

Integration of NEESPI studies

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Challenge: How to make the whole greater than the sum of the parts

- Key points:
 - NEESPI projects are far ranging, from snow microphysics to economics
 - Various models could be used for integration
 - Important not to lose sight of the unifying questions per the science plan (role of humans in perturbing the system, carbon as the unifying issue, role of land cover change)
 - Data and models (reanalysis?) as possible unifying themes

Possible models for integration: 1)

“Loose coordination approach”

- Typical of past large scale studies – selection of PI level projects follows science plans, proposals argue for their contribution
- Post-selection synthesis primarily through coordination of field activities, interaction at PI meetings, and/or papers published in journal special issue(s).
- Integration tends to be either a) by accident, or b) after the fact (sometimes via post-project RFP).

Possible models for integration: 2)

“Top down approach”

- Use for instance assessment indicators as unifying theme – e.g., how does process investigated (at PI project level) affect regional carbon budget
- Screen projects according to their relevance/contribution to unifying theme
- Works best where theme can be relatively tightly defined
- Questionable approach here as NEESPI is more a consortium than a funding mechanism

Possible models for integration: 3)

NSF FWI approach

- Recognizes nature of PI projects (e.g., long-term monitoring vs process/field)
- Identify small number of “capstone products” to which PI projects can contribute
- “Capstone products” are a) water and energy budgets (could be carbon for NEESPI) and b) changes and attribution
- Approach requires coordination, via working groups etc, but represent modest “steering” of PI projects relative to their stated (in proposals) goals, science questions, etc.
- Appropriate modification of this approach seems feasible for NEESPI