

# Unlocking Coastal Resilience: Exploring Applications of Surface Elevation Table (SET) Data



## Our Mission:

The SECOORA Surface Elevation Table (SET) Community of Practice brings together stakeholders, practitioners, and communities spanning North Carolina, South Carolina, Georgia, and Florida. We are dedicated to providing stakeholders with insights into elevational changes within wetlands, including marshes, mangroves, forested wetlands, swamps, and pocosins. This fosters a deeper comprehension of coastal dynamics, pinpointing areas of vulnerability, and advocating for effective adaptation strategies. Our goal is to equip stakeholders with the necessary tools to promote environmental awareness and community engagement in safeguarding our coastal regions.

SECOORA SET Network webpage: <https://secoora.org/surface-elevation-table-community-of-practice/>



## Understanding SETs and Their Role in Measuring Marsh Elevations:

The SET serves as a vital instrument for gauging marsh and sediment elevation alterations over time. Comprising a benchmark pipe or rod with pins for measuring marsh elevation and a marker horizon, such as white feldspar clay, for assessing sediment elevation, SETs deepen our understanding of wetland dynamics and provide invaluable insights into trends relating to flooding, erosion, and sea level changes.



## Applications of SET- Derived Trends for Stakeholders:

*For Coastal Managers, Planners, and  
Emergency Management Agencies:*

- Informing decisions on coastal development and adaptation strategies.

*For Environmental NGOs and  
Conservation Groups:*

- Guiding the prioritization of habitat restoration endeavors.
- Cultivating community participation in coastal protection initiatives.

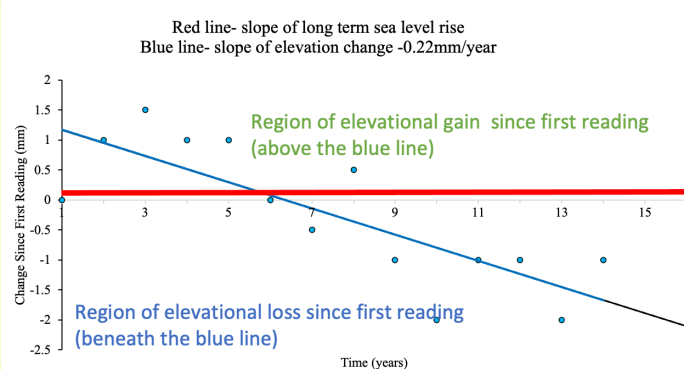
*For the Scientific Community:*

- Enabling the study of impacts on coastal landscapes.
- Facilitating the development of predictive models.

*For Infrastructure Developers and  
Engineers:*

- Informing the design of resilient coastal structures.
- Prioritizing public safety measures.

## SET-Derived Data Trends



*Regression analysis used to generate the slope, showing a decline (-0.22 mm/year) in elevation (blue line), referenced to its initial measurement at year 0 and predicted sea level rise (red line).*

## Possible Community Outcomes in using SET- Derived Trends:

- Inform Coastal Property Investments and Risk Management
- Enhance Coastal Protection Policies
- Strengthen Community Resilience and Environmental Conservation Efforts
- Promote Sustainable Recreational and Economic Activities.