

Puerto Rico Coral Reef Ecosystem Valuation: Economic Contributions from Coral Reef Based Recreational Users

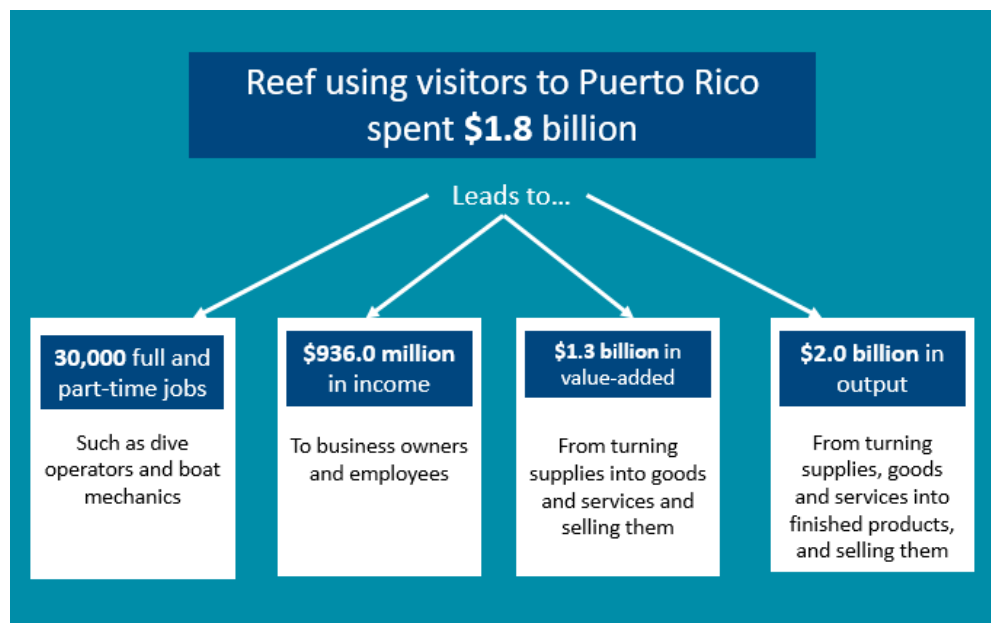
What is the economic contribution/impact of recreation?

Marine based recreation generates significant economic revenues to coastal economies. When people enjoy healthy marine ecosystems, their activities and spending are contributing to the creation of local jobs and economic output.

How can you measure the economic contribution/impact of recreational use?

A large portion of recreational activities includes non-consumptive uses, which are activities that do not involve extraction of natural or marine resources. Some examples include sightseeing, going to the beach, kayaking, diving, and surfing.

In partnership with the Environmental Protection Agency (EPA) and Puerto Rico Sea Grant, NOAA's Office of National Marine Sanctuaries was able to estimate the economic contribution of reef using visitors to Puerto Rico. The report, ***Economic Contributions of Reef Using Visitors to the Puerto Rican Economy, 2018***, presents the results of economic models that estimated total annual expenditures of visitors to Puerto Rico who use coral reefs in the region and the associated economic impacts of recreational activity (based on surveys collected from October 2016 to May 2017). This information allows us to explore connections between the money spent by Puerto Rican visitors to enjoy these coral reefs, and the benefits this brings to the local communities in the form of jobs, products, income, and services.



Photos: Environmental Protection Agency

How much are Puerto Rican reef using visitors spending?

Expenditures were collected for both the visitors' total trip and the portion of expenditures within Puerto Rico. The largest spending categories were Lodging and Food & Beverage. Lodging includes hotels, campgrounds, and rental properties. Food and beverage includes items bought at a grocery store and at dining establishments or bars.

In total, visitors spent about \$534 million on lodging, of which nearly 84 percent or roughly, \$446 million was spent within Puerto Rico. Nearly 100 percent of total food and beverages purchases were made within Puerto Rico. Additionally, reef-using visitors spent about \$17 million on dive and snorkeling and 75 percent or nearly \$13 million was spent within Puerto Rico. Unlike food, which is mostly perishable, dive and snorkeling equipment could be purchased in advance of visiting the island. In total, visitors spent \$1.8 billion on trip-related expenditures and \$1.4 billion of their total expenditures were made while on the island.

How many jobs?

Through the spending of reef using visitors, nearly 30,000 jobs in Puerto Rico were sustained. Further, nearly one billion dollars in labor income was generated and nearly two billion in output or gross domestic product was supported by reef using recreational visitors. These numbers do not include visitors who spent time on the island for other reasons and recreation that did not utilize the coral reefs, nor recreation by residents of Puerto Rico or commercial fishing.



Annual Expenditures by Category of Spending (2017 Dollars)				
	Lodging	Food & Beverage	SCUBA Diving/ Snorkeling	Total Trip-Related
Total Expenditures	\$534,083,084	\$375,685,737	\$16,795,162	\$1,795,543,250
Total Expenditures in Puerto Rico	\$446,249,919	\$374,447,085	\$12,747,747	\$1,411,387,940
Percent of Total Expenditures in Puerto Rico	83.6%	99.7%	75.9%	78.6%

More Information:

A complete copy of the report is available at: https://www.coris.noaa.gov/activities/projects/pr_reef_ecosystem_valuation/

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Estimated Economic Impacts/Contributions (2017 dollars)				
	Employment	Labor Income	Value-Added	Output
Total Effect	29,467	\$935,952,079	\$1,345,483,394	\$1,964,633,445

Definition of Key Terms (Adapted from Day, 2011)

Employment – Employment is the total annual average jobs. This includes self-employed in addition to wage and salary employees, and all full-time, part-time, and seasonal jobs, based on a count of full-time and part-time job averages over 12 months.

Labor Income – Labor income is equivalent to employee compensation plus proprietor (business owner) income.

Intermediate Inputs – Intermediate inputs are goods and service required to create a product.

Output – Output is the total value of an industry's production, comprised of the value of intermediate inputs and value added.

Value Added – Value added demonstrates an industry's value of production over the cost of the goods and services required to make its products. Value added is often referred to as Gross Regional Product.

Non-Consumptive – Non-consumptive are activities that do not involve taking or harming the resource being used. Examples include sightseeing or photography.