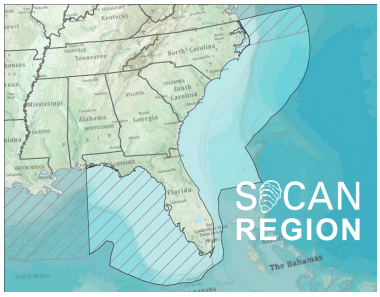
SOCAN
Southeast Ocean and Coastal Acidification Network

SOCAN Steering Committee Workshop Consensus Points



From North Carolina to Florida, ocean acidification (OA) impacts in the Southeast US are largely unknown. On January 12 and 13, 2016 the SOCAN (Southeast Ocean and Coastal Acidification Network) Steering Committee held a meeting at the College of Charleston in Charleston, SC to discuss the state of ocean acidification science, prioritizations and vulnerabilities of the region. The meeting sought to accomplish three objectives:

1. Summarize key findings, prioritize research needs, and identify research and laboratory capabilities that could address OA-related research questions;
2. Identify why the Southeast region is unique and its vulnerabilities to potential impacts of OA; and
3. Summarize why ocean acidification matters to stakeholders.

During the meeting, committee members worked together to outline what they know about the OA issue in the southeast. They developed a list of key messages to use when speaking to the public. Below are the consensus points:

- The Southeast Ocean and Coastal Acidification Network (SOCAN) facilitates collaboration and communication on the regional drivers of ocean and coastal acidification, approaches to monitoring, state-of-the-art science, and vulnerable species and ecosystems, among other concerns related to OA in North and South Carolina, Georgia, and Florida.

- Ocean acidification is driven by global ocean uptake of carbon dioxide that is increasing in the atmosphere due to the burning of fossil fuels, land use change, and cement production. Closer to shore, ocean acidification is modulated by local and regional processes such as eutrophication, upwelling, and freshwater flow to the coast that can cause coastal acidification.

- Ocean and coastal acidification impacts are complex. Although it has been shown to negatively impact some calcifiers – e.g. oysters, clams, mussels, corals –research shows sea grasses could actually benefit from higher carbon dioxide conditions and provide refugia for vulnerable organisms.

- The Southeast region is unique from other U.S. Coastal regions because it spans subtropical to tropical climate zones, and displays unique and extreme environmental conditions, gradients, and natural and human induced stressors.

- Global ocean acidification is an emerging threat that will exacerbate the coastal acidification that is already occurring in the Southeast Region due to changing local environmental conditions, and that is already impacting coastal resources such as coral reefs.

- Shellfisheries and coral reefs, which are important to the culture and the economy of the Southeast region, are particularly vulnerable because ocean acidification can directly impede their growth.

- Many studies have been conducted around the nation on the impact of ocean acidification on economically and ecologically important marine species and the environments in which they live.

- More specific effects to the Southeast region are largely unknown. However, we have a good base of information to help build our knowledge on impacts to the Southeast, and ways to prepare society to manage the consequences.

- Many marine species in the Southeast have adapted to extreme environmental conditions and pressures. It is unknown whether this adaptability will make them less vulnerable to ocean acidification, or if ocean acidification will be the pressure that tips their survivability into a decline.

- A diverse community of science, resource management, industry and policy experts from North and South Carolina, Georgia and Florida are working together to understand ocean acidification and how it is affecting our region's ecological resources, and to develop ways to prepare our community to adapt, mitigate and manage.

- A library of webinars on different aspects of ocean acidification and its impacts is available on the SOCAN website.

- SOCAN is working to bring these experts together, identify the knowledge and information needs of the community, set regional priorities for research and monitoring, and communicate results to help address problems caused by ocean and coastal acidification.