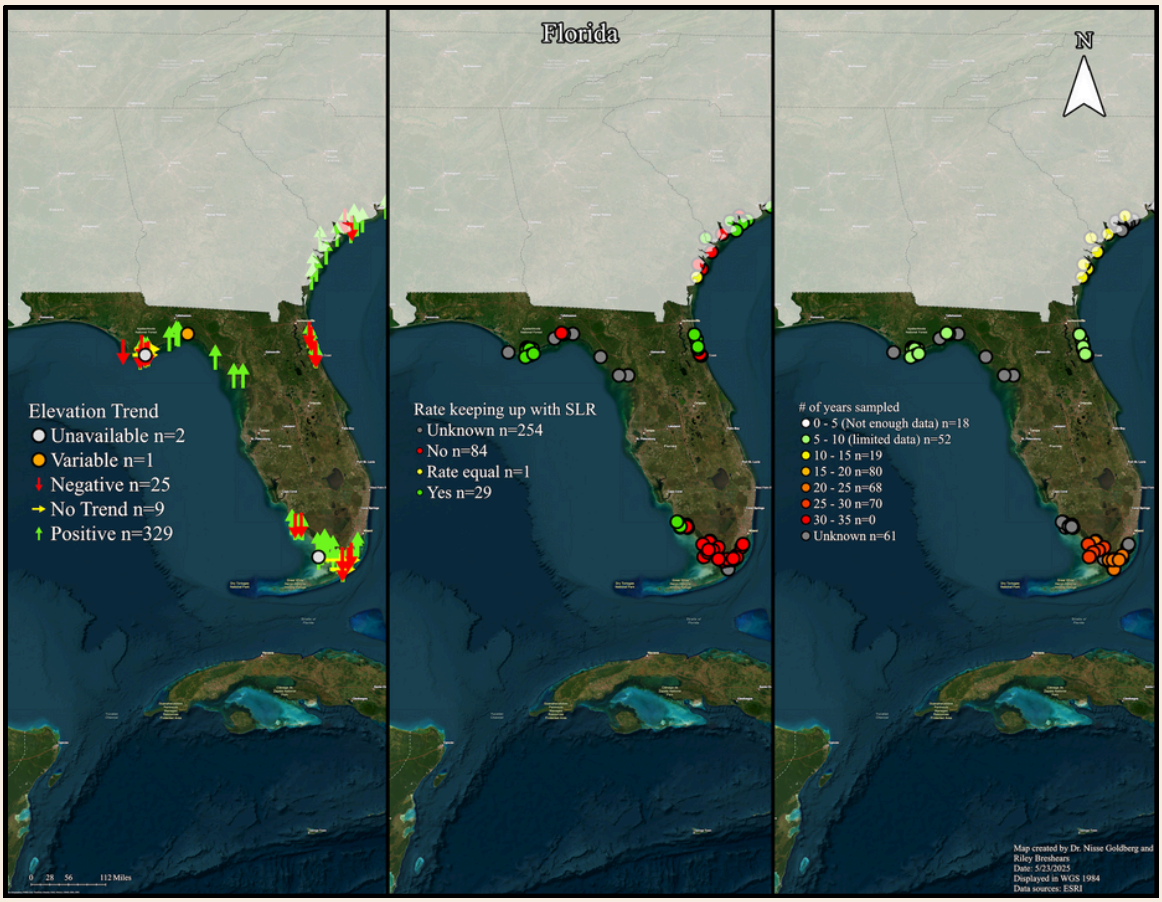
SET Elevation Monitoring in Florida

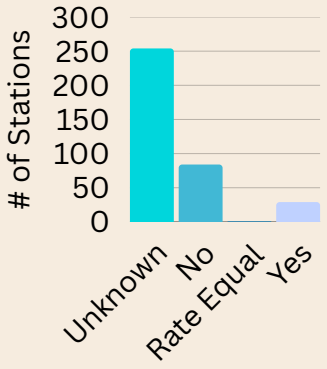
SECOORA

Elevation Trend Results

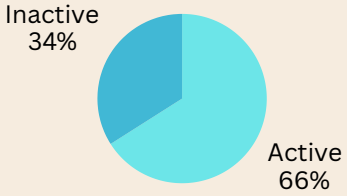
Most of the SET marsh stations in Florida (329 in total) show an increasing elevation trend, mostly due to accretion, where layers of sediment and decaying plant material contribute to the increase in elevation. **Only 29 of these stations are gaining in elevation fast enough to keep up with predicted rates of sea-level rise (SLR), 83 stations are not keeping up with SLR, and for the majority, 254 stations, we do not have enough information to say for sure.** These results show that even though the marshes are gaining elevation in many places, they are not keeping pace with SLR.



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



SET Station Status in Florida n=243



Continued SET monitoring is critical to understanding the vulnerability of our marshes due to SLR and other drivers, such as increased storm intensity, human development pressures, and changing hydrology, that impact these valuable ecosystems and the communities that depend on them. Many of the SET stations have 15–30 years of monitoring data, others have been monitored for less than 10 years, which is not enough time to reliably document elevation trends using the SET methodology, and a few (likely older or remote sites) have very limited or unclear records.

If we support natural processes that help marshes build elevation, such as restoring wetlands, reconnecting floodplains, and allowing rivers to deliver sediment, and simultaneously take steps to address sea-level rise, we can improve the chances of these vital ecosystems continuing to protect our coastlines and provide 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.