

**LTET Science Council Business Meeting May 16, 2013**  
**Jornada (JRN) LTER and NMSU Campus**

The Science Council Business Meeting was convened by Chair Collins at 6:30PM on 16 May 2013 in the lobby of Wooton Hall, New Mexico State University, Las Cruces, NM

1. Roll call

HJA: Michael Nelson

ARC: Gus Shaver

BES: Steward Pickett

BNZ: Roger Ruess

CCE: Mark Ohman

CDR: David Tilman

CAP: Nancy Grimm

CWT: Ted Gragson

FCE: Evelyn Gaiser

GCE: Meryll Alber

HFR: David Foster

HBR: Charles Driscoll

JRN: Deb Peters

KBS: Phil Robertson

KNZ: John Blair

LUQ: Jess Zimmerman

MCM: Diane McKnight

MCR: Russ Schmitt

NWT: Diane McKnight

NTL: Emily Stanley

PAL: Hugh Ducklow

PIE: Anne Giblin

SBC: Dan Reed

SEV:

VCR: Karen McGlathery

2. Approval of May 2012 Minutes (1 minute)

The minutes were approved unanimously

3. NSF Report – Saran Twombly and Matt Kane (60 minutes)

The new solicitation for LTER renewal proposals is going through clearance right now. Deadline for submissions is currently set for 14 March. There are several mostly minor changes from the previous call for proposals. One of the more substantial changes will be a de-emphasis of responding to the site visit reports. A new component will include a part where you describe the parts of the project funded through collateral sources. Because cost share is disallowed, it is important that PIs not specify matching funds in the budget, but instead describe what “infrastructure (human and otherwise)” is being provided from other sources in the facilities section.

At the moment supplements are very unlikely this year because sequestration ate up the funds.

Matt Kane engaged the group in a discussion of what works and does not work at the ASM. He asked the valid question, “Is this meeting worthwhile?” The meeting does cost around \$300K, which comes to about \$428.57 per participant (assuming 700 participants). Matt was concerned

because the report out session on the last day was poorly attended. Also, one of the groups met for the second time and said they didn't make any progress since last time. Hence the question, "is the meeting as productive as it could be?"

Mark Ohman: Efficiency is not necessarily a measure of scientific productivity.

David Foster: Sites have 100 people and this is the only meeting that really introduces them to the Network to develop collaborations and share information. This helps translate the essence of LTER to these people.

Bob Robbins: On a per site per year basis it only costs \$4K!

Gus Shaver: The problem with the LTER meeting is it is just for the LTER Club. We need to be more inclusive of other, non-LTER Scientists. Most agreed with this sentiment that we should do more to recruit and invite non-LTER Participants to the ASM.

LTEArts, our effort to blend arts, humanities and science as intellectual partners, is moving along swimmingly. Saran is working with NEA and NEH to develop an MoU in an effort to foster this integration. There is strong interest in this partnership at NSF, NEH and NEA. These agencies will fund summer fellowships for writers, philosophers, etc. Saran will send web links to provide guidance on how to access these resources.

In an effort to keep the dollars flowing to LTER, it seems that the Program can only justify getting us supplement funds if we can follow up on new ideas and opportunities. So, the plan is to inquire among young scientists what they would like to see regarding new data. Asking this group, "What is the LTER of the future?" Some of us think that the old people in LTER also have some cool new ideas, and maybe they could be asked to brainstorm, as well.

Please remember to follow NSF process and communicate with Cheryl Dybas regarding press releases for publications. She needs to connect with the author, PI and university communications officer. Do so BEFORE your paper is published. Once it is published, it is old news. Cheryl is very astute and knows how to coordinate press releases among institutions with respect to embargo dates.

Site visits will proceed as planned. No fears regarding criteria for IM evaluation. IMExec developed a set of questions that can be used to inform the site visit team starting this year. Visits will assess quality of science as proposed and carried out and search diligently for "waste, fraud and abuse." Is the site managed well? Is the work integrated? Etc. Be strategic in what you present.

Dave Tilman: One area of need is coordinated cross-site experiments and question-driven data collection efforts. Also, we need to spread the LTER mission more broadly. LTER is an incredibly valuable resource. Not just LTER but long-term data sets. The EB will work with the Communications Committee to develop efforts to spread the word.

Ann Giblen: Could funds be used to link LTER with other networks? Answer: what funds?

John Porter: LNO is a very important facility for support of many fundamental aspects of the LTER Network. Concern about timing of re-competition and continuation of valuable services. NSF is aware of this issue and working hard to make sure that any transition that occurs will occur smoothly.

Nancy Grimm: How do we assimilate other networks, for example LTAR, into LTER and to whatever degree? Answer: LTAR in particular is a hard fit with LTER because of its structure. So far, the designation has not resulted in any additional funding, either. ULTRA is another potential

partner, but with a slightly difficult fit, as well. Some awkwardness is created via joint review with different review criteria used between agencies. For example, USFS would like the ULTRA sites located at their experimental forests, whereas NSF prefers a more open competition for site selection.

#### 4. Science Initiatives Reports (2-3 minutes each)

- Diversity workshop – Collins

A small working group organized by Daniel Nidzgorski and supported by workshop funds from LNO met in Albuquerque from 17-19 April 2013 to discuss efforts to enhance participant diversity within the LTER Network. The focus of this initial workshop was undergraduate students. We discussed the need for more sites to compete for REU Sites awards from NSF. We also discussed the possibility of creating a web portal to advertise undergraduate research opportunities across the network. Currently this is rather ad hoc and it is therefore difficult to highlight opportunities available network-wide. Finally, we have plans to work with NSF to use the Fastlane data base to assess the current diversity profile of the LTER Network. This profile can be broken down into categories including PIs/Senior Scientists, staff, grad students, undergraduates, etc. This will provide the network with a baseline against which we can establish goals to enhance diversity with LTER.

- ILTER – Vanderbilt

Socio-Ecohydrology workshop was a success in Chapela organized with Mexico LTER Network in 2012. Will have follow-up manuscript and proposal for more collaboration. ILTER integration workshop will be held in Shanghai to work on controlled vocabulary across multiple Chinese, Japanese and English languages. There will be a follow-up to this effort in Taiwan later this year following the ILTER annual meeting that is to be held in Korea in September 2013. Finally ILTER has organized a symposium at INTECOL on Phenology and Carbon issues.

- VegE – Ruess

There are many vegetation data sets among all the LTER sites. These data sets will be very discoverable in PASTA but they will still be in raw form in a variety of ugly formats. Currently they cannot be easily downloaded and used. Network does not have the capability to present the data in a more useful format. The solution to this problem is VegE – Vegetation Engine, which is being developed under the leadership of Mark Harmon and others. The goal will be to take data from PASTA and put them into a useful form for further analysis and synthesis. This will require cooperation from each site because the data will need pre-processing to put them into a common and useful format. Some PIs expressed concern about additional demands on their data managers or other staff regarding this effort.

- Long-term Ecological Dynamics ABI – Collins

Corina Gries, Matt Jones and Scott Collins have been funded by NSF ABI to create workflows in Kepler that will use PASTA for the analysis of temporal dynamics of communities. The plan is to develop specific scripts to convert data from idiosyncratic site chosen format (described above as “ugly”) to temporal community data matrix. At that point any data matrix can be run through the metrics. Gries and Collins will be bugging sites to get their community level data sets (plants, animals, microbes) into PASTA. The group will help with development of EML. To facilitate use of these workflows the award also includes workshop funds to bring people together to learn how to use the tools and to work on products.

#### 5. Report from the LNO - Bob Waide (15 minutes)

Talk with Bob about “key” findings and consider making it a section of cool findings in 2013 or whatever year we are in.

## Synthesis

The 2012 Science Council and All Scientists meetings stimulated a record number of proposals for synthesis projects in 2012-13. Fourteen working group and five post-doctoral synthesis projects were supported with results expected by fall 2013 (Appendix 1). Important outcomes from synthesis activities will include peer-reviewed publications, new collaborative research funded from diverse sources, new standards for long-term measurements, and new synthetic databases for use by the LTER scientists. These new databases include prototypes of LTER vegetation and soil biogeochemistry databases and a central repository of atmospherically-corrected satellite data for all LTER sites.

## Cyberinfrastructure

By re-aligning priorities based on recommendations of the 2012 site review, LNO software developers were able to complete operational versions of the PASTA framework and the LTER Data Portal and release them to the LTER community in January 2013. The accelerated release of PASTA allows LTER sites to begin to contribute data to the Network Information System more than a year ahead of schedule. To accelerate the pace of synthesis, the LNO published nearly 16,000 datasets to PASTA from the EcoTrends project and from the defunct North Inlet LTER site.

In its current operational status, PASTA supports a full data package life cycle that harvests site-based data packages (both metadata and data) into a persistent storage archive. PASTA screens all data packages for accuracy and quality before ingesting the data package in PASTA. Publicly accessible datasets are assigned a Digital Object Identifier (DOI) upon acceptance into PASTA. General user access to PASTA is through the NIS Data Portal. The NIS Data Portal supports user authentication and access to a set of user interface tools for interacting with PASTA. LNO staff put priority effort into data management tools that make it easy for LTER IMs to evaluate and upload data packages. Data portal priorities for the coming performance period will focus on data consumer enhancements. The NIS Data Portal is available at <https://portal.lternet.edu>.

Because the EcoTrends database only contains data collected before 2008, the LNO focused on recovering time-series ecological variables from site data that will extend the EcoTrends database. This work involves writing computational workflows to update EcoTrends data from site-based data found in PASTA.

The LNO supported four important cyberinfrastructure projects designed and carried out by the LTER information management community: DEIMS, Metabase, GeoNIS, and EML mentoring. The total LNO investment in these projects was approximately \$240,000.

## Core Services

In collaboration with the Santa Barbara Coastal, Andrews Experimental Forest, and Bonanza Creek LTER sites, the LNO is preparing a repository of cloud-free and atmospherically-corrected imagery for all LTER sites from the NASA Landsat-5 archive. Part of this work has been completed and data will be available in the PASTA data repository sometime in summer 2013.

## Development and Outreach

The LNO helped design and brought to fruition the inaugural LTER annual report.

In addition to regular meetings of the Executive Board (5), Information Management Executive Committee (13), and the Information Management Committee (18), LNO staff supported videoteleconferences for working groups and sites, and water-cooler meetings on topics such as improved data access (22). The consistent use of videoconferencing capabilities available through the LNO indicate that this is an important service.

In collaboration with the Communications Committee, LNO staff worked with people identified by their sites as being responsible for communication to improve their knowledge, gain new skills, and make them be more effective. The goal of this effort is to improve the flow of information within, as well as in and out of the Network, thus helping achieve one of the major goals of Strategic Plan for Communication – greater visibility for the LTER Network.

### 6. Report from the Chair – Scott Collins (10 minutes)

- EB Priorities – IM REVIEW CRITERIA: The new review criteria drafted by IMExec at the request of NSF will be reviewed by the EB in Fall 2013. Given the changes in IM over the years, it is a logical time to evaluate and revise these criteria which can then be used in proposal development, panel reviews and site visit evaluations. The idea is to define reasonable criteria and expectations that will make evaluations of the IM component of LTER consistent across sites.
- Funding for cross-site research (new data): The EB will discuss potential mechanisms for encouraging and funding cross-site research in which multiple sites collect new data in a coordinated, shared fashion.

### 7. 2014 Minisymposium (15 minutes)

- Call for theme (set by SC)

A number of potential ideas were bandied about by the participants: “Scenarios?” Maybe generalize to “ecosystem forecasting (solutions)” “Solutions to environmental problems” “Stationarity is dead. Stationarity is a zombie” “What happens if we have more frequent and larger fires?”

Ultimately, in order to make sure we can group sites together in this context, we settled on a theme that involves forecasting and solving environmental problems.

The Organizing Committee for the 2014 Minisymposium is: Dave Foster, Nancy Grimm, Charlie Driscoll

### 8. 2014 SC Meeting (15 minutes)

- After a lengthy discussion about the costs and benefits of holding the next Science Council meeting at MCR, it was decided that under current pressures we will postpone meeting there. Instead KNZ will host the next Science Council meeting in May 2014. Specific dates to be set.
- Science theme – same theme as Minisymposium.
- Planning committee – Same as minisymposium working with John Blair, KNZ PI.

### 9. Recognition and thanks (10 minutes)

- The LTER Science Council presented a special tribute to Jim Gosz at the field trip BBQ

- in honor of his long and dedicated efforts to establish an International LTER Network.
- We were very grateful to our local SC Hosts at Jornada (Deb Peters, Bernice Gamboa, Kris Havstad, and a cast of THOUSANDS)
  - The Science Council program in 2013 was organized by Dan Childers and Hugh Ducklow
  - We offered our deepest gratitude to the outgoing EB members Emily Stanley, John Moore, Steve Hamilton, for the considerable time and effort they have devoted to improving the business end of the LTER Network. Incoming EB members (sites) are Deb Peters (JOR), Emma Rosi-Marshall (BES) and Will Pockman (SEV).
  - Appreciation was expressed for the 2013 Minisymposium Organizing Committee Kristin Vanderbilt, Chair; Dan Childers, Evelyn Gaiser, Jeb Barrett and John vande Castle for their efforts to schedule another outstanding Minisymposium at NSF.
  - The group also offered thanks to two outgoing committee chairs (Kim La Pierre – Grad Student, Bruce Hayden - Climate)
  - The group also recognized the efforts of the LNO, particularly John Vande Castle and George Garcia, in providing logistics for the SC meeting.

10. The meeting adjourned at 9:30PM

#### Appendix 1. New synthesis projects

- A guide to successful graduate student socio-ecological research: Insights from the Long Term Ecological Research Network - PI Sydne Record
- Beyond the numbers: Supporting an increasingly diverse LTER community - PI Daniel Nidzgorski
- Coastal wetland ecology and geomorphology - PI Steven Pennings
- Exploring the seasonal synchrony of catchment nitrogen dynamics: The search for a unifying theoretical framework - PI Jonathan Duncan
- Identifying alternative indicators for the detection of abrupt transitions in ecosystems: A consideration of time scale and community parameters - PI Emily Rivest
- Linking aquatic and soil organic matter across ecosystems through characterization of optical properties - PI Diane McKnight
- Mechanisms of convergence and divergence: understanding the variability of plant community responses to multiple resource manipulations - PI Meghan Avolio
- Responses of soft sediment coastal ecosystems to sea level rise and coastal squeeze in the LTER Network - PI Jenifer Dugan
- Sensitivity of ecosystem properties to winter climate anomalies - PI Laura Ladwig
- Soil biogeochemistry: Synthesis of past data and development of protocols for a new long-term, network-wide data stream - PI Peter Groffman
- Synthesis of stream ecosystem responses to nutrient enrichment at multiple trophic levels -PI Lydia Zeglin
- The ecosystem sensitivity to rainfall experiment (EcoSeRE): Design and synthesis - PI Melinda Smith
- Urban aquatic ecosystems: a synthesis working group proposal - PI Nancy Grimm
- Veg-DB Phase 2: Developing a cross-site system to improve development and access to synthetic vegetation databases -PI Mark Harmon

- A synthesis of LTER community data to test metacommunity theory under different ecological conditions - PI Eric Sokol
- Atmospheric correction to LTER Landsat catalog - PI Thomas Spies
- Cross-site analysis and synthesis of arts and humanities engagement within LTER - PI Michael Nelson
- Cross-site analysis and synthesis of the role of vegetation, sediment supply, sea level rise and storminess on intertidal coastal geomorphology - PI Joel Carr
- Establishing high quality digital collections of LTER educational resources - PI Beth Simmons