

SCIENTISTS ON CLIMATE SCIENCE AND MEANINGFUL SOLUTIONS TO CLIMATE CHANGE IN FLORIDA

An open letter to policy makers in the state of Florida

September 18, 2014

This statement reflects on the recent discussion with Florida Governor Rick Scott and a number of scientists on climate science and Governor Scott's call for finding solutions.

We are grateful the Governor took time to meet with scientists to learn about the science behind climate change. We share Governor Scott's desire for solutions. It is crucial for policymakers to understand that human activity is affecting the composition of the atmosphere which will lead to adverse effects on human economies, health and well being. Once policy makers understand this problem, it follows that we are capable of taking action for both adaptation and to prevent the problem from accelerating and rising the price for the solutions which ultimately will be emplaced.

Solutions come in many forms. As scientists, including co-authors of the Florida section of the recently-released [National Climate Assessment](#) (NCA), we believe we need to address the threat posed by climate change. There is a clear need to develop a state plan to both mitigate and adapt to the threats to Florida's communities, businesses, tourism industry and protect the state's economic well-being. One example of a collaborative solutions approach was drafted by the Florida Climate Institute (FCI) and has been submitted to the Board of Governors for review. This multi-university center aims to partner with businesses and agencies to help Floridians navigate the inevitable changes our state will bear.

As scientists, we would like the opportunity to contribute scientific information to a plan which would address what is at stake for our state. One solution is the recently announced carbon pollution limits from the US Environmental Protection Agency (EPA). Each state will be called on to implement reductions with Florida's carbon intensity rate reduction target at 38 percent in 2030, from 2012 levels. We expect that Florida will have a transparent planning process to create a state implementation plan to meet these new standards.

In addition clear attention to adaptation planning decisions that state agencies are already considering must be coordinated in a transparent fashion. As you may be aware, the NCA report has concluded that climate change "is already affecting the American people in far-reaching ways." Of particular interest to Floridians are rising sea levels. The report further found "unambiguous" evidence that human activities – the burning of fossil fuels, the clearing of forests – are the cause. The NCA also found we are "exceptionally vulnerable to sea level rise, extreme heat events, and decreased water availability" caused by climate change, with "residents in some areas such as Miami Beach [already] experiencing seawater flooding their streets."

Indeed, Florida is one of the most vulnerable places in the country with respect to climate change, with southeastern Florida of particular concern.

In that spirit, we urge the participation of scientists at a Climate Science & Solutions Summit to take place this fall. We hope The Governor, The Florida Cabinet, State Legislative leaders, Members of Congress, local elected and regulators will attend. We suggest that this proposed summit would bring together not only scientists like us, studying the cause of the problem, but also engineers and entrepreneurs that have outstanding, job-creating solutions to put on the table. We stand ready to discuss advances in clean energy options, such as energy efficiency, solar and wind power. These energy sources offer the best potential for meeting the carbon limits cost effectively and reducing the future impacts of climate change on Florida with the added benefit of creating jobs and keeping energy dollars in the state.

The problem of climate change is not a hypothetical. Thousands of scientists have studied the issue from a variety of angles and disciplines over many decades. Those of us signing this statement have spent hundreds of years combined studying this problem, not from any partisan political perspective, but as scientists - seekers of evidence and explanations. As a result, we feel uniquely qualified to assist policy makers in finding solutions to adapt and mitigate so we can protect the people of this state and their enterprises and property.

It is crucial for policymakers to have a full access to scientific expertise regarding the current and future threats to Florida. Key to that is detailed information regarding the specific climate change impacts already affecting Florida so optimal plans for mitigating future impacts may be formulated, while simultaneously preparing Florida's communities and businesses for the changes already underway, and almost certain to accelerate in coming years.

Sincerely,

Senthold Asseng, Ph.D., Professor
Department of Agricultural & Biological Engineering
University of Florida

Donald M. Axelrad, Ph.D., Assistant Professor
Institute of Public Health
Florida A&M University

Andrew Bakun, Ph.D., Professor
Department of Marine Ecosystems and Society
Rosenstiel School of Marine and Atmospheric Science
University of Miami

Ray Bellamy, M.D., Surgery Clerkship Director
College of Medicine
Florida State University

Leonard Berry, Ph.D., Distinguished University Professor Emeritus
Charles E. Schmidt College of Science
Former Director, Center for Environmental Studies
Florida Atlantic University

Kenny Broad, Ph.D., Professor and Chair
Department of Marine Ecosystems and Society
Rosenstiel School of Marine and Atmospheric Science
University of Miami

Robert Buschbacher, Ph.D.
Program Coordinator, Amazon Conservation Leadership Initiative
Associate in Tropical Forestry
School of Forest Resources and Conservation
University of Florida

Jeff Chanton, Ph.D., Professor
The John Widmer Winchester Professor of Oceanography
Department of Earth, Ocean and Atmospheric Science
Florida State University

Eric Chassignet, Ph.D., Professor
Director, Center for Ocean-Atmospheric Prediction Studies (COAPS)
Department of Earth, Ocean and Atmospheric Science
Florida State University

Amy Clement, Ph.D., Professor and Associate Dean of Graduate Studies
Department of Atmospheric Sciences
Rosenstiel School of Marine and Atmospheric Science
University of Miami

William T. Cooper, Ph.D., Professor and Associate Chair
Department of Chemistry & Biochemistry
Florida State University

Jeffrey A Cunningham, Ph.D., Associate Professor

Department of Civil and Environmental Engineering
University of South Florida

Kendra Daly, Ph.D., Professor
College of Marine Science
University of South Florida

Robert G. Ellingson, Ph.D., Professor
Department of Earth, Ocean and Atmospheric Science
Florida State University

Elizabeth Forys, Ph.D., Professor
Environmental Science and Biology
Eckerd College

David Hastings, Ph.D., Professor of Marine Science and Chemistry
Galbraith Marine Science Laboratory
Eckerd College

Brian K. Haus, Ph.D., Associate Professor
Department of Ocean Sciences
Rosenstiel School of Marine and Atmospheric Sciences
University of Miami

James W. Jones, Ph.D., Distinguished Service Professor
Department of Agricultural and Biological Engineering
Director, Florida Climate Institute (FCI)
University of Florida

Ben Kirtman, Ph.D., Professor
Department of Atmospheric Sciences
Rosensteil School for Marine and Atmospheric Science
Program Director, Physical Sciences and Engineering; Center for Computational Science
University of Miami

Marguerite S. Koch-Rose, Ph.D., Professor
Department of Biological Sciences
Florida Atlantic University

William Landing, Ph.D., Professor
Department of Earth, Ocean and Atmospheric Science,
Florida State University

David Letson, Ph.D., Professor and Chair
Division of Marine Affairs and Policy
Rosensteil School for Marine and Atmospheric Science
University of Miami

J. William Louda, Ph.D., Scientist Emeritus
Organic Geochemistry Group
Department of Chemistry and Biochemistry
The Environmental Sciences Program
Florida Atlantic University

Timothy Martin, Ph.D., Professor
Director, Carbon Resources Science Center
School of Forest Resources and Conservation
University of Florida

Gary Mitchum, Ph.D., Associate Dean, Professor
College of Marine Science
Physical Oceanography
University of South Florida

Vasubandhu Misra, Ph.D., Associate Professor
Department of Earth, Ocean and Atmospheric Science
Florida State University

Thomas J. Morgan, Ph.D., Assistant in Medicine
College of Medicine
Florida State University

Pamela Hallock Muller, Ph.D., Professor
College of Marine Science
University of South Florida

Jim O'Brien, Ph.D., Professor Emeritus
Robert O. Lawton Distinguished Professor
Department of Earth, Ocean, and Atmospheric Science
Florida State University

John Parker, Ph.D., Professor Emeritus

Department of Environmental Studies
Florida International University

Larry C. Peterson, Ph.D., Professor
Department of Marine Geosciences
Rosenstiel School of Marine & Atmospheric Science
University of Miami

Brad E. Rosenheim, Ph.D., Assistant Professor
College of Marine Science
University of South Florida

Leonard J. Scinto, Ph.D.
Associate Director, Southeast Environmental Research Center and
Assistant Professor, Department of Earth and Environment
Florida International University

Amelia Shevenell, Ph.D., Assistant Professor
College of Marine Science
University of South Florida

Brian Soden, Ph.D., Professor
Department of Atmospheric Sciences
Rosenstiel School of Marine and Atmospheric Science
University of Miami

Philip K. Stoddard, Ph.D., Professor
Department of Biological Sciences
Florida International University
Mayor, City of South Miami

Michael Sukop, Ph.D., Associate Professor
Department of Earth and Environment
Florida International University

Kalanithy Vairavamoorthy, Ph.D., Professor
Civil and Environmental Engineering Department
Director, School of Global Sustainability
University of South Florida

John Van Leer, Sc.D., Associate Professor

Department of Ocean Sciences
Rosenstiel School of Marine and Atmospheric Science
University of Miami

Harold Wanless, Ph.D., Chairman and Professor
Department of Geological Sciences
University of Miami

Laura Reiser Wetzel, Ph.D., Associate Professor (of Marine Science & Geosciences)
Department of Earth and Planetary Sciences
Galbraith Marine Science Laboratory
Eckerd College

David Zierden, State Climatologist
Florida Climate Center
Florida State University

*** Please note signatories to the letter are acting as individuals and not as representatives of their respective universities or organizations. ***

Questions? Contact

Jeff Chanton: (850) 644-7493 or jchanton@fsu.edu

Ben Kirtman: (305) 421-4046 or bkirtman@rsmas.miami.edu

David Hastings: (727) 864-7884 or hastindw@eckerd.edu