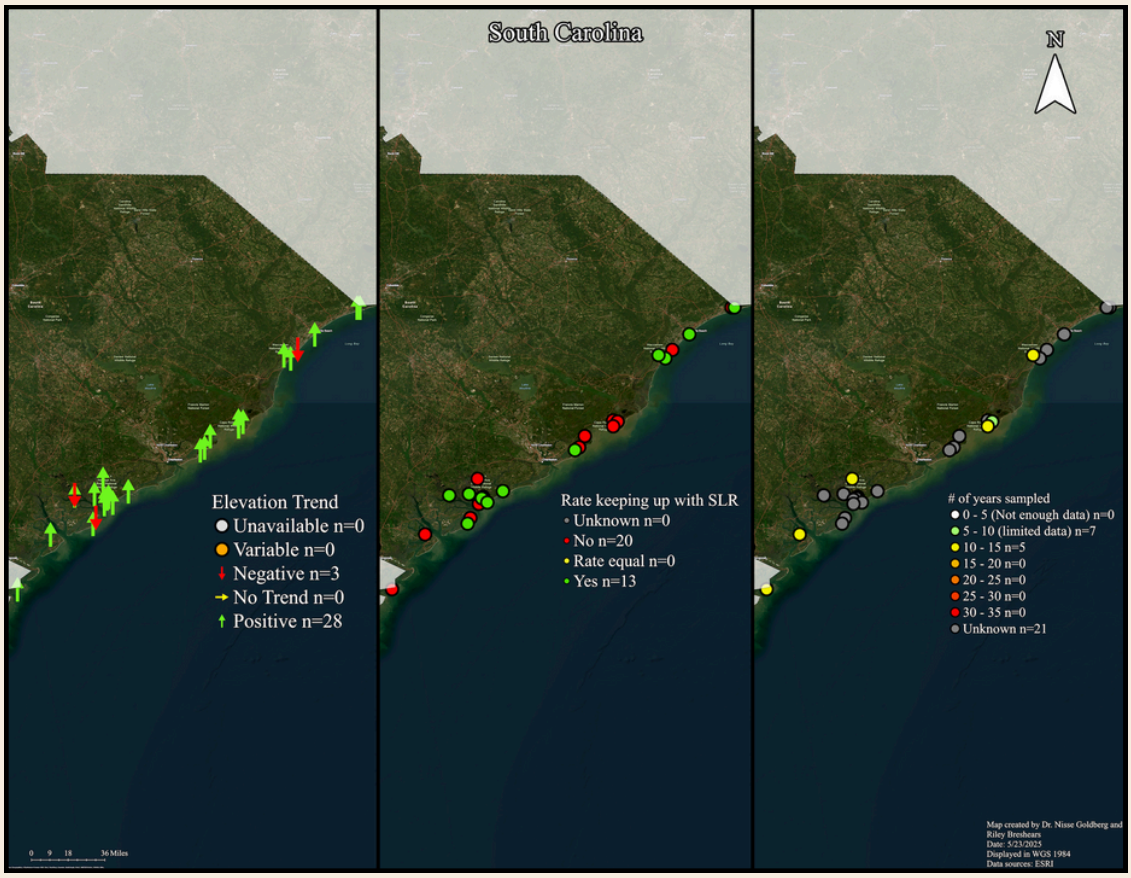
SET Elevation Monitoring in South Carolina

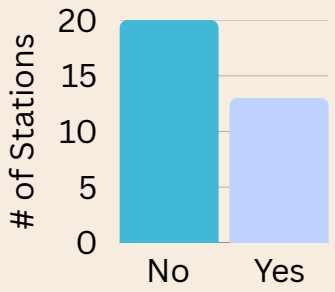
Elevation Trend Results

In South Carolina, **most of the 31 monitored SET stations are in marshes that are gaining elevation** through accretion, which is a good sign. Only three sites show subsidence, where the elevation shows a decreasing trend. However, when comparing elevation gain to sea-level rise (SLR), **only 13 stations have elevation rates that are keeping up with SLR, while the remaining 18 are at risk of being submerged.**

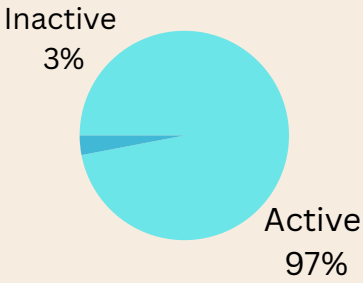
Continued SET monitoring is critical to understanding the vulnerability of our marshes due to SLR and other drivers, such as changes in precipitation patterns, increased storm intensity, and human development pressures, that impact these valuable ecosystems and their ability to adapt over time. The SET stations in South Carolina have been recording elevation for varying



Are the Active SET Stations Keeping Up with Sea-Level Rise?



SET Station Status in South Carolina n=63



lengths of time: six stations have 5–10 years of records, four stations have 10–15 years, and twenty-one stations have very limited data. These gaps in long-term data collection make it harder to fully understand elevation trends in the marshes. Still, the overall picture suggests that many marshes are struggling to keep pace with sea-level rise.

Ongoing research, public awareness, and proactive management are essential to guide effective responses. If we support natural processes that help marshes build elevation, like restoring wetlands, reconnecting floodplains, and allowing rivers to deliver sediment, and we take steps to address factors contributing to sea-level rise, we can improve the chances of these important ecosystems continuing to protect our coastlines and provide other critical services such as carbon sequestration, water filtration, and habitat for wildlife. For questions about the data or more information, visit SECOORA's Surface Elevation Table Community of Practice or contact ngoldbe@ju.edu.