



FLORIDA CLIMATE INSTITUTE

University of Florida and The Florida State University

# The Florida Climate Institute



## Science for Societal Responses to a Changing and Uncertain Climate A Work In Progress

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# Outline

- Why an Institute?
- An evolutionary process
  - The Southeast Climate Consortium
  - BOG Center of Excellence Proposal
- FCI Mission
- Envisioned FCI niche
- Current Status & Plans





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# Why an Institute?

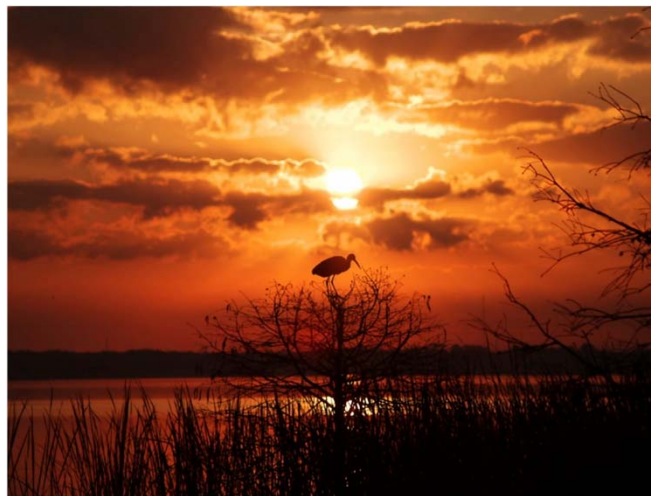
- The major challenge of climate change, climate variability, and sea level rise to society
- Major progress on understanding the global climate and its changes, but less on changes at local to regional scales
- Lack of understanding of how society should respond to climate change information at local to regional scales and at multiple time scales over which decisions, policies are made
- Many questions without answers in Florida on climate change, sea level rise, and associated decisions and policies
- Success of the SECC during the last 10 years
- Increase awareness of and cooperation among disparate climate projects in and among our universities



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# An Evolutionary Process

- The Southeast Climate Consortium 
- A joint proposal to the Florida Board of Governors for a “Center of Excellence for Climate Technologies and Preparedness”
- Florida Climate Institute initiative



**NOAA-Sponsored Regional Integrated Science  
Assessment (RISA) Center; Funding also from  
USDA-RMA and USDA-NIFA, ...**

- 1998 – the Florida Climate Institute
  - Climate science – FSU
  - Agricultural responses – UF
  - Social, economic issues – UM
- 2003 – Broadened to SECC
  - U Georgia
  - U Alabama-Huntsville
  - Auburn U
  - North Carolina State U



## SECC

- Seasonal climate variability and forecast information use
- Emphasis on agriculture, water resources management
- Research – climate risk management, decision analysis framework, assessment of stakeholders and SECC products
- Interdisciplinary, about 60+ scientists
- Extension – integral part of program via climate extension specialists



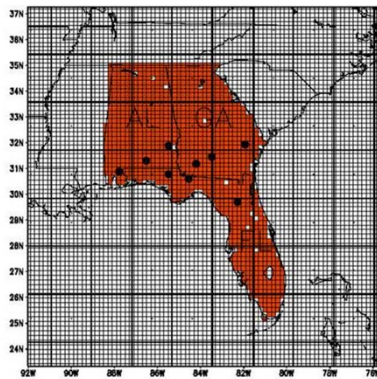




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Southeast  
Climate Consortium

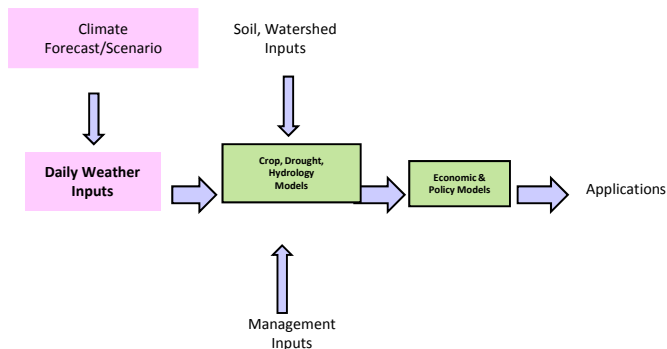


**Many Projects Ongoing:  
Some cutting edge; others  
address immediate needs**



**Integrating Climate, Agricultural,  
Hydrology, Economic Models**

**CARBON FOOTPRINT BASELINE  
FOR COW CALF PRODUCTION  
SYSTEMS: BUCK ISLAND RANCH**



Marta M. Kohmann, Clyde W.  
Fraisse



MacArthur Agro-ecology  
Research Center  
a division of Archbold  
Expeditions

Operational since  
August 2008

Hosted by Florida  
Cooperative  
Extension at UF

Open-Source  
AgroClimate  
Project, multiple  
states, countries



AgroClimate - A service of the Southeast Climate Consortium - AgroClimate provides important new tools to help agricultural producers ...

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**AgroClimate**  
A Service of the Southeast Climate Consortium

**Current Climate Phase: Neutral**  
A transition from La Nina to neutral conditions occurred during June 2008.

**News**

**AgClimate.org is now AgroClimate.org »**

Making Climate Forecasting More Useful »

Strong Start Increases NOAA's Confidence for Above-Normal Atlantic Hurricane Season »

Global Temperature Sets Record »

Chance of Midwest Drought »

Flint River Basin Drought Declaration Not Present: Download PDF

La Niña Conditions Peak: »

More News »

**Outlooks**

**Summer / Fall Climate Outlook (August 6, 2008):** Drought continues in Georgia and Alabama. Like we predicted back in the spring...

**2008 Hurricane Forecast (August 6, 2008):** hurricane forecasts for the Atlantic basin produced by Colorado State University and NOAA...

**Climate Phase Forecast (August 6, 2008):** Our assessment of the current and forecasted state of the tropical Pacific Ocean. [Read Article »](#)

[Outlook Archive »](#)

**Climate Phase Forecast for Sep-Oct-Nov**

Neutral (70%)  
La Nina (10%)  
El Nino (20%)

Source: The International Research Institute for Climate and Society

AgroClimate Workshop - Griffin Georgia  
February 13, 2008

**State Weather Networks**

GAEMN FAWN

SECC CONSORTIUM MEMBERS

Read agroclimate.org



# Proposed Center of Excellence for Climate Technologies & Preparedness (2007/8)

## What We Learned: Strong Interest in:

- Developing market advantage re: carbon footprint
- Biofuel production
- Climate forecasts or projections from weeks to decades
- Technologies for reducing risks to climate variability and to climate change
- Carbon sequestration in forestry, agriculture
- Land use, management for environmental services, payments
- Sea level rise
- Recreation impacts and adaptation
- Drought, hurricane frequency
- Water policy
- Water withdrawal, allocation





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# Florida Climate Institute Mission

To create economic opportunities and environmental benefits to society at local to regional scales (in Florida and beyond) by providing reliable scientific information about climate change and sea level rise and by developing technologies and policy options for societal responses to those changes.

# Goals

The FCI will foster interdisciplinary research, education, and extension to:

- Improve understanding of the processes and effects of climate variability, climate change, and sea level rise on the economy and on natural and human-built systems
- Develop technologies and information for reducing economic and environmental risks in managed and natural systems and to support environmental policies
- Engage Floridians in research, extension and education programs for enhancing adaptive capacity and responses to associated climatic risks



# Objectives

- Develop & make widely available climate change and climate variability scenarios & datasets
- Develop innovative approaches & tools for incorporating climate change & sea level rise into policy and decision making processes for land, water, and natural resources
- Provide information for use by different sectors to assess benefits and tradeoffs among different decision and policy response options
- Develop methods that use climate change information to build resiliency and adaptive capacity at local to regional scales that are globally applicable



# Envisioned FCI Niche

- Local to regional scales (in Florida and beyond)
- Temporal scales of weeks to seasons, years, decades, and beyond, based on societal needs
- Globally applicable methods and tools
- Emphasis on societal “responses” to climate variability/change, sea level rise (adaptation, mitigation, and others)
- Partnerships among with boundary organizations, private sector, and public agencies
- Interdisciplinary – biological, physical, social scientists
- Technologies and decision support system that bring about economic opportunities, sustainable development



# Why Focus on Responses?

- Reliable climate information, honest broker
- Impacts on biological, agricultural, ecological, hydrological, built systems
- Adaptation by farmers, water, land, and natural system managers, city/county/state agencies, businesses, etc.
- Mitigation options and opportunities
- Policy options



# Current Status

- Seed funding provided by UF and FSU administration
- Paperwork being finalized for official designation as a joint institute in the SUS
- Plans underway to submit various proposals for federal funding and to co-locate UF component with the Water Institute
- Future requests for expanding the institute via state funding, when available



# Next Steps & Discussion



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