Inland climate change

• 17 participants

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Data synthesis opportunities

• Goal: fully utilize site data to evaluate variation in NPP and other response variables to inter-annual variability in temperature and precipitation
  – Many data synthetic efforts to date
  – Recommend working group to consider existing syntheses
Building on existing climate change research in LTER

• Many sites have ongoing relevant experiments
  – Many have room for outside researchers to ask additional questions using ongoing manipulations

• Assure that the full range of experiments are easily visible to those seeking sites
  – Doesn’t require a new database
  – Encourage LTER scientists to register their projects with CLIMANI, INTERFACE, TERACC, etc
Ongoing data collection

• Ongoing climate measurements at sites
  – Do all sites measure all variables required for climate change analysis and modeling?
  – Possible topic for Climate Committee?
Parallel experimental approaches to climate change

• Network of small scale simple experiments
  – Inspired by success of small scale studies and the need to span a large number of sites

• LTER sites with more comprehensive implementation of the same approach
Small scale, widely dispersed manipulative experiments (a la NutNet)

- Small plots (3m x 3m) over short stature vegetation (incl. forest understory)
  - Minimum deployment
    - Drought, water addition and control
    - 3 replicates
    - Estimated cost $5,000
  - Standard measurements
    - ANPP
    - Soil sampling
    - Environment (soil water, temperature)
  - Easily scaleable
    - Added reps, additional treatments as desired
  - Broad participation (LTER, NEON, USDA sites, Ag Res Stn, OBFS, small college research sites)
  - HUGE potential for climate change education
    - Citizen science, K-12
- Would require funds for information management from many sites.
  - RCN funding would be appropriate.
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• Manipulations with LTER supplements
  – Same design just described
  – Add active warming treatment (heaters)
  – Est. $25K entry cost (higher if added complexity)
  – Est. $10K annual heating

• Measure
  – NPP
  – Soil moisture, temperature
  – Archive soils with central collaborator (add’l $$)

• IM cost