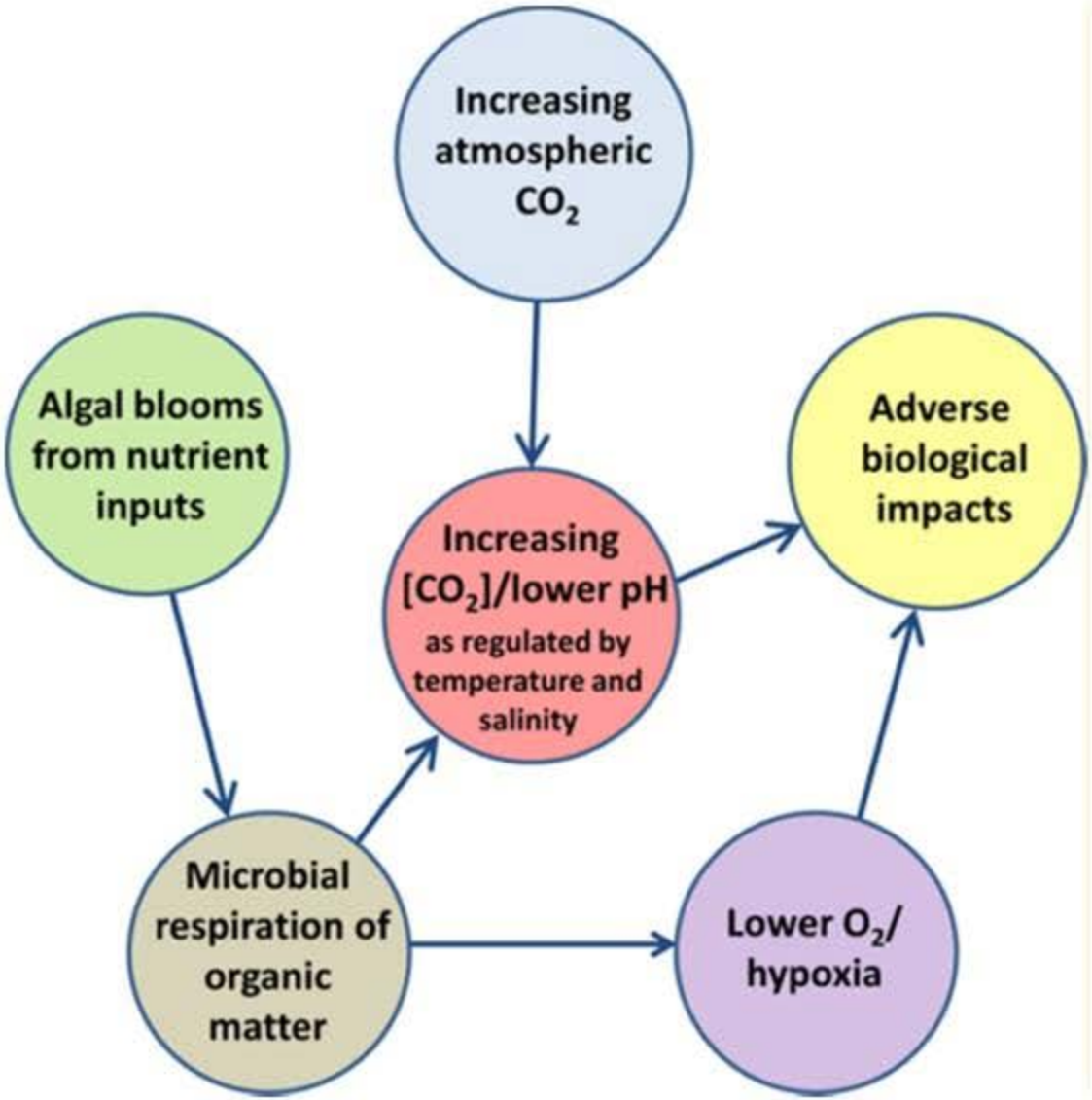
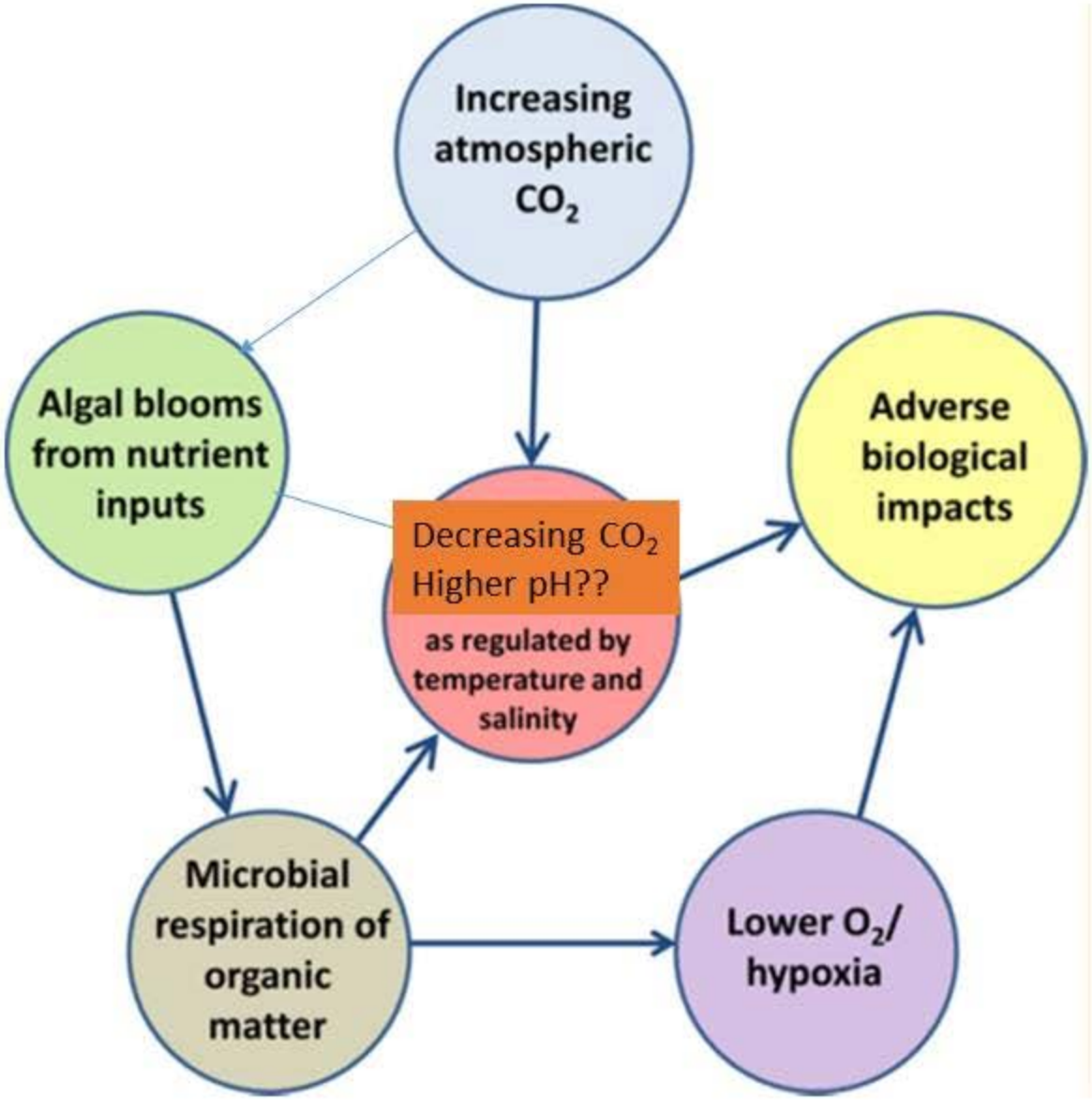
One view of the linkage of eutrophication to pH



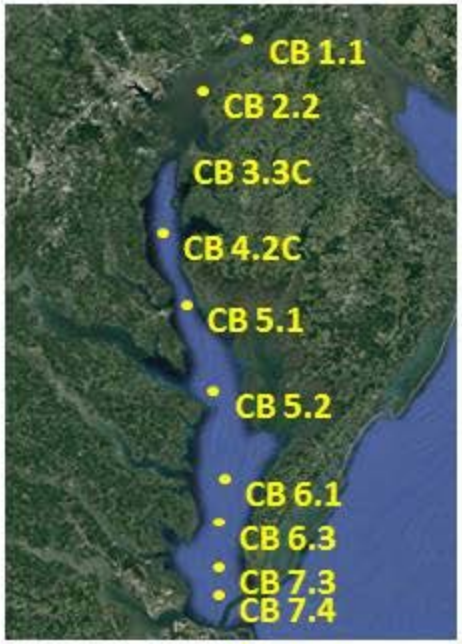
Sunda and Cai (2012)

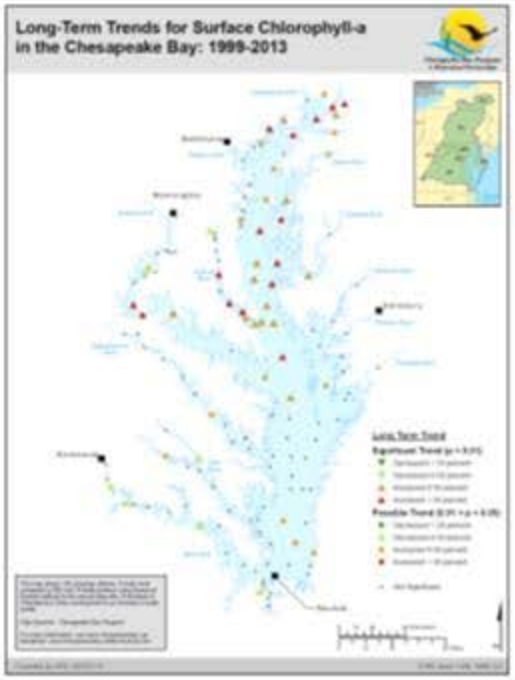
Adding some biology: Algal uptake/fixation and release of CO_2

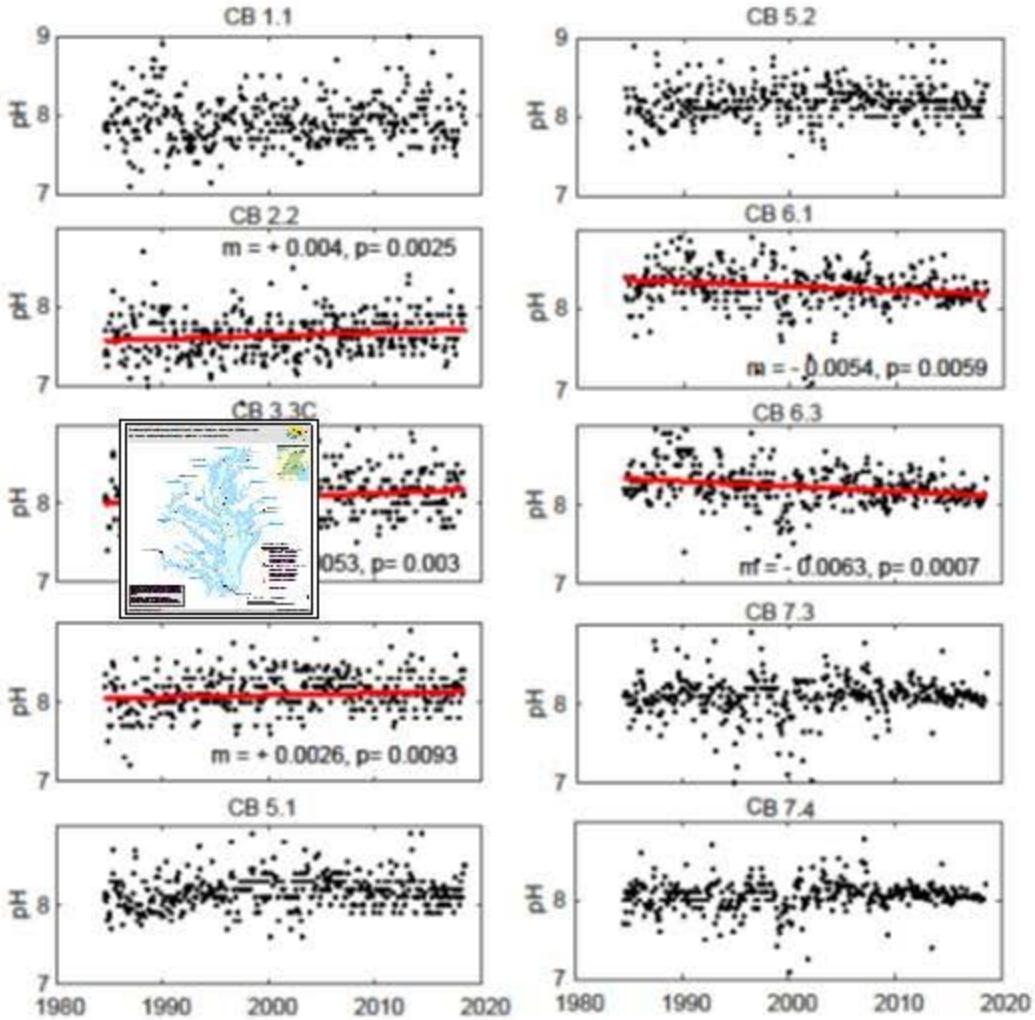


Chesapeake Bay, long term (1984-2017) pH measurements

Data source, EPA Chesapeake Bay Program

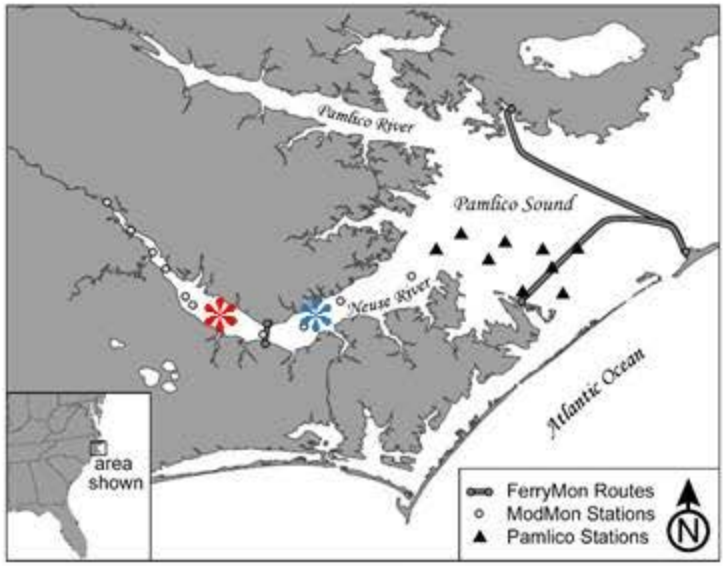




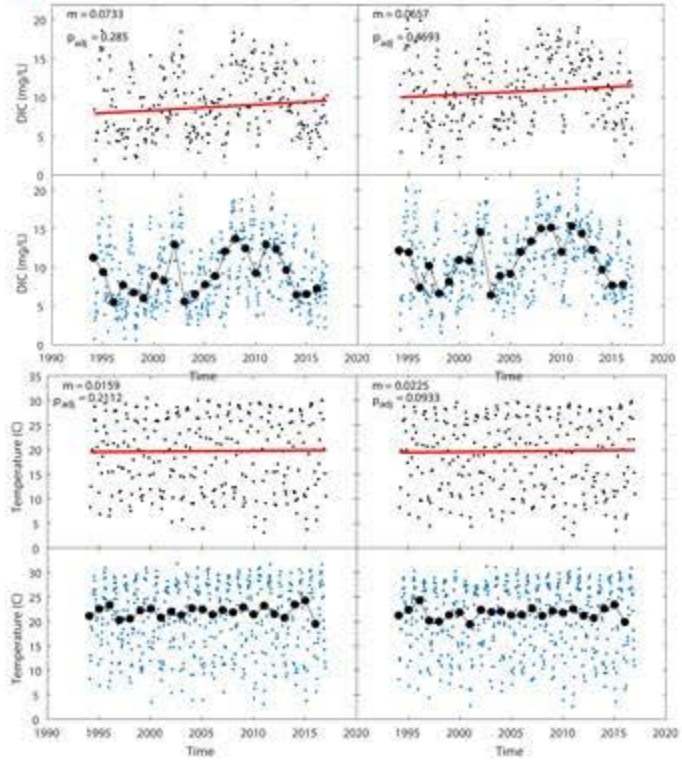


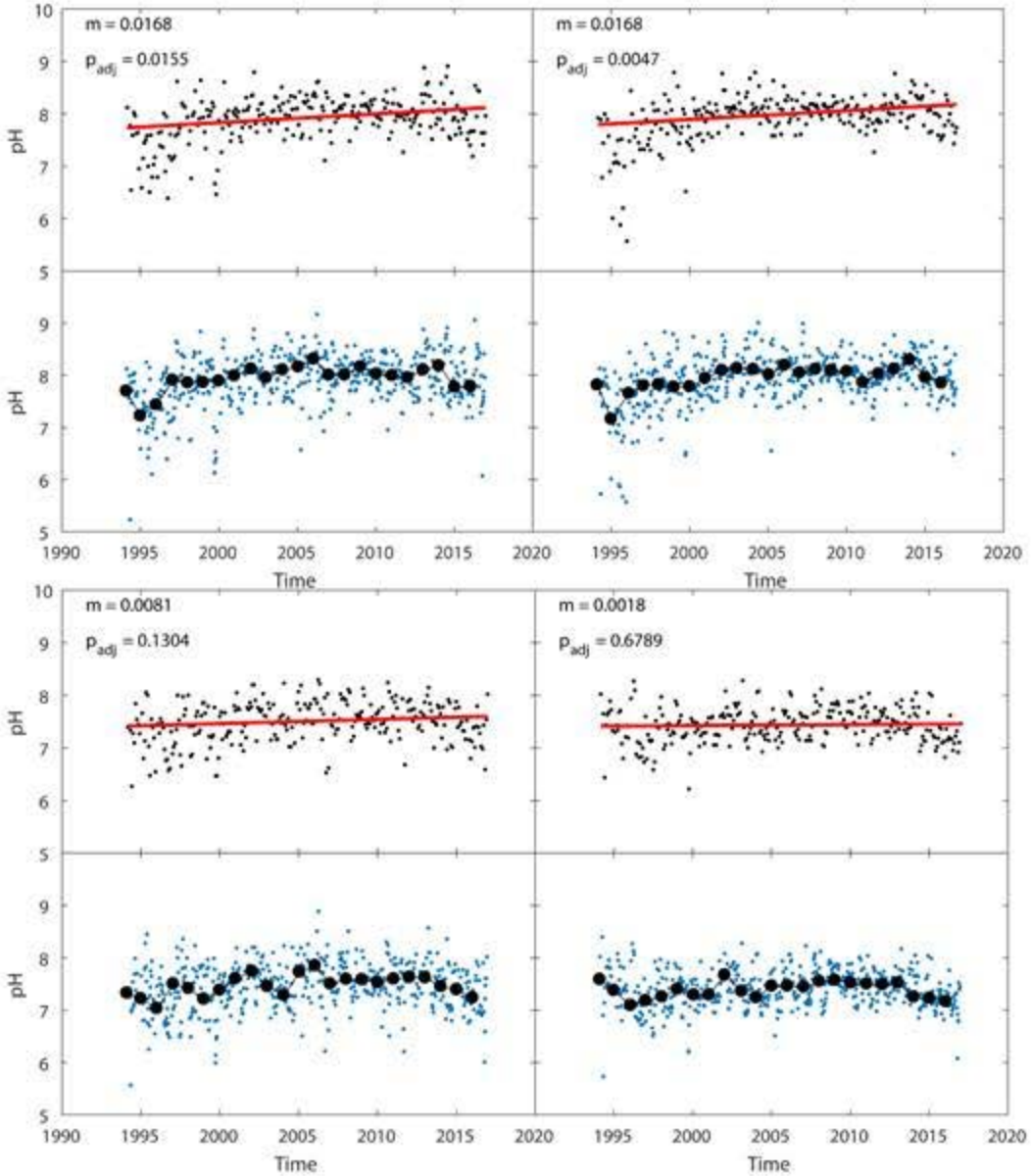
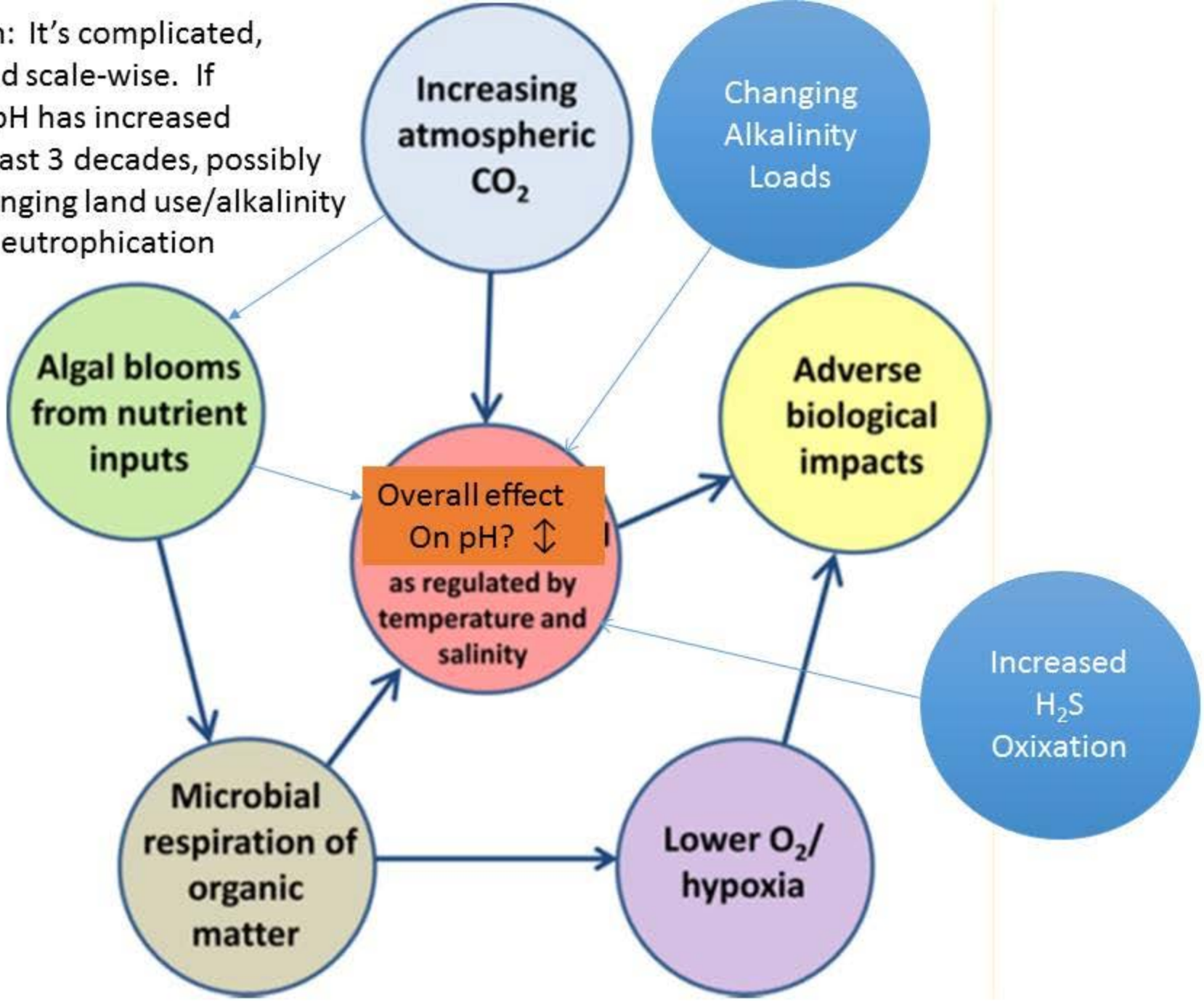
Results from a seasonal Kendal Test. m values are Sen slopes (units /year) and p-values have been adjusted for serial correlation.

Long-term changes in pH, DIC and Temp. in the Neuse River Estuary (Data from ModMon Program) http://www.unc.edu/ims/neuse/modmon/



Station 70 Station 120





Conclusion: It's complicated, process and scale-wise. If anything, pH has increased Over the past 3 decades, possibly due to changing land use/alkalinity loads and eutrophication