



# Studies on Climate Change and Adaptation at VSU, DSU, and MSU: Curriculum Development and International Experience



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## Abstract

A collaboration of minority serving institutions around the Chesapeake Bay region: Virginia State University (VSU), Delaware State University (DSU), and Morgan State University (MSU) was established to provide the innovative and cohesive education and research opportunities to underrepresented groups in the climate related sciences. The activities in this collaboration include: (i) Faculty development workshop on climate studies by American Meteorological Society (AMS); (ii) Course contents development using AMS climate studies course manual and SimCLIM software; (iii) International classroom experience for students through a course, "Climate Change and Adaptation Response" at the University of Sunshine Coast, Australia.

## Introduction



A clear understanding of climate change impacts requires a climate literate public and a workforce with the scientific and technical capacity for research, adaptation, and implementation of such complex solutions.

The lack of involvement at climate science education and research has robbed the United States of an important segment of potential talent needed to address critical climate change problems.

This project strives for developing a strong interdisciplinary and cross-institution partnership that builds on past efforts. All the partners in this collaboration bring unique sets of resources, personnel, and experiences to the project.

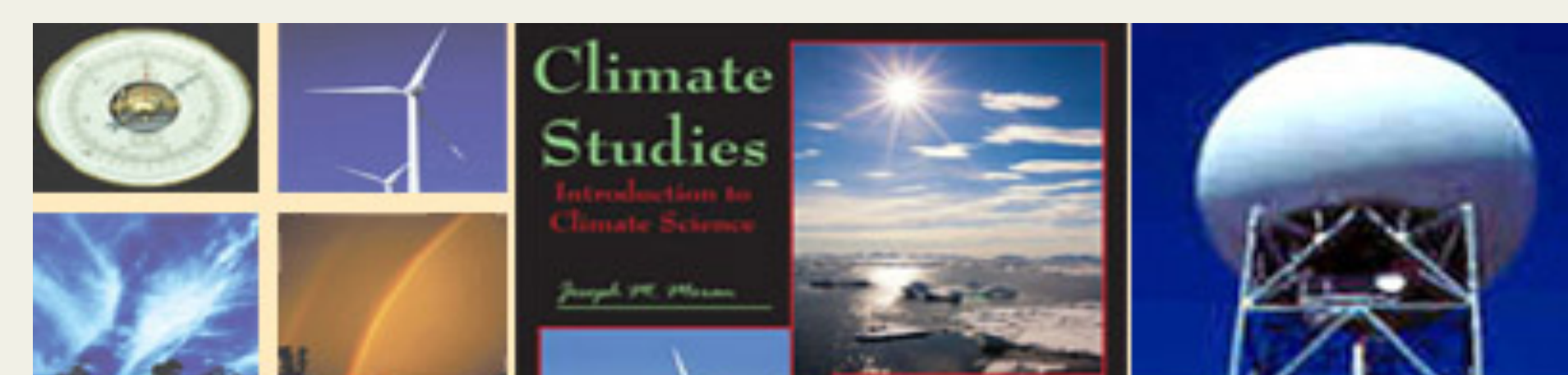


## Objectives

- ❖ Improve the climate literacy of a large number of undergraduate students using a networked, multi-institutional enhanced curricular materials adapted from climate study materials by AMS.
- ❖ Provide faculty development opportunities by attending AMS climate study workshop and SimCLIM training.
- ❖ Provide a cohort undergraduate students with hand-on experiences on climate study through international experience and summer internships.

## Project Activities

- ❖ **Curricular Developments**
  - Adapted from AMS Climate Study materials
  - Focus on the physical basis of the earth's climate system.
  - At VSU, the course, AGRI 350 (Climate Change and Adaptation Response Science) was approved in fall, 2012. It will be offered in spring and fall, 2013.
  - At MSU, BIOL498 (Internship course) was offered in fall 2012. Formal Climate Study course proposal in the process through the Curriculum Committee.
  - At DSU, Climate Change and Adaptation course is planned to be implemented in spring 2012. Formal approval of the course is in process through the Curriculum Committee.



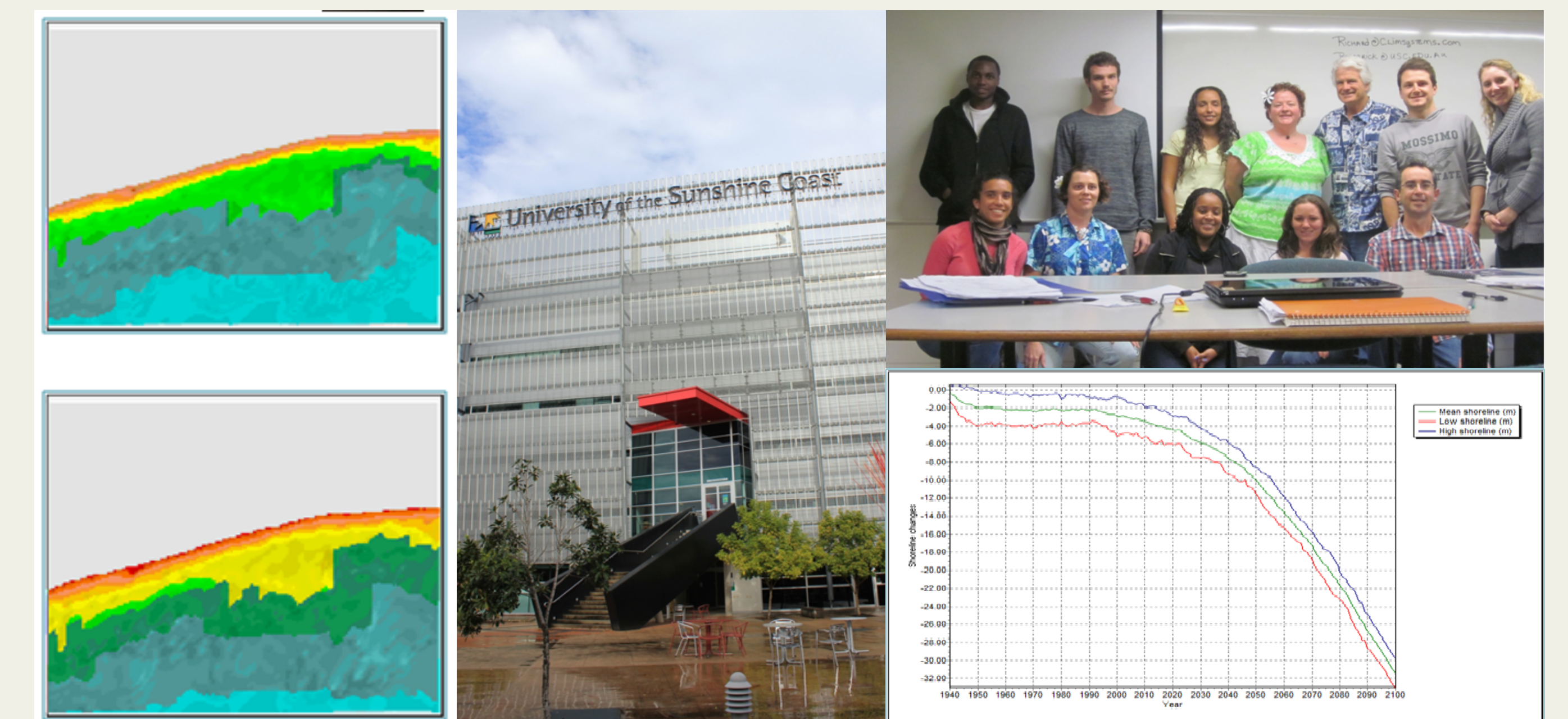
## Faculty Developments

- AMS Climate Study Workshop in May 2012.
- SimCLIM training in July 2012.
- NCAR Workshop of Enhancing Diversity in Climate Change Science and Application in August 2012.
- NASA Innovations in Climate Education Summer Workshop in August 2012.



## International Experiences

- University of Sunshine Coast, Australia in July 2012.
- Students earned 3 credits.
- Group project of the impacts of climate change on coastal ecosystem with SimCLIM simulation.
- Field trips to various ecosystems: tropical rainforest, barrier island, and coral reef etc.



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