Welcome

Welcome and thank you for joining us for our first conference on climate change in Florida! Co-chaired by the Center for Environmental Studies (CES) at Florida Atlantic University, and the Dr. Kiran C. Patel Center for Global Solutions at the University of South Florida, our goals for this first time conference are to provide the latest scientific findings and identify impacts and actions that should be taken to respond to climate change. When we held an invited workshop on this topic sixteen months ago, many researchers, state agencies, counties, and municipalities were already hard at work. Much of their experience and expertise helped to form this exciting conference program. To those who are with us today, thank you!

Since that workshop there has been an increasing interest in climate change. In this year’s first report Florida’s Century Commission has placed climate change high on its agenda. Governor Charlie Crist has initiated a climate change summit to explore technologies and strategies to reduce greenhouse gases. Chief Financial Officer Alex Sink and Commissioner Charles Bronson are holding a series of climate change workshops. And the findings of the Intergovernmental Panel on Climate Change confirm the need to reduce human impacts on the atmosphere and to plan ways to mitigate the current and future impacts on people and the environment.

As a conference participant, we hope you will interact with speakers and sponsors throughout the program. We also encourage you to offer your opinion during the Q&As as well as in the working groups that will provide recommendations to the Century Commission and decision makers in the State on how best to integrate the dynamic of climate change in the environment, economy, and social fabric of the State. We anticipate this conference will be the beginning of a statewide effort that continues to address concerns and make positive changes with your help.

Sincerely,

Leonard Berry  
Center for Environmental Studies  

Thomas L. Crisman  
Patel Center for Global Solutions

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**Conference Program Committee:**

Ricardo Alvarez, Florida International University  
Ana Puszkin-Chevin, Center for Urban and Environmental Solutions at Florida Atlantic University  
Doreen DiCarlo, Florida Center for Environmental Studies (conference coordinator)  
Susan Glickman, Natural Resource Defense Council  
Howard P. Hanson, Florida Atlantic University  
Mark Harwell, Harwell Gentile & Associates, LLC  
Greg Hendricks, USDA/NRCS  
Annette Hugues, British Consulate  
Jo Ann Jolley, Florida Center for Environmental Studies  

David Major, Columbia University  
Peter Merritt, Treasure Coast Regional Planning Council  
Fernando R. Miralles-Wilhelm, Florida International University  
Jim Murley, Center for Urban and Environmental Solutions  
Jim Murrian, The Nature Conservancy  
Richard S. Owen, Southwest Florida Water Management District  
Jeff Schmidt, USDA, NRCS  
Steve Seibert, Century Commission for a Sustainable Florida
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Florida Wildlife Federation
850-656-7113

Florida Local Environmental Resource Agencies
850-561-0904
www.flera.org

Please visit exhibitors during the conference, Wednesday, May 9 through Friday, May 11.
Poster Presenters

We Must Take Action Now!
Ricardo A. Alvarez

Southeast Climate Consortium
Keith Ingram, Southeast Climate Consortium

Climate Change and Sea Level Rise in Florida, Series of Educational Roundtables
Kristy J. Buckley, Climate Institute

Preservice Teachers’ Ideas about Climate Change
Julie Lambert, Florida Atlantic University
George DeBoer, American Association for the Advancement of Science

Stakeholder Participation Methods Used in Research and Development of AgClimate: A Climate-based Decision Support System for Agriculture
Norman E. Breuer, University of Miami and University of Florida
C. Roncoli and T. Crane, University of Georgia
K. Broad, University of Miami
K. T. Ingram, University of Florida

FAMU School of Architecture Addresses Climate Change Awareness and Design Responsibility
Elizabeth Lewis, Florida A&M University

Renewable Ocean Energy for Florida
Frederick Driscoll, Florida Atlantic University

Climate Variability in the Florida Keys: Implications for Coral Reefs
Inia Soto, Christopher S. Moses, Frank Muller-Karger, Chuanmin Hu, University of South Florida

Understanding and Enhancing the Resilience of Florida’s Coral Reefs to Climate Change:
Linking Research, Resource Managers and Users
Eric Mielbrecht, Emerald Coast Environmental Consulting
Alex Score, World Wildlife Fund
Dan Wagner, Florida Institute of Technology

Monitoring Post-freeze Recovery of Mangroves along the East Coast of Florida
Sue Leithoff and John Weishampel, University of Central Florida

Hydrologic Response of Suwannee River Basin in Florida to Climate Variability
Nitesh Tripathi, Peter E. Hildebrand, James W. Jones, Grenville Barnes, University of Florida

Implications of Climate Change for Tourism in the Southeast United States
Sarah Nicholls, Michigan State University
Bas Amelung, University of Maastricht

Climate Science and Risk Management: Adapting New York City’s Water Supply and Wastewater Treatment Systems to Climate Change
David Major, Cynthia Rosenzweig, Radley Horton, Columbia University

Meet the presenters Wednesday, May 9, from 4:45 to 6:30.
WEDNESDAY, MAY 9

9:00 - 11:00 AM
Welcome (Costa Del Sol Grand Ballroom, Salons E-H)
* Conference Facilitators: Leonard Berry, Center for Environmental Studies at Florida Atlantic University and Thomas L. Crisman, Dr. Kiran C. Patel Center for Global Solutions, University of South Florida
* President Frank Brogan, Florida Atlantic University
* President Judy Genshaft, University of South Florida
* Executive Director, Betty Castor, Dr. Kiran C. Patel Center for Global Solutions

General Session (Salons E-H)
* Mohamed El-Ashry, Former Chief Executive Officer and Chair, Global Environmental Facility, "The Challenge of Responding to Climate Change"
* Howard Hanson, Associate Vice President for Research, Florida Atlantic University
* Intergovernmental Panel on Climate Change 2007 Setting the Stage
* Thomas L. Crisman, Patel Professor of Environment, Dr. Kiran C. Patel Center for Global Solutions, University of South Florida "Florida Climate Change"

11:00 - 11:15 AM
Refreshment Break (Exhibit Area/Ballroom Foyer)

11:15 - 12:15 PM
Concurrent Sessions

Impacts & Responses (Salon E)
Policy Issues
* History: Susan Glickman, Natural Resources Defense Council
* State Programs: Tom Peterson, Center for Climate Change
* Policy Making: George A. Gonzalez, University of Miami
* AB 32 - Global Warming Solutions Act: Nick Boillman, Center for Urban and Environmental Solutions, Florida Atlantic University

A brief history of climate change policy and an overview of current regional and national programs. This session will also cover the economic considerations that must be addressed when developing policy and the various policy options for addressing climate change. In covering these topics the session will focus on Florida-specific opportunities for developing effective climate change policies.

Moderator: Jim Murley, Center for Urban and Environmental Solutions at Florida Atlantic University

Science (Salons F-H)
Historical Perspective
* The Interplay of Tectonics, Climate Change and Sea Level: Florida's Transformation over Geologic Time John Jaeger, University of Florida
* Reconstructing Drought for Central Florida: The Last 2,000 Years, Philip van Beynen, University of South Florida

Moderator: Mark Brenner, University of Florida

12:15 - 1:30 PM
Lunch (included) (Salons A-D)
Keynote Speaker Alex Sink, Chief Financial Officer, State of Florida
### Agenda

**WEDNESDAY, MAY 9**

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<tr>
<th>Time</th>
<th>Concurrent Sessions</th>
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<tr>
<td>1:30-2:30 PM</td>
<td><strong>Impacts &amp; Responses</strong>  (Salon E) <em>Translating Science into Action</em> &lt;br&gt; - Infrastructure: David Major, Columbia University &lt;br&gt; - Building Design Criteria for Climate Change: Ricardo Alvarez, Florida International University &lt;br&gt; - Education: Glenn Thomas, Florida Atlantic University &lt;br&gt; - Insurance: Alex Sink, Chief Financial Officer, State of Florida &lt;br&gt; Moving climate change science into action in society—infrastructure design, building standards, insurance, and education. &lt;br&gt; Moderator: David Major, Columbia University</td>
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<td><strong>Science</strong>  (Salons F-H) <em>Historical Perspective continued.</em> &lt;br&gt; - People and Climates Over 12,000 Years of Florida Prehistory, Nancy White, University of South Florida &lt;br&gt; - Holocene Climate Change in Florida, Mark Brenner, University of Florida &lt;br&gt; Moderator: Mark Brenner, University of Florida</td>
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<td>2:30-3:05 PM</td>
<td><strong>Refreshment Break</strong>  (Exhibit Area/Ballroom Foyer)</td>
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<td>3:05-4:45 PM</td>
<td><strong>Impacts &amp; Responses</strong>  (Salon E) <em>Planning for Climate Change</em> &lt;br&gt; - Water: Paul Trimble, South Florida Water Management District &lt;br&gt; - Florida Reefs: Phil Kramer, The Nature Conservancy, Florida Reef Resilience Project &lt;br&gt; - Climate and Public Health - Potential Impacts: Andy Reich, Florida Department of Health &lt;br&gt; Minimization and adaptation in Florida; limiting negative affects and adapting to climate change. How do we respond to areas of concerns and what kinds of decisions should be made that include climate change factors. &lt;br&gt; Moderator: Peter Merritt, Treasure Coast Regional Planning Council</td>
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<td><strong>Science</strong>  (Salons F-H) <em>Sensitive Ecosystems and Components</em> &lt;br&gt; - Climate Change, Coral Bleaching and Florida’s Coral Reefs: The Canaries are Dying, C. Mark Eakin, NOAA &lt;br&gt; - Intensification of Climate Change Impacts on Ecosystem Components of the Florida Keys, Billy Causey, NOAA &lt;br&gt; - Climate Envelope Model to Predict Effects of Warming and Drying Scenarios on Florida Ecosystems, Dennis Hardin, Florida Division of Forestry &lt;br&gt; - The Realities and Opportunities of Climate Change for Florida, Stephen Mulkey, University of Florida &lt;br&gt; Moderator: Lakhdar Boukerrou, Center for Environmental Studies</td>
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<tr>
<td>4:45-6:30 PM</td>
<td><strong>Welcome Exhibitor and Poster Reception</strong>  (Ballroom Foyer and La Fuente Courtyard) <em>(hors d’oeuvres and beverages)</em></td>
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### Agenda

**THURSDAY, MAY 10**

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<th>Time</th>
<th>Session</th>
<th>Location</th>
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<td>7:15 - 8:15 AM</td>
<td>Refreshments (Exhibit Area/Ballroom Foyer)</td>
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<tr>
<td>8:15 - 8:45 AM</td>
<td>General Session - Climate Change: Challenge and Response (Salons E-H)</td>
<td>Thomas Pravda, Advisor to Special Representative for Climate Change in the United Kingdom</td>
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<td>9:00-10:15 AM</td>
<td>Concurrent Sessions</td>
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<td><strong>Impacts &amp; Responses</strong> (Salon E)</td>
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<td>Current Initiatives and Technologies</td>
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<td></td>
<td>* Energy: Florida Solar Energy Center, James Fenton</td>
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<td>* Agriculture: Florida Farm to Fuel Initiative, Jay Levenstein, FDACS</td>
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<td>* Biogas and Energy: University of Florida, Ann C. Wilkie</td>
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<td>* Energy: Florida Power and Light, Rayburn L. Butts</td>
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<td></td>
<td>A look at current initiatives and available and emerging technologies for reducing anthropogenic contributions to climate change. (reduction of emissions, technological change, alternative fuels).</td>
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<td>Moderator: Barry Heimlich, Florida Climate Imperative</td>
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<td>10:15-10:35 AM</td>
<td>Refreshment Break (Exhibit Area/Ballroom Foyer)</td>
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<td>10:35-12:05 PM</td>
<td>Concurrent Sessions</td>
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<td><strong>Impacts &amp; Responses</strong> (Salon E)</td>
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<td>Partnerships for Success</td>
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<td>* EPA Climate Protection Partnerships, Kevin Rosseel, Environmental Protection Agency</td>
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<td>* A Regional Perspective, Richard Owen, Southwest Florida Water Management District</td>
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<td>* Climate Change Mitigation and Adaptation Efforts in Miami-Dade County, Nichole L. Hefty, Miami-Dade, Environmental Resources Management</td>
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<td>* City of Tampa, Mayor Pam Iorio</td>
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<td>Which agencies and entities are the most appropriate to address impacts on the natural and human systems resulting from climate change and how do people/groups/ agencies work together.</td>
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<td>Moderator: Len Berry, Center for Environmental Studies(CES)</td>
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<td><strong>Science</strong> (Salons F-H)</td>
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<td>Evidence for Recent Climate Change</td>
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<td>* Lake Temperature Trends as Indicators for Climate Change in Florida, Danny Coenen, University of Florida</td>
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<td>* Simplistic predictions, confounding effects, and complex responses; climate tales from Archbold Biological Station, Hilary Swain, Archbold Biological Station</td>
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<td>* Sea Level Rise and Coastal Forest Decline Along Florida's Big Bend, Frances E. Putz, University of Florida</td>
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<td>Moderator: Hilary Swain, Archbold Biological Station</td>
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<td><strong>Science</strong> (Salons F-H)</td>
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<td>Climate Variability: Initiating a Social Science Paradigm Shift</td>
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<td>* Introduction: Ana Puszkin-Chevlin, Center for Urban and Environmental Solutions at Florida Atlantic University</td>
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<td>* Climate Change as a Social Issue: Elizabeth L. Malone, Joint Global Change Research Institute</td>
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<td>* Explaining Local Commitment to Climate Change Policy in the United States: Samuel D. Brody, Texas A&amp;M</td>
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<td>* Linking Planning to Sustainability: Joyce Levine, Florida Atlantic University</td>
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<td>Moderator: Ana Puszkin-Chevlin, Center for Urban and Environmental Solutions at Florida Atlantic University</td>
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### THURSDAY, MAY 10

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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| 12:15-1:30 PM | Lunch (included)  
Keynote Speaker Michael Sole, Secretary, Department of Environmental Protection | Salons A-D       |
| 1:30 - 2:00 PM | Century Commission for a Sustainable Florida: Steve Seibert, Executive Director  
Overview and Invitation to Participate in Discussion Groups: Len Berry, CES | Salons E-H       |
| 2:00 - 5:00 PM | Be a part of the solution! Here’s your opportunity to contribute to positive outcomes by participating in one of the three discussion groups. Results will be printed in the post-conference summary and will be provided to the Century Commission.  
- **Environmental - Facilitated by Nick Aumen, Everglades National Park** (Marbella Room)  
The climate change discussion group focused on environmental issues will assess what was presented and learned during the preceding days of the conference, and will analyze and synthesize this information in a group setting. The goal is to identify, discuss, and refine a number of issues related to achieving environmental sustainability within the context of global climate change. Particular attention will be paid to the overlapping and sometimes competing issues of Florida's rapid population growth, sufficient quantity and quality of drinking water, food and energy needs, and efforts to conserve, protect, and restore natural lands and waters.  
- **Economic - Facilitated by Chris Walker, The Climate Group** (Salon C)  
A focused discussion on the economic dimensions of climate change for the state of Florida. What are the financial threats and opportunities facing the State, its ability to grow and its key industries (e.g. agricultural, tourism, real estate) from a climate changed future? The goal is to identify, discuss, and refine the activities that make the most economic sense for the State to simultaneously mitigate climate risk while adapting to a climate changed environment.  
- **Social - Facilitated by: Art Evans, Florida Atlantic University** (Livorno Room)  
A discussion on the anticipated social effects of climate change within the state of Florida is the purpose this workshop. Climate change may significantly impact critical institutions such as health, housing, disaster preparedness and transportation. Complicating this picture is the fact that the social effects of climate change will not be democratic because some groups will inevitably fare better than others. Currently, Florida's population is extremely diversified both ethnically and spatially. Social issues related to climate change will need to be dealt with in the context of this diverse population with consideration for social class, race, ethnicity, gender and age. As Florida experiences climate change appreciably, it will be necessary to have in place adaptive responses to deal with the social changes that will inevitably follow in its wake. |

### FRIDAY, MAY 11

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<th>Time</th>
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<th>Location</th>
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<tr>
<td>7:15 - 8:15 AM</td>
<td>Refreshments</td>
<td>Exhibit Area/Ballroom Foyer</td>
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<td>8:15 - 9:15 AM</td>
<td>Reports on Discussion Group Outcomes (Nick Aumen, Chris Walker, Art Evans)</td>
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<tr>
<td>9:15-10:15 AM</td>
<td>Century Commission Overview; Discussion and Recommendations</td>
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<td>10:15-10:30 AM</td>
<td>Refreshment Break</td>
<td>Exhibit Area/Ballroom Foyer</td>
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<tr>
<td>10:30-12:00 PM</td>
<td>Building Climate Change into Florida’s Future</td>
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- Senator Michael S. Bennett, Florida Senate District 21  
- Governor Charlie Crist, Florida (invited)
Hotel Floor Plan

Costa del Sol Ballroom

Salon A
Salon B
Salon C

Salon D
Salon E
Salon F
Salon G
Salon H

Pre-Function

Outside ~ Garden Court

La Fuente

1st LEVEL

2nd LEVEL

Genoa
Kalamata

Mezzanine Foyer

Livorno
Marbella
Sergio Brdsm