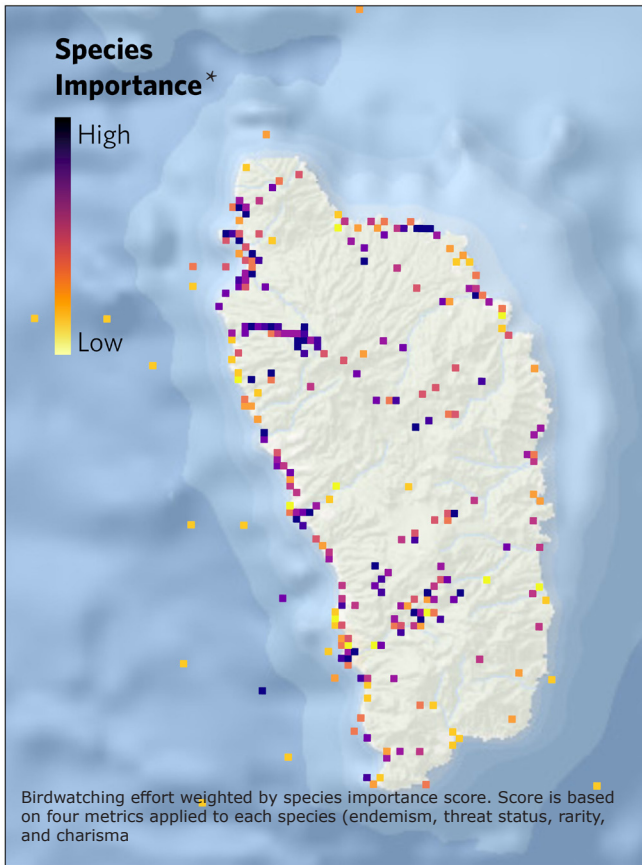


Attracting Devices (FADS) which can be quite far offshore. Several of the tour operators offer both fishing and whale/dolphin watching. Passengers aboard these trips generally fish for barracuda, sailfish, dolphin (mahi mahi), blue and white marlin, wahoo, yellowfin, and skipjack tuna.

Wildlife

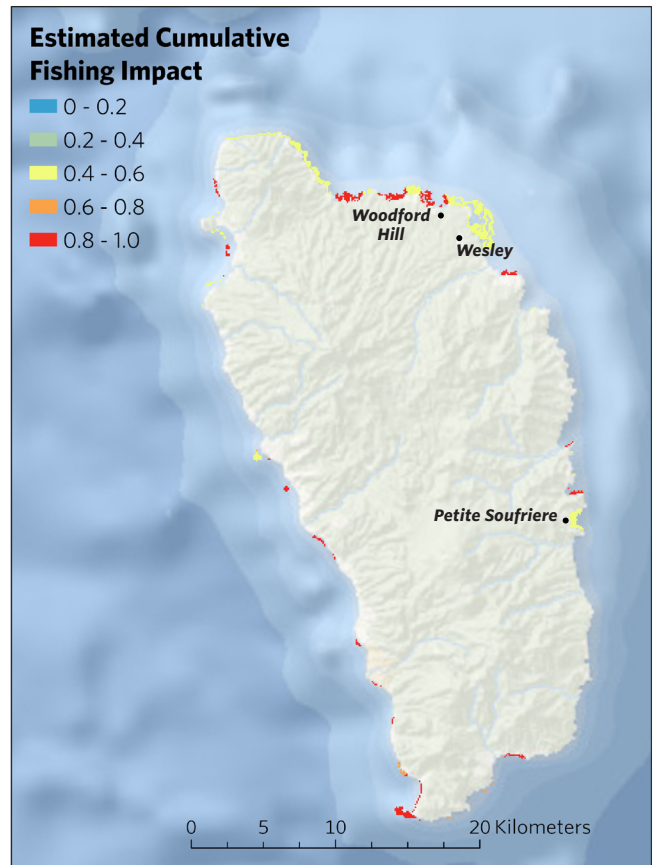
In Dominica, the bird-watching community have recorded 212 bird species from almost 18,000 reported observations. Dominica is home to two species of bird endemic to the island, the Jaco (red-necked amazon) and imperial amazon, as well as 21 other species endemic to the region. Birdwatching hot spots can be found along the western side of the island, coincident with popular tourism destinations, but also within the country's two inland national parks. Morne Diablotin National Park, a protected area and an important bird watching area, and also home to the Syndicate Nature Trail has had 69 species recorded by users of the eBird platform, and high levels of visitation (233 birder observer days).

Dominica has one of the largest boat-based whale-watching industries in the Caribbean generating almost \$2million in direct tourism expenditures per year. The country's deep offshore canyons are home to sperm whales, arguably the industry's largest draw, but also Cuvier's beaked whales, short-finned pilot whales, false killer whales, various species of dolphin, and seasonally, humpback and Bryde's whales. The models show high levels of whale watching intensity coincident with the canyons off the western coast of the island.



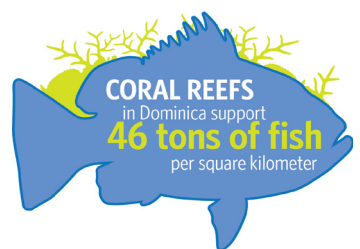
est biomass values for all species can be found in the coral reefs farthest from shore off the northeast side of the island, especially between Wesley and Woodford Hill. There are also areas of high biomass for all surveyed species on the nearshore reef areas near Petite Soufriere (central east coast). These areas of high biomass are, as expected, coincident with areas of lower fishing impact. Fishing impact across the rest of the country's reef is high.

The models show opportunities for increasing the biomass of snapper-grouper complex in several locations, most notably off of Scotts Head on the southwest tip of the island and on the offshore reefs in the Northeast. Reducing fishing impacts on these reefs has the potential to nearly double snapper-grouper stocks. Any such changes could very likely have positive outcomes for the diving industry already active in this area, in addition to the benefits for fishers and the habitats on which they rely. Opportunities for increasing parrotfish populations through increase in coral cover can be found in several location on the northeast side of the island, especially in the reef areas around Portsmouth and off of Baroui.



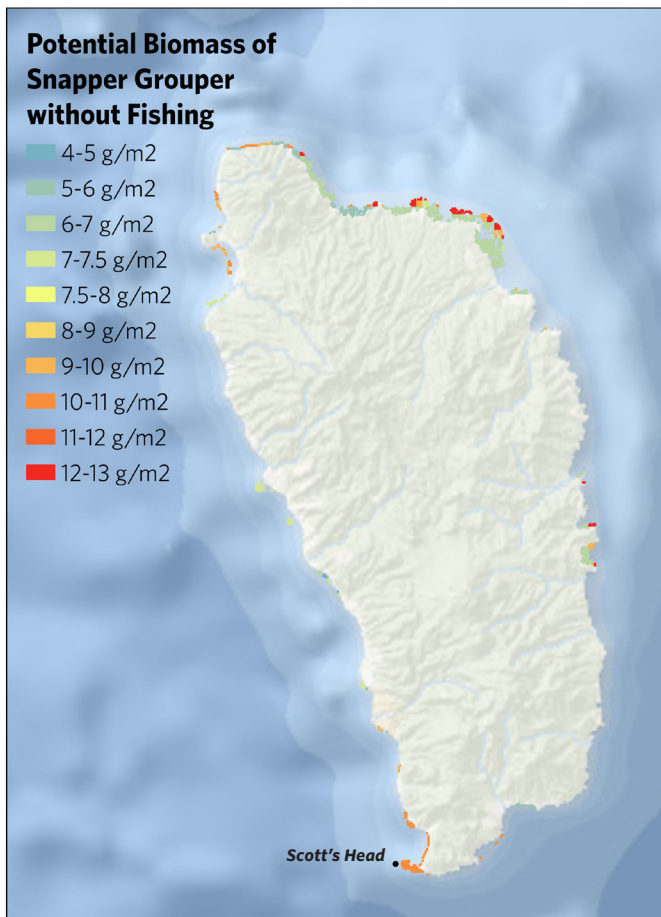
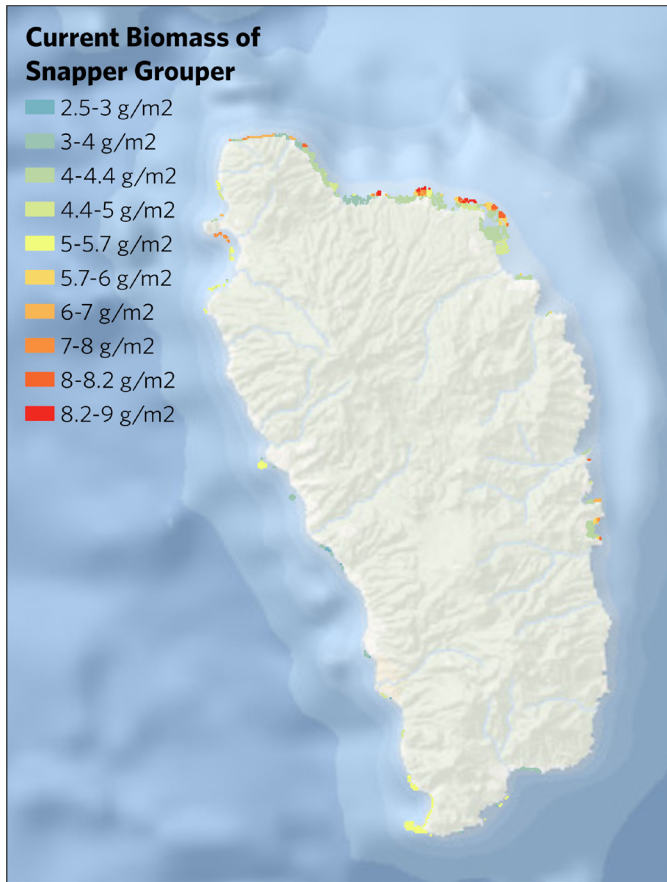
A Note on Covid-19

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.



Coral Reef Fisheries

The coral reefs of Dominica support an estimated mean value of 5 g/ m² for snapper-grouper species and 4 g/m² for parrotfish (46 g/m² for all surveyed species). The high-



Highlighted Statistics*



On reef tourism such as snorkeling and SCUBA draws over **19,000** visitors and over **\$11 Million** in spending, annually



Calm, turquoise waters, lush vegetation and other natural features of Dominica beaches are responsible for almost **28,000** visitors and almost **\$9 Million** in annual spending



Dominica has at least **6** sportfishing charter operators. Tourists spend **\$360,000** on sportfishing tours annually

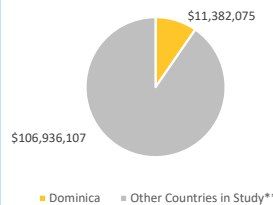


Dominica has at least **7** whale/dolphin watching charter operators. Tourists spend at least **\$1.8 Million** on these tours annually

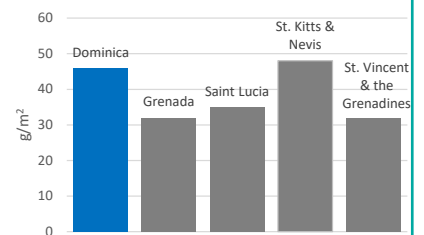


Dominica's reefs support **46 g/m²** in fishable biomass when accounting for all surveyed species. The average predicted gain in snapper-group biomass under reduced fishing measures across all reef areas in **58%**

Dominica'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

** Grenada, 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