

**Climate Change Symposium, Science Teacher Professional Development  
Health Professions, Nursing, and Pharmacy (HPNP) Building, University of Florida  
May 24, 2013**



**Goal**

To increase comfort and competence in teaching about climate change

**Objectives**

1. To gain appreciation for and knowledge about locally relevant evidence of climate change and projected impacts of realistic future scenarios
2. To enhance abilities to convey climate change to students with pedagogical content knowledge and appropriate teaching strategies

**Agenda**

<b>9:00</b>	<b>Morning Plenary (Auditorium, HPNP Building Room 1404)</b>
<b>9:00</b>	<b>Welcome and Orientation to the Day</b> <i>Martha Monroe, Professor, School of Forest Resources and Conservation</i> <i>Mary Jo Koroly, Director, Center for Precollegiate Education and Training</i>
<b>9:30</b>	<b>What We Know about Teaching Students about Climate Change</b> <i>Martha Monroe, Professor, School of Forest Resources and Conservation</i>
<b>9:45</b>	<b>Climate Change and Its Impacts on Marine Organisms and Ecosystems</b> <i>Don Behringer, Assistant Professor, Fisheries and Aquatic Sciences Program, School of Forest Resources and Conservation</i>

**10:30 Break (Snacks in Classroom G-111)**

<b>10:45</b>	<b>Concurrent Session A (Classrooms, HPNP Building)</b>
<b>G-108</b>	<b>Coral Reefs and Climate</b> <i>Chelsey Crandall, Research Assistant, School of Natural Resources and Environment</i> This session will engage teachers in an in-depth discussion of the impacts of climate change on coral reefs and introduce you to several relevant classroom activities.
<b>G-109</b>	<b>Climate and Agriculture: Variability, Change, and What Can Be Done To Be Prepared</b> <i>Daniel Dourte, Research and Extension Assistant, Department of Agriculture and Biological Engineering</i> Variability and changes in climate can present significant challenges for farmers and others in the agricultural industry. This session explores 1) the changes in climate that might pose the greatest challenges for agriculture and 2) the ways that farm management can be changed to make farming systems less affected by a changing and variable climate.
<b>G-110</b>	<b>Leveraging Easily Accessible Web-Based Geospatial Tools and Datasets to Teach Climate Change (and Other Subjects!)</b> <i>Bob Swett, Associate Professor, School of Forest Resources and Conservation</i> <i>Corina Guevara, GIS Analyst and Instructor</i> Location! Location! Location! Spatial literacy and enhancing spatial thinking skills are increasingly important for making good decisions and resolving local and global problems (such as climate change). Participants will be introduced to such tools and data by engaging in a hands-on experience.
<b>1102 (upstairs)</b>	<b>Why So Many Perceptions about Climate?</b> <i>Martha Monroe, Professor, School of Forest Resources and Conservation</i> Understanding the variety of ways people think about climate change and the nuggets of facts that underlie these perceptions can help reduce frustration in the classroom. This session will provide an overview and exercises that can help students recognize faulty assumptions and common ground.

**11:30 Lunch (Served in Classroom G-111, Tables available outside and in Classrooms G-108, G-109, G-112)**

**Thanks to the symposium sponsors!**



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**12:30 Concurrent Session B (Classrooms, HPNP Building)**

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- G-108 Potential Effects of Sea Level Rise on Florida's Coastal Ecosystems**  
*Whitney Gray, Sea Level Rise Coordinator, FL Fish and Wildlife Conservation Commission*  
This presentation will examine how sea level rise may change some of Florida's important coastal ecosystems. Examples of how this is being measured and planned for will be included. Especially important is that the coastline isn't like the edge of a bathtub; gradually sloping shores mean that sea level rise moves water inland!
- G-109 Adaptation to Climate in Southern Pines**  
*Gary Peter, Professor, School of Forest Resources and Conservation*  
*Jianzing Zhang, Graduate Assistant, School of Forest Resources and Conservation*  
This session will explain our understanding of how climate has shaped the genetic diversity of southern pines and how adaptability to climate and soils is important for growth and survival.
- G-110 Climate Models and Ecosystems on the Move**  
*Tim Martin, Professor, School of Forest Resources and Conservation*  
Models for climate change are numerous and varied. This session will help you explain and demonstrate the differences between some of them. A webquest exercise will allow you to see how forest ecosystems might shift with different projections of climate change.
- G-112 Carbon: Cycling, Sequestration, and Measuring It in Trees**  
*Maxwell Wightman, Research Assistant, School of Forest Resources and Conservation*  
*Anthony Fields, PINEMAP Intern, Virginia State University*  
In this session we will review the carbon cycle and discuss the role of ecosystems in either storing or releasing carbon. Project Learning Tree activities focusing on these topics, such as measuring the amount of carbon stored in trees, will then be reviewed.
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**1:15 Concurrent Session C (Classrooms, HPNP Building)**

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- G-108 Forest Health and Climate Change**  
*Jeffrey Eickwort, Biologist and Supervisor, FL Forest Service, Forest Health Section*  
This presentation discusses how the prevalence, range, and impacts of insects and diseases that affect trees and forests may respond to a changing climate. We will look at some ways that these changes are already being observed, and discuss what the future consequences may be.
- G-109 Florida's Dynamic Forests: Building a Forest System Model**  
*Chris Demers, Extension Associate, School of Forest Resources and Conservation*  
This session will focus on Florida forests and how forests grow and respond to environmental changes. We will begin with a brief presentation on Florida's forests: where they are, who owns and manages them and their contributions to Florida's economy. Then we'll develop a model of a pine forest that illustrates how the forest responds to a set of changes in environmental conditions.
- G-110 Forest Carbon and Products over Time**  
*Tim Martin, Professor, School of Forest Resources and Conservation*  
Using Life Cycle Analysis to track carbon through a system yields some interesting results when considering the substitution effect – carbon not emitted through the use of wood products. This overview will include an interactive exercise for students.
- G-112 Sea Level Rise and Coastal Community Planning**  
*Kathryn Frank, Assistant Professor, Department of Urban and Regional Planning*  
Florida's many coastal communities, large and small, are vulnerable to sea level rise due to low elevation, reliance on groundwater, and significant assets. This session will present two engaging activities to teach K-12 students about sea level rise adaptation strategies and participation in planning.
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**2:00 Break (Snacks in Classroom G-111)**

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**2:30 Afternoon Plenary (Auditorium, HPNP Building Room 1404)**

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- 2:30 Discussion: Reflections, Surprises, Gains, Needs, Questions**  
*Martha Monroe, Professor, School of Forest Resources and Conservation*
- 2:45 Climate Change and Forests**  
*Tim Martin, Professor, School of Forest Resources and Conservation*  
*Maxwell Wightman, Research Assistant, School of Forest Resources and Conservation*
- 3:30 Wrap-up and Evaluation**
- 4:00 Safe Travels**
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Symposium Handouts can be found at:

[www.pinemap.org/education/secondary/cc-symposium](http://www.pinemap.org/education/secondary/cc-symposium)