

# Demographic Baseline Report of U.S. Territories and Counties Adjacent to Coral Reef Habitats





*This document was compiled for NOAA's Coral Reef Conservation Program by the Special Projects office of NOAA's National Ocean Service.*

***Suggested citation***

Crossett, K.M., C.G. Clement, S.O. Rohmann. 2008. Demographic Baseline Report of U.S. Territories and Counties Adjacent to Coral Reef Habitats. Silver Spring, MD: NOAA, National Ocean Service, Special Projects. 65 pp.

***Cover photo***

Kaneohe Bay, City and County of Honolulu, Hawaii

Credit: C. Fletcher, Coastal Geology Group, University of Hawaii

# ***Demographic Baseline Report of U.S. Territories and Counties Adjacent to Coral Reef Habitats***

Kristen M. Crossett  
Christopher G. Clement  
Steven O. Rohmann

June, 2008

National Oceanic and Atmospheric Administration  
U.S. Department of Commerce



## ***TABLE OF CONTENTS***

Introduction.....	5
Threats.....	6
National Summary.....	10
Guam.....	16
Commonwealth of the Northern Mariana Islands.....	22
American Samoa.....	28
Hawaii.....	34
Southeast Florida and the Florida Keys.....	40
U.S. Virgin Islands .....	46
Puerto Rico.....	52
Methods.....	60
End Notes.....	61
Acknowledgments.....	62
References.....	62



*A vibrant reef community in the shallow waters of the Tumon Bay Marine Preserve at Ypao Beach in Guam. Coral species in photo include the staghorn coral (*Acropora formosa*) and yellow finger coral (*Porites cylindrica*). Fish species include the yellowfin goatfish (*Mulloidichthys vanicolensis*) the raccoon butterflyfish (*Chaetodon lunula*) and the humpback dascyllus (*Dascyllus aruanus*).  
Credit: Dave Burdick*

## Introduction

Coral reef habitats found in U.S. waters less than 18 meters deep are estimated to cover over 36,813 square kilometers, an area larger than Maryland, while those in water less than 180 meters deep are estimated to cover over 143,059 square kilometers, an area larger than New York (29). The Nation's coral reef habitats have major economic value, are a natural resource that comprise tremendous biodiversity, and are known to enhance the world's fisheries, tourism, maritime and cultural heritage, and protect coastlines from storm damage (24). For example, reef-related tourism and recreation activities generated an estimated \$6.2 billion in income and supported over 250,000 full and part-time jobs in southeast Florida in 2001 (22). Further, tourist activities associated with coral reefs generate an estimated \$364 million in added value to Hawaii's economy each year (9).

U.S. coral reef habitats (and those worldwide) are, however, generally in decline and suffer from the consequences of a growing human population. Coastal development and pollution, tourism and recreation, overfishing, climate change, and marine debris—to name only a few—all contribute to coral reef ecosystem degradation (47). Consider, for example, that in southern Florida, residents spent over 14 million person-days doing activities involving coral reefs during a one year period from June 2000 to May 2001 (22). Understanding how coral reef habitats respond to the consequences of a local population and its growth is necessary for planning conservation strategies and ultimately increasing the biodiversity, resistance, and resiliency of coral reef habitats, all of which are essential attributes in combating anthropogenic stressors (23). In general, collecting information on a local population's (or stakeholders') characteristics is important to understanding how they are affected by resource management, how important a resource is to a community, and how to tailor a management strategy to stakeholder needs and backgrounds. Characteristics that are typically collected and analyzed to help understand a population include age, race, number of households, household economics, education, and residency status (6, 7).

To understand the populations that depend upon and impact valuable coral reef habitat, managers of U.S. Coral Reef Jurisdictions have recognized the need to collect socioeconomic data for communities near these areas.

To help meet this need, this report summarizes demographic baseline data for U.S. jurisdictions and counties adjacent to coral reef habitats, including those found in:

American Samoa • Guam •  
Commonwealth of the Northern Mariana Islands •  
Hawaii • U.S. Virgin Islands • Puerto Rico •  
Southeast Florida and the Florida Keys

This report compiles and synthesizes information from existing sources focusing on recent demographic, economic, and population projection variables of each area's resident population. Statistics and maps showing the extent of coral habitats in relation to these populations is also presented. Although tourism is not a focus of this report, statistics on visitor information are also presented for each jurisdiction. There are many other socioeconomic factors—including recreational activities, governance, local culture, and human health—that affect the use and condition of coral habitats. However, summarizing information on these topics is beyond the scope of this report. For further information on these topics, refer to the following reports listed in the references: Hatzios, M., 2006; Pomeroy, R.S. et al., 2004; and Dani, A. (ed.), 2003.

This report was produced in conjunction with the International Year of the Reef 2008 and is intended to complement the recently released report titled *State of the Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008*. The goal of this report is to provide consistently derived comparable demographic and economic baseline information for all U.S. Coral Reef Jurisdictions that coral managers, local officials, media, and the public can draw upon for planning and management purposes.

### *A Note About the Data*

Tremendous differences in residential population and geographic area exist among the jurisdictional study locations. As a result, it is difficult to present demographic data and maps consistently across chapters in a meaningful way. The information presented in each jurisdictional chapter should not be compared to other chapters at these varying levels of population and geography. Rather, the information is intended to provide a baseline from which to compare future population and demographic data for each study area.