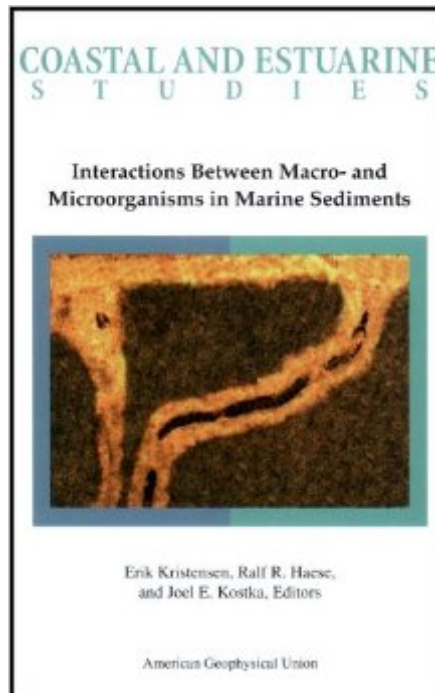


The book was found

# Coral Reefs And Climate Change: Science And Management



## Synopsis

Published by the American Geophysical Union as part of the Coastal and Estuarine Studies, Volume 61. The effects of increased atmospheric carbon dioxide and related climate change on shallow coral reefs are gaining considerable attention for scientific and economic reasons worldwide. Although increased scientific research has improved our understanding of the response of coral reefs to climate change, we still lack key information that can help guide reef management. Research and monitoring of coral reef ecosystems over the past few decades have documented two major threats related to increasing concentrations of atmospheric CO<sub>2</sub>: (1) increased sea surface temperatures and (2) increased seawater acidity (lower pH). Higher atmospheric CO<sub>2</sub> levels have resulted in rising sea surface temperatures and proven to be an acute threat to corals and other reef-dwelling organisms. Short periods (days) of elevated sea surface temperatures by as little as 1–2 °C above the normal maximum temperature has led to more frequent and more widespread episodes of coral bleaching—the expulsion of symbiotic algae. A more chronic consequence of increasing atmospheric CO<sub>2</sub> is the lowering of pH of surface waters, which affects the rate at which corals and other reef organisms secrete and build their calcium carbonate skeletons. Average pH of the surface ocean has already decreased by an estimated 0.1 unit since preindustrial times, and will continue to decline in concert with rising atmospheric CO<sub>2</sub>. These climate-related Stressors combined with other direct anthropogenic assaults, such as overfishing and pollution, weaken reef organisms and increase their susceptibility to disease.

## Book Information

Hardcover: 244 pages

Publisher: American Geophysical Union; 1 edition (January 10, 2006)

Language: English

ISBN-10: 0875903592

ISBN-13: 978-0875903590

Product Dimensions: 6.3 x 0.7 x 9.3 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,033,999 in Books (See Top 100 in Books) #76 in Books > Science & Math > Nature & Ecology > Ecosystems > Coral Reefs #2649 in Books > Science & Math > Earth Sciences > Rivers #2805 in Books > Science & Math > Earth Sciences > Climatology

[Download to continue reading...](#)

Coral Reefs and Climate Change: Science and Management Climate: Causes and Effects of Climate Change The Climate Crisis: An Introductory Guide to Climate Change Science Comics: Coral Reefs: Cities of the Ocean Climate and the Oceans (Princeton Primers in Climate) Pacific: Silicon Chips and Surfboards, Coral Reefs and Atom Bombs, Brutal Dictators, Fading Empires, and the Coming Collision of the World's Superpowers A Field Guide to Coral Reefs of the Caribbean and Florida Including Bermuda and the Bahamas (The Peterson Field Guide Series) Coral reefs: A guide to the common invertebrates and fishes of Bermuda, the Bahamas, southern Florida, the West Indies, and the Caribbean coast of ... America (Roger Tory Peterson field guides) A Field Guide to Coral Reefs: Caribbean and Florida (Peterson Field Guides) The Nature of Florida's Ocean Life : Including Coral Reefs, Gulf Stream, Sargasso Sea, and Sunken Ships Six Months in the Sandwich Islands: Among Hawaii's Palm Groves, Coral Reefs, and Volcanoes Life and Death of Coral Reefs Encyclopedia of Modern Coral Reefs: Structure, Form and Process (Encyclopedia of Earth Sciences Series) The Hawaiian Archipelago: Six Months Among the Palm Groves, Coral Reefs and Volcanoes of the Sandwich Islands Coral Reefs of the Caribbean, The Bahamas and Florida Coral Reefs National Geographic Readers: Coral Reefs Coral Reefs: In Danger (Penguin Young Readers, Level 3) The Biology of Coral Reefs (Biology of Habitats Series) Coral Reefs in the Microbial Seas

[Dmca](#)