



COOPERATIVE ECOSYSTEM STUDIES UNITS
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Climate Change for Students of All Ages: An Education Module for Pacific Island Coral Reefs

This project created a dynamic learning program that allows students and teachers to explore the coral reefs of the Pacific Islands in the context of climate change. To complete the module, the National Park Service's Pacific Island Network partnered with the Integration and Application Network at the University of Maryland Center for Environmental Science through a CESU task agreement.



■ Illustrating climate change effects on coral reefs.

The web-based, learning module called "Coral Reefs and Climate Change" allows students to learn about the ecology and vulnerability of coral reefs. (*Coral Reefs and Climate Change website at ian.umces.edu/learn/education_modules/coral_reefs_and_climate_change/get_started/*)

To create the web-based educational program, the cooperators brought scientists, teachers, science educators, and undergraduate students together at a workshop to analyze research, develop the most important messages, and design the interactive module. They used videos, games, photographs, and external links to teach about coral reef ecology, climate change impacts, cultural connections, and stewardship. The rich, vibrant graphics and easy-to-use interface makes the module

especially appealing for young audiences, though the activities are appropriate for students of all ages. The team developed the module for the classroom, and it can be used in conjunction with formal lesson plans or as stand alone activities.

The team is distributing the module through the University of Maryland Center for Environmental Science website, through a series of teacher workshops, and via DVD. Evaluation of the module's effectiveness is ongoing.

Chesapeake Watershed Cooperative Ecosystem Studies Unit

■ Project Partners



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE



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■ Project Website

ian.umces.edu/learn/education_modules/coral_reefs_and_climate_change/get_started/

■ Project Type

Education



■ **Depicting ecological trends is challenging.** In order to understand coastal trends, scientists and educators provided teachers training and resources on coral reefs and climate change. Then, the science teachers tested classroom activities. The module uses videos, games, photographs, and external links to teach. (above, Greg Kudray/NPS; reef pictures by K. Lindsey Kramer/NPS)

Fostering Reef Stewardship

The education module provides a conduit for education and outreach beyond park boundaries and traditional interpretive programs. It allows teachers and students around the world to explore their connection to coral reefs. By examining reef ecology within the context of climate change, the module fosters Reef Rangers and helps them answer the question: “How can you help coral reefs?”



Stepanie Guerra wrote this project spotlight in August 2011. It was part of an education project between Colorado State University and the CESU Network National Office. Cooperative Ecosystem Studies Units provide research, technical assistance, and education to federal land management, environmental, and research agencies and their partners. Their broad scope includes the biological, physical, social, cultural, and engineering disciplines needed to address natural and cultural resource management issues at multiple scales and in an ecosystem context. There are seventeen CESUs, each composed of federal agencies, a host university, and partner institutions, which are linked together in a CESU network. For more information, see www.cesu.org or contact Dr. Thomas E. Fish, CESU National Coordinator, at tom_fish@nps.gov.