



Marine Synthesis Center Project Summary Template

Louisiana Universities Marine Consortium

Title

Saltwater intrusion and the coastal landscapes of the Atlantic and Gulf coasts

Event statement and date

The Saltwater Intrusion and Sea-Level Rise (SWISLR) Research Coordination Network (RCN) met at LUMCON's DeFelice Marine Center in Cocodrie on May 13-15, 2025.

Participation and Leadership

The meeting was led by Drs. Kiera O'Donnell and Emily Bernhardt from Duke University, and included 17 scientists from across the U.S. representing multiple career stages. Participants included wetland scientists, forest ecologists, agro-ecosystem scientists, remote sensors, and modelers.

Background

The SWISLR synthesis project represented the culmination of a three-year effort funded by the National Science Foundation (NSF) to amass a community of practice devoted to synthesis, understanding, and sharing of knowledge related to environmental change from the incursion of saltwater into the surface and ground water along a diversity of coastal landscapes. The network has worked to incorporate rural locations, agricultural systems, and wetland and upland forest mortality into a holistic understanding that, for the first time, includes the appropriate scope and scale of an issue that is stimulating rapid change to natural systems and social landscapes.

Meeting accomplishments

Participants gave project overviews, presented new research, and broke into interdisciplinary groups that developed and began writing summary and synthesis papers. Teams also developed an outline for the future of SWISLR, and how it may continue through a dedicated web site to provide a user-friendly accounting of projects underway, list contacts for focal study locations, and communication platforms to connect the RCN's accomplishments to a wider community. Future funding options were discussed.

Lead institution

Duke University, Nicholas School of the Environment

Web site

<https://www.swislr.org/>

Contact(s)

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Image 1 (upper right)– The SWISLR landscape in coastal Maryland as upland pine converts to ghost forests underlain with *Phragmites australis* (Blackwater National Wildlife Refuge, Cambridge, MD).

Image 2 (left) - SWISLR synthesis group photo orchestrated by Dr. Elliott White's (Stanford University) selfie skills.

Image 3 (lower right) – Up in the tower, LUMCON's executive director (Dr. Brian Roberts) orients SWISLR team members to the salt marsh mosaic of Cocodrie.