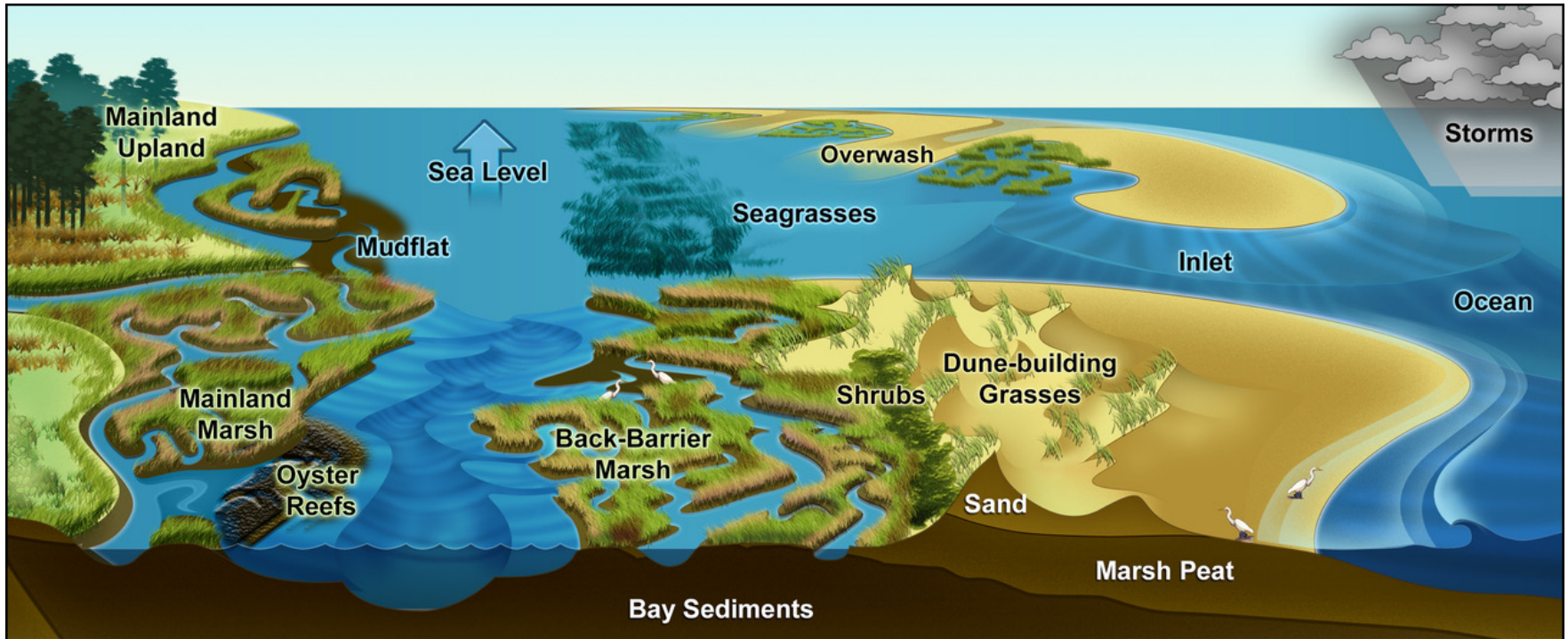


# Virginia Coast Reserve



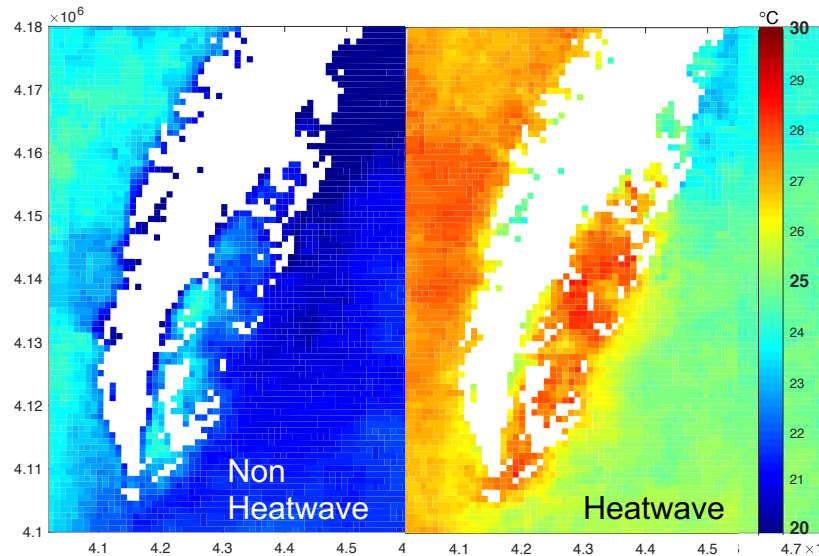
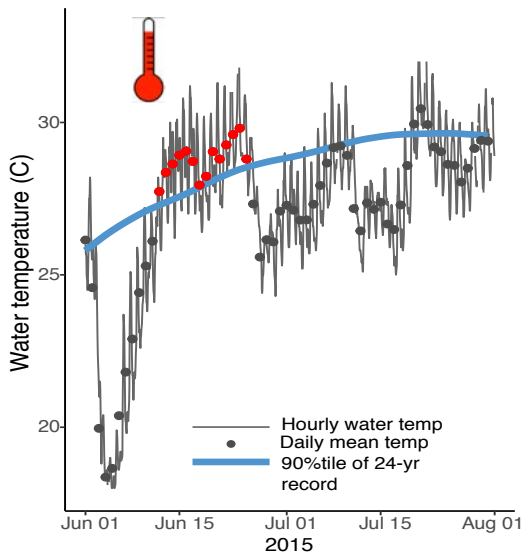
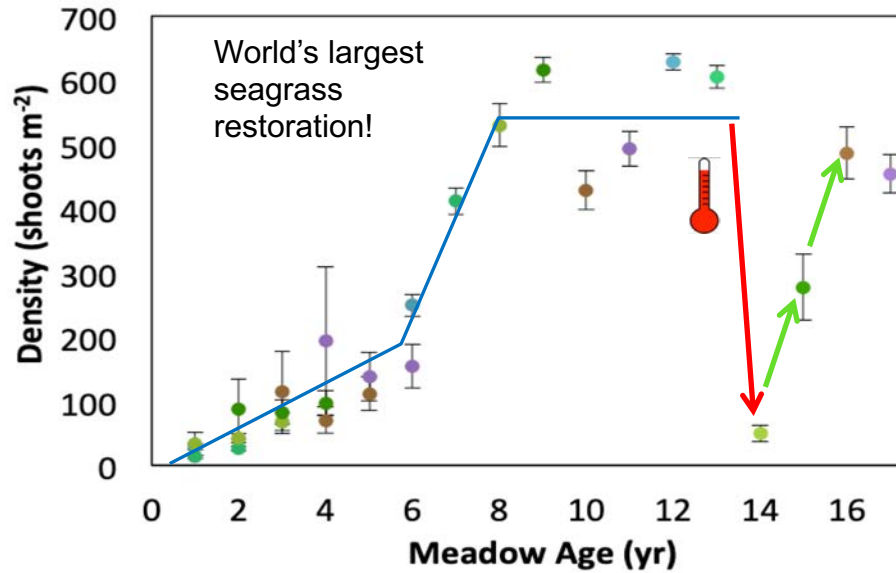
**Framework:** Climate and ecosystem state change: connectivity and coupled dynamics

**Specific example:** Seagrass restoration and resilience to marine heat waves

# Landscape-scale decadal experiment

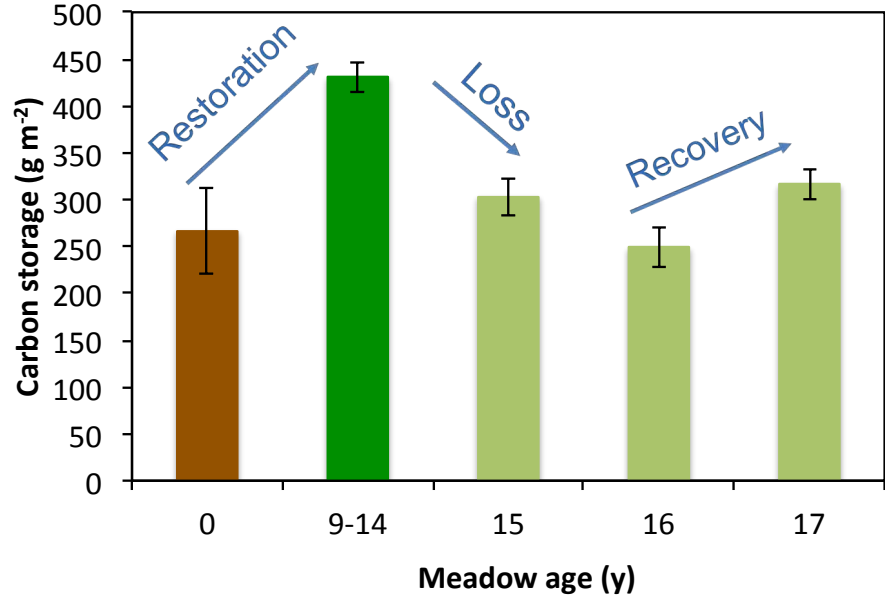
State change is non-linear; ~10 year to maturity

Marine heatwave causes dieback

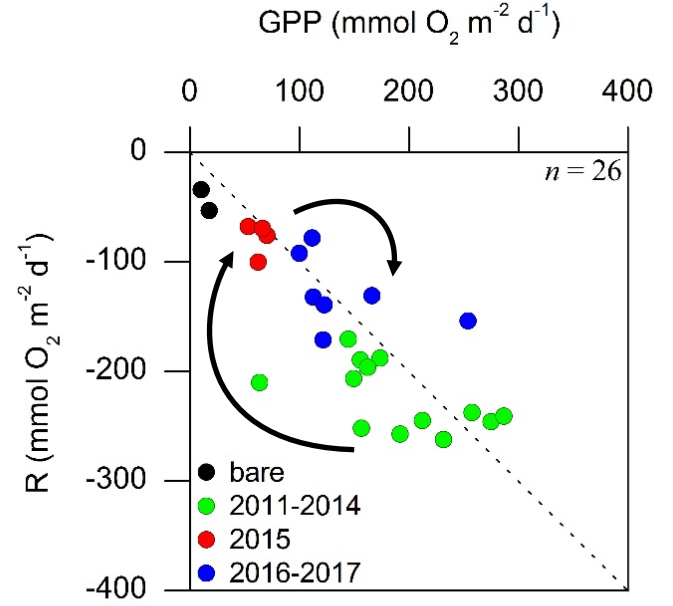
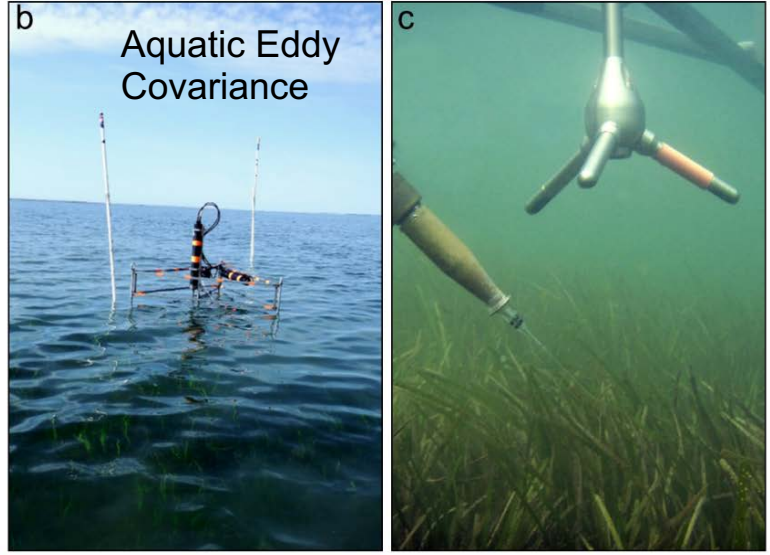


# How resilient are the seagrass and their functions?

Temperature drives long-term carbon sequestration and storage



14 years of C storage can be lost in 2 yr  
C recovery lags behind seagrass recovery



GPP and R tightly coupled



# Next Steps:

## Does variation in response and recovery confer spatial resilience?

