

Important variables in the two datasets:

### **1. GCB\_plot\_level\_biomass.csv**

Year: 2006-2019

CO<sub>2</sub>: CO<sub>2</sub> treatment (ambient CO<sub>2</sub> = 0, elevated CO<sub>2</sub> = 1)

Nitrogen: N treatment (unfertilized = 0, fertilized=1)

Plot: plot number

sedge\_biomass: sedge biomass (g m<sup>-2</sup>)

grass\_biomass: grass biomass (g m<sup>-2</sup>)

total\_biomass: total biomass (g m<sup>-2</sup>)

interNY: interaction between nitrogen and year

interact: interaction between nitrogen and CO<sub>2</sub> treatments

### **2. GCB\_annual\_mean\_biomass.csv**

Year: 2006-2019

CO<sub>2</sub>: CO<sub>2</sub> treatment (ambient CO<sub>2</sub> = 0, elevated CO<sub>2</sub> = 1)

XNmo (N=2, 3, 6, 12, 15, 18, 24): running average of sea level in N months. For example, X24mo is the mean sea level in 24 months ending with July of the focal year.

NH<sub>4</sub>\_A\_N (N=20, 40, 80): NH<sub>4</sub> concentration in umol L<sup>-1</sup> at the depth of N cm. For example, NH<sub>4</sub>\_A\_40 is the NH<sub>4</sub> concentration at the depth of 40 cm.

NeffectSedge: effects of N limitation on sedge biomass, i.e., the mean aboveground sedge biomass in N-fertilized treatments minus biomass in unfertilized treatments

NeffectGrass: effects of N limitation on grass biomass

NeffectTotalBiomass: effects of N limitation on total biomass