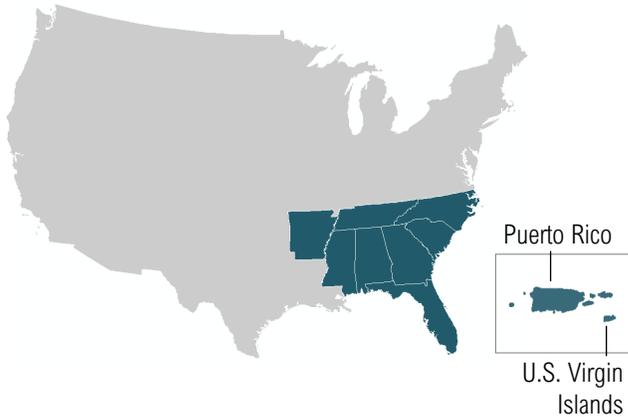


# ALABAMA

Alabama falls within the domain of the Southeast Climate Adaptation Science Center (SE CASC)



## Southeast CASC Consortium Institutions

**Host:** North Carolina State University

**Consortium:**

Auburn University

University of South Carolina

Duke University

University of Tennessee

University of Florida

## OUR WORK IN ALABAMA

**41+**  
Projects

since **2010**

## Key Science Topics



Wildlife & Plants



Freshwater



Wetlands



Sea-Level Rise & Coasts



Science Tools for Managers

## THE GULF COAST'S MIGRATING MANGROVES

*In the northern Gulf of Mexico, mangrove forests are expected to expand their range northward as winter temperatures warm, replacing more freeze-tolerant salt marshes. Understanding the temperature thresholds at which these types of ecological transformations occur can help managers forecast where and when mangroves will migrate.*

### WHAT:

The Southeast CASC leveraged the community-curated Mangrove Migration Network to examine temperature thresholds for damage, mortality, and recovery for several mangrove species, and assessed their vulnerability to changing winter temperature extremes.

### RESULTS:

Results show that damage to mangroves can occur at  $-4^{\circ}\text{C}$ , mortality can occur at  $-7^{\circ}\text{C}$ , and full recovery of mangroves following extreme freeze events can occur within one to three years.

### IMPACT:

Understanding mangrove sensitivity thresholds to freeze events and cold temperatures can help coastal wetland managers better anticipate and prepare for ecological transformations in a warming climate.



## CLIMATE CHANGE & STATE WILDLIFE ACTION PLANS

*The southeastern U.S. is experiencing high rates of urbanization, land use change, and shifting climatic conditions. These changes present considerable near- and long-term challenges to the health and sustainability of the region's fish and wildlife.*

### WHAT:

The Southeast CASC assessed how states addressed current and projected climate change in their 2015 state wildlife action plans (SWAPs), which serve as important resources to help states identify and protect declining species and their habitats.

### RESULTS:

Wildlife managers in Alabama identified the lack of information on the vulnerability of Regional Species of Greatest Conservation Need (RSGCN) to climate change as a barrier for the state, which is home to 379 RSGCN – the highest in the region. The state's plan also suggests that areas identified as being less affected by climate change can be targeted with enhanced conservation efforts as an adaptation strategy.

### IMPACT:

Identifying how each state in the Southeast region addresses climate change in their SWAPs enables the identification of opportunities for further action and potential areas for regional coordination.

