

# Long Term Ecological Research (LTER)

Georgia Coastal Ecosystems (GCE)

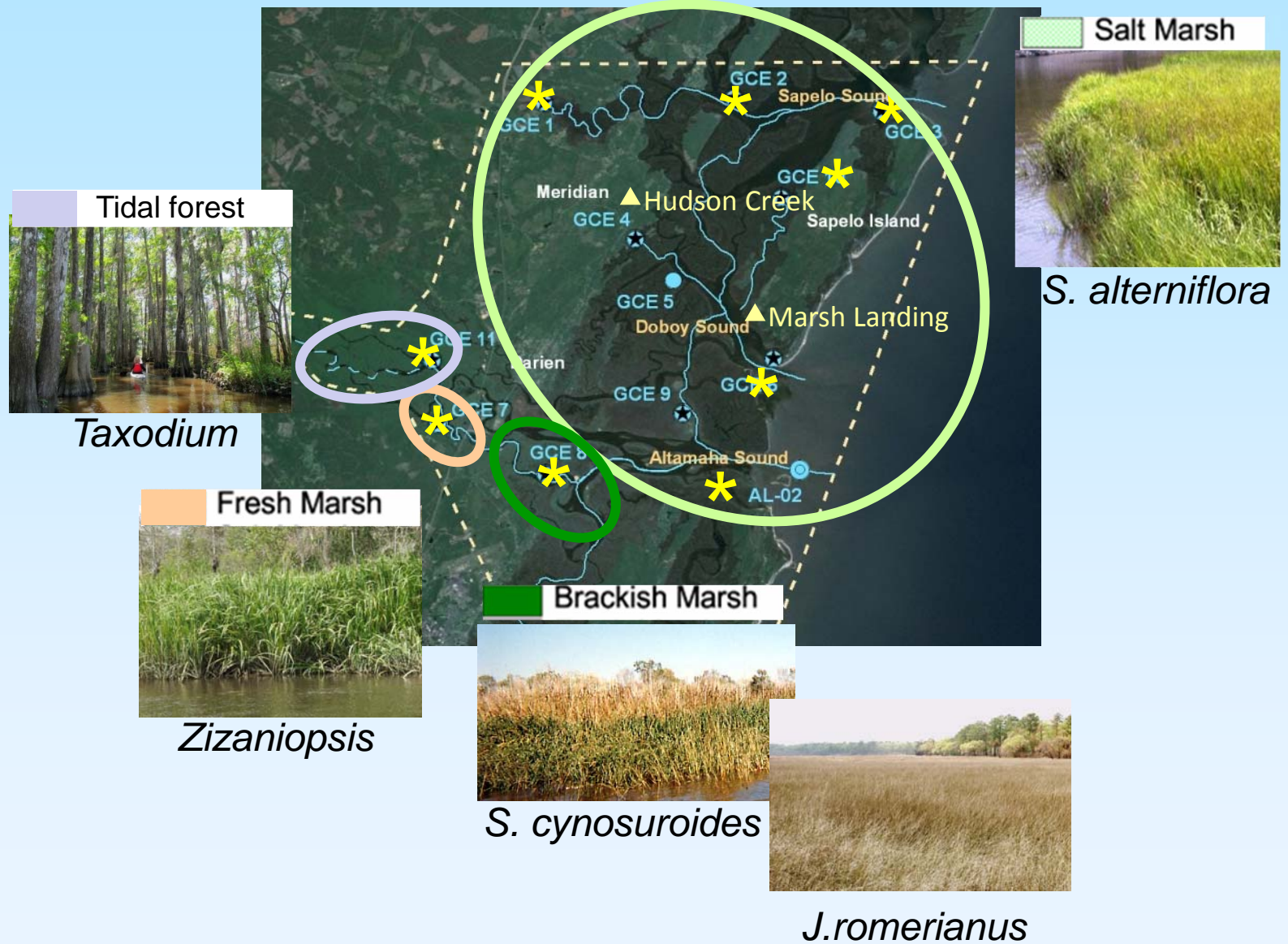
2000-present

22 co-PIs

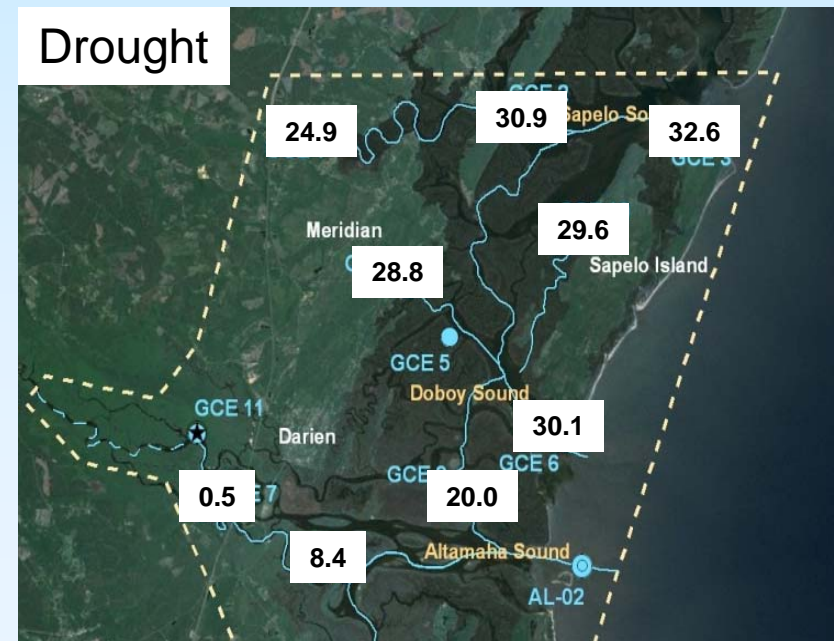
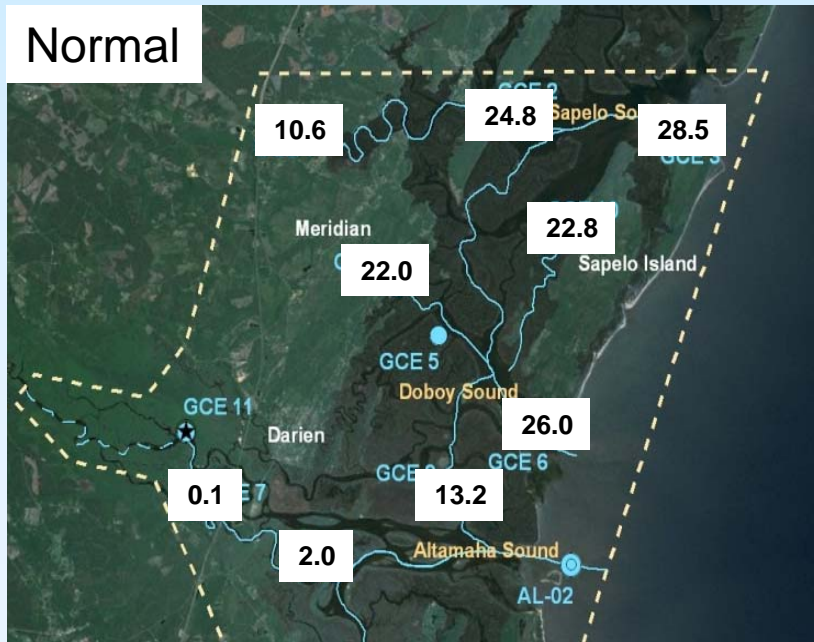
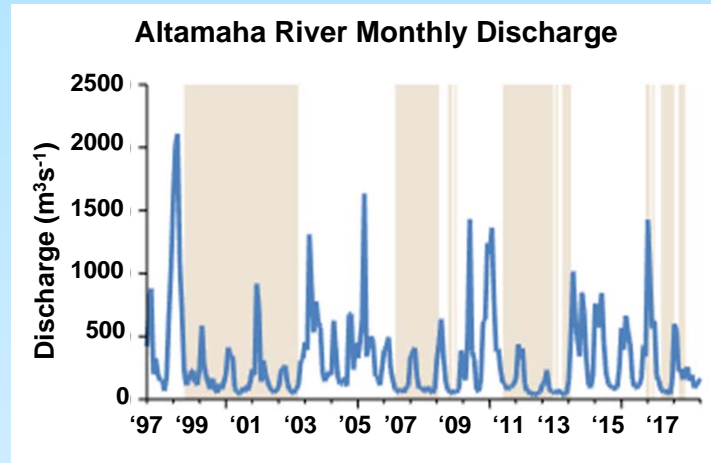
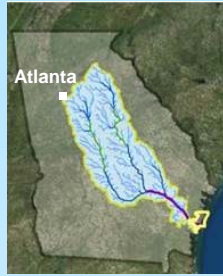
9 institutions



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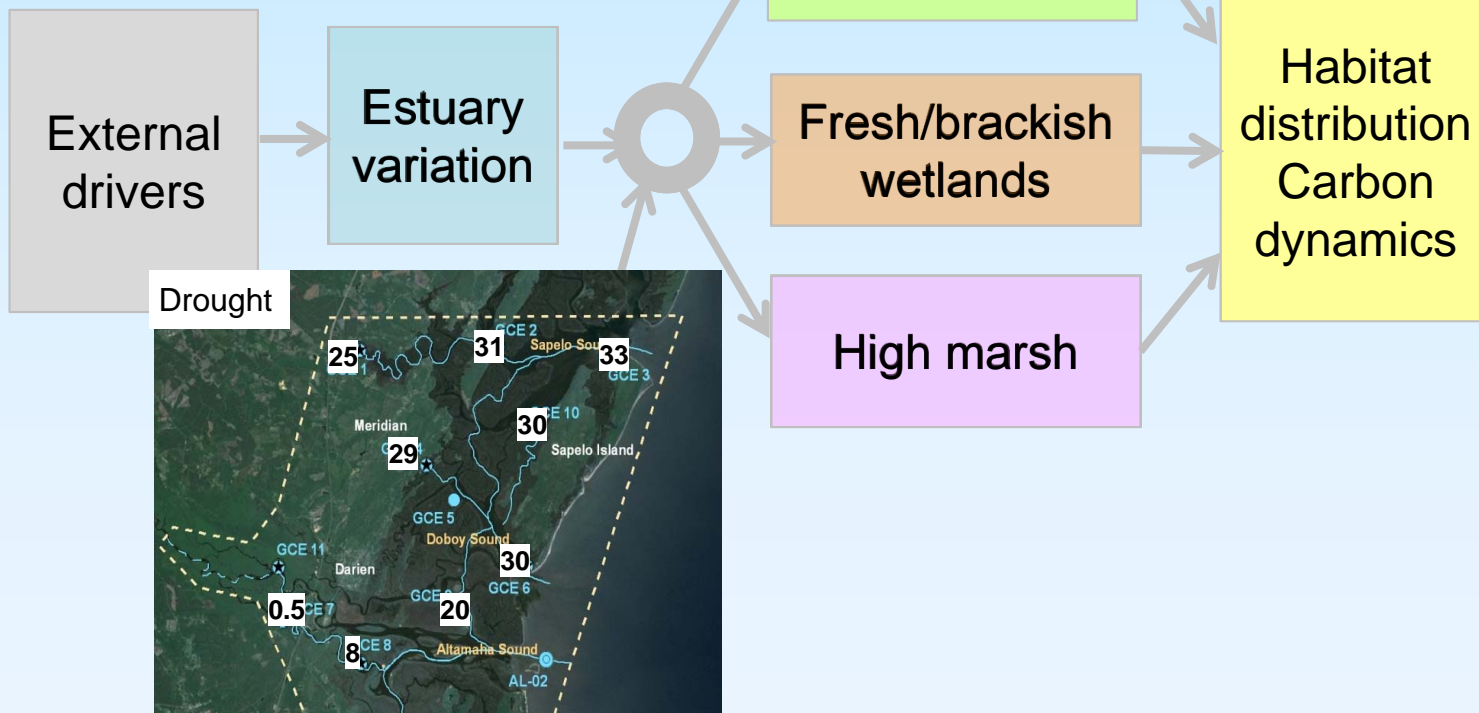
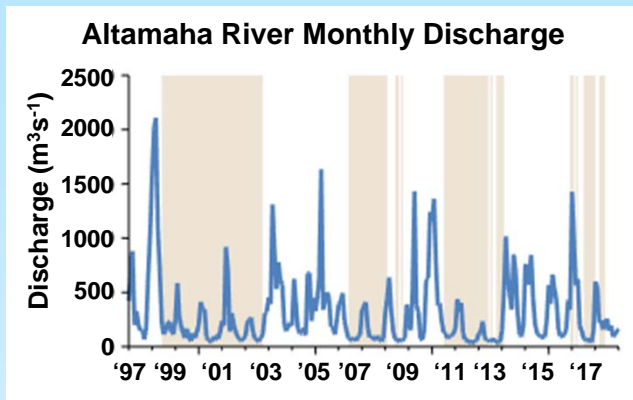


# GCE Focus: How does variation in salinity and inundation affect coastal ecosystems?





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# Seawater Addition Long Term Experiment

SALTE<sub>x</sub> is a large-scale field experiment being conducted to evaluate how both chronic and acute pulses of saltwater affect freshwater wetlands.



Press duration: April 2014- Oct 2017  
Pulse delivered: Sep-Oct, 2014-2017

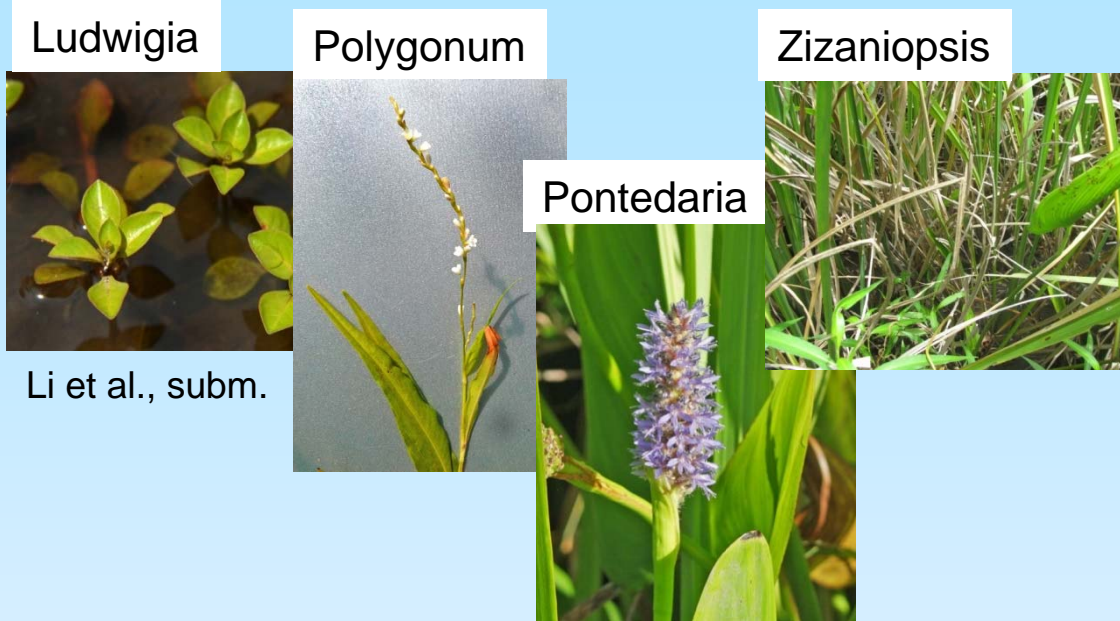
30 plots (2.5 m<sup>2</sup>)





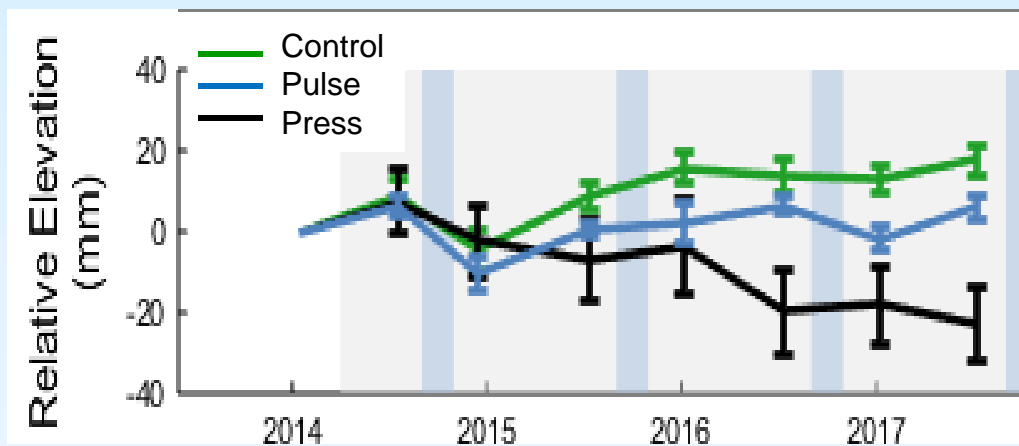
# Response in Press Treatments

## Plant loss

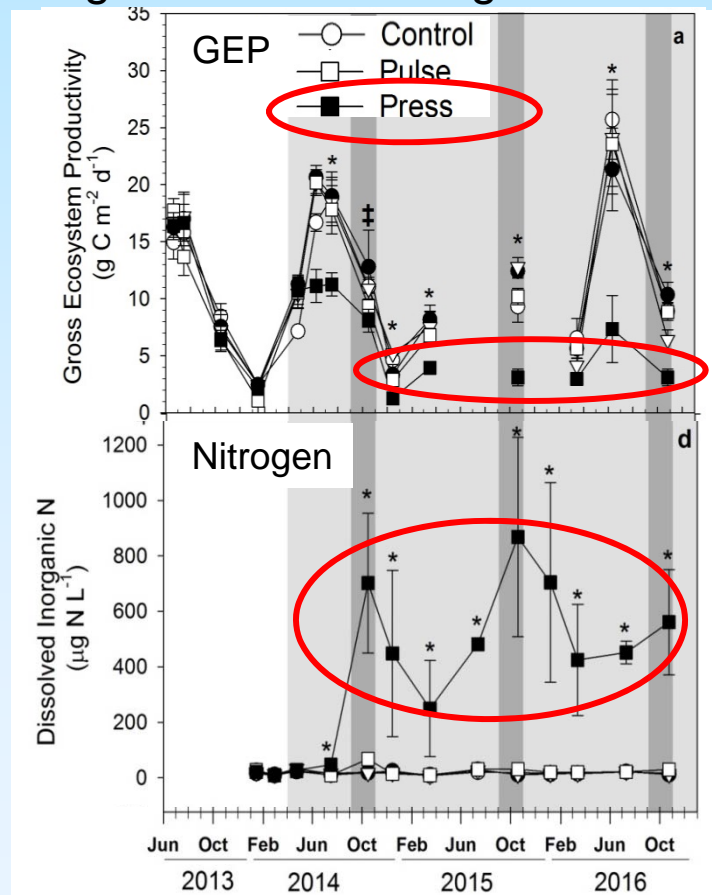


Li et al., subm.

## Elevation loss

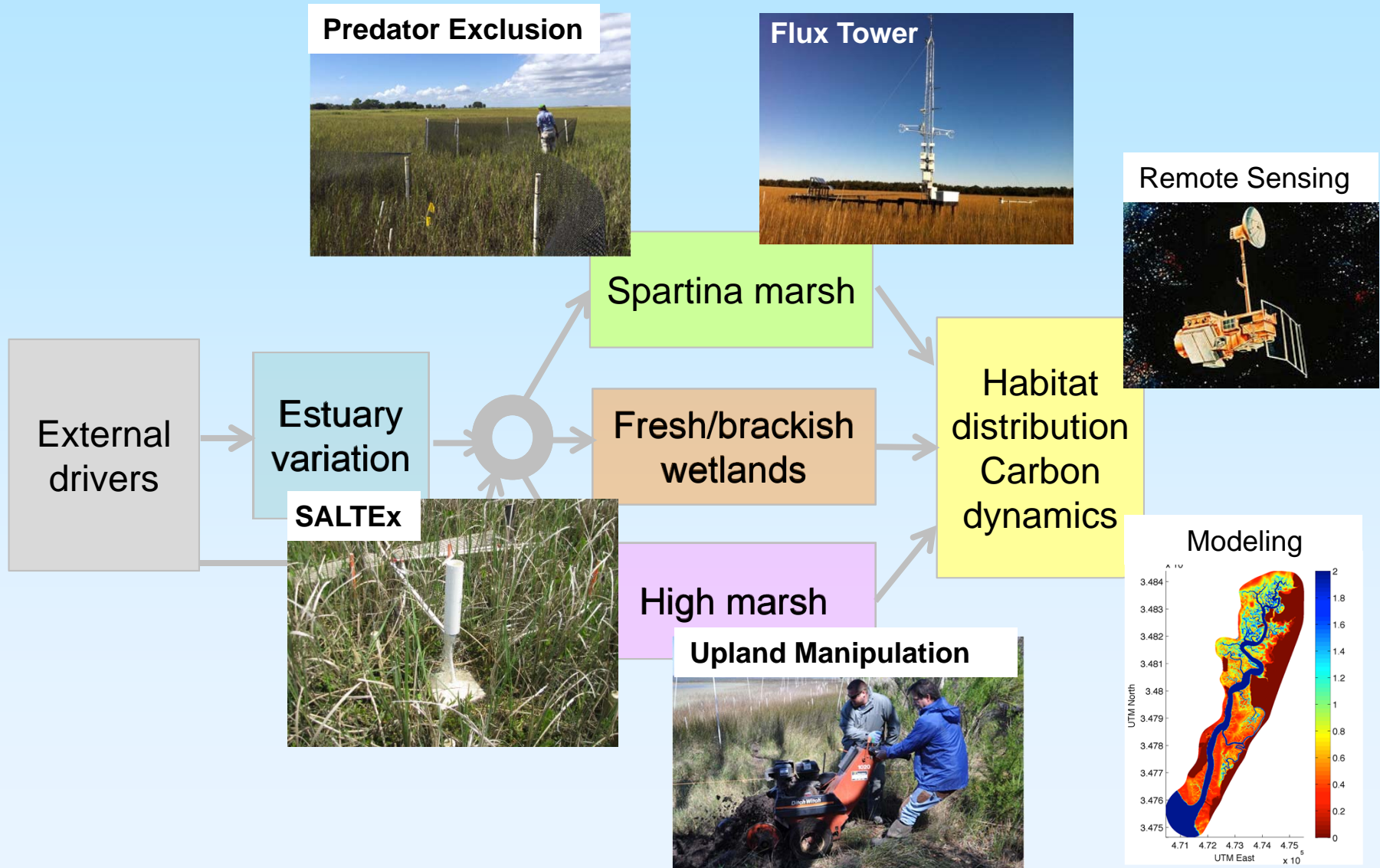


## Biogeochemical changes

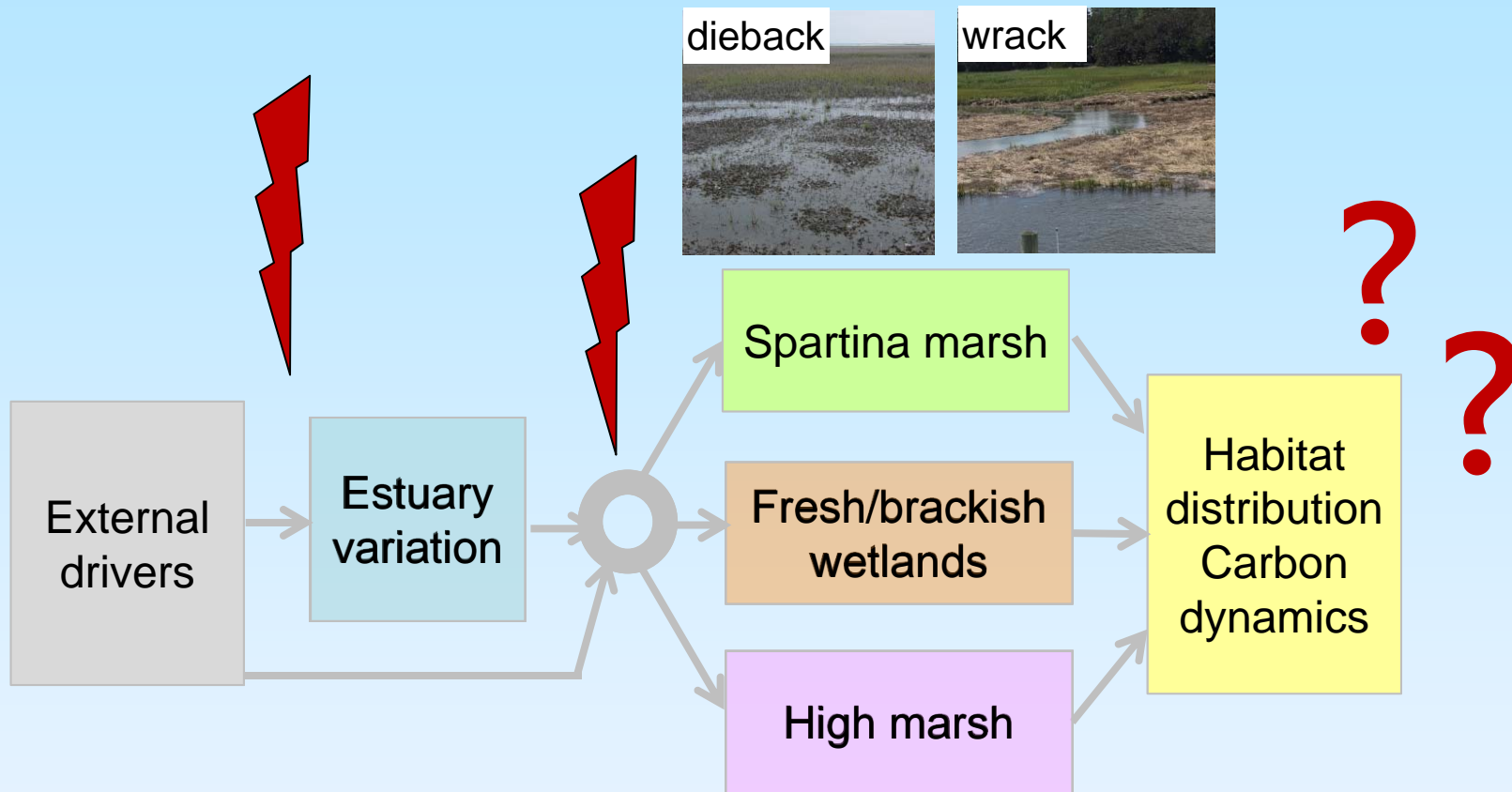


Herbert et al. Biogeochemistry In press

# GCE Focus: How does variation in salinity and inundation affect coastal ecosystems?



# Coming soon: What are the implications of disturbance for coastal ecosystems?



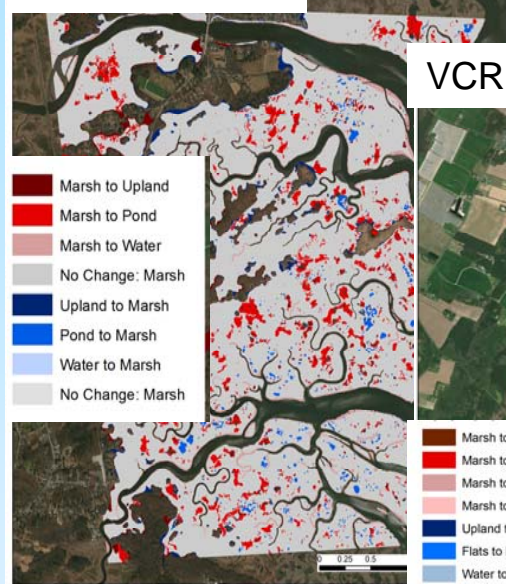
- What are the patterns of disturbance?
- How do they relate to external drivers?
- How do ecosystems respond to and recover from disturbance?
- What are the consequences at the landscape scale?



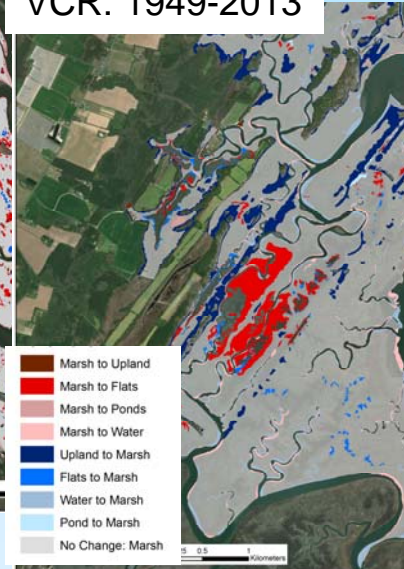
# Coastal SEES: A cross-site comparison of salt marsh persistence



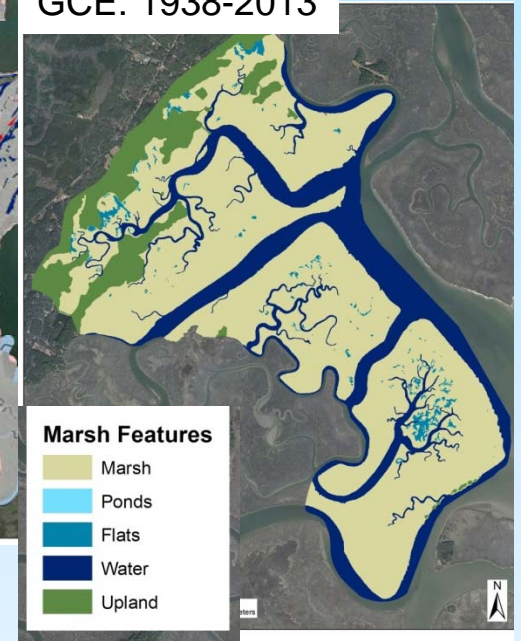
PIE: 1938-2013



VCR: 1949-2013



GCE: 1938-2013



PIE: Decrease in marsh area; increase in ponds

VCR: Conversion of marsh to tidal flats; upland transgression

GCE: Little change over time.