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Coordinating Committee Meeting, Kellogg Biological Station, November 1988

Long-Term Ecological Research Network

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LTER/CC (Coordinating Committee) Meeting
November 3-4, 1988
Kellogg Biological Station, Michigan

Minutes

AGENDA

Nov 3 Thursday morning/working lunch; afternoon, field trip

1 Introductions - Jerry Franklin
2 Comments from NSF Directorate - Dr Mary Clutter, Acting Assistant Director, Behavioral, Biological & Social Science
3 What's happening at NSF - Tom Callahan, Bob Robbins, Caroline Bledsoe
4 Wide-Area Networking - Karen Roubicek, BBN, Inc., Boston MA
5 Evolving LTER Network: Our tasks. Development of a strategic plan - Jerry Franklin
6 Potential Intersite Projects - Jerry Melillo, Jim Gosz
7 Internat'l Activities: Europe, China - Melillo, Franklin
8 Report on Data Managers' Meeting - John Vernberg & Bledsoe
9 Report: AERC mtg. (Assn. Ecosystem Research Centers) - Gosz
10 Development of a contract for network-wide training in GIS: what is desired? Leader? - Franklin

Nov 4 Friday morning/afternoon

11 Report on recommendations to NSF on criteria for review of LTER renewal proposals (Dueser committee report with modifications by LTER/EXEC (Executive Committee) - Bledsoe
12 NSF Supplemental Requests for Scientific/Technological Improvements to LTER Network
   (a) Results of FY 1988 funding - Franklin
   (b) Short-term advice to NSF for FY 1989 - Franklin
   (c) Long-term plan - Franklin
13 LTER Network Office: relocation, restructuring, and recruitments for personnel - Franklin
14 Progress on current intersite projects - Magnuson, Webber, Grigal (Tilman's project)
15 Discussion of possible All Scientists' Meeting in 1990
16 Dates, scheduling for future meetings & workshops
17 Procedure for rotation of members of Executive Committee
18 Publication plans - Newsletter, revision of LTER Network Guide ("blue book"), 1989 issue of LTER Personnel Directory
19 Activities - Environmental Protection Agency, International Geophysical Biological Program
20 Development of scientific goals for LTER network - continuation of Goal Setting Exercise initiated at the April 1988 LTER/CC meeting at H.J. Andrews LTER, Oregon - Magnuson

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The highlights of the meeting are summarized below. Details for topics follow.

HIGHLIGHTS:

A. Six Year Cycle for LTER Reviews and Renewal Funding

NSF outlined a 6 year plan for review and renewal of LTERs. The basics: Sites are grouped into 3 cohorts and receive 6 year grants. Extensive NSF Project Reviews (on site) occur in the 3rd year. For each cohort in their renewal year, renewal proposals are due Feb 1, panels meet in April, renewal funding dates are Oct 15. Annual progress reports are due in June. See Table 1 for other important details.

B. Short-Planning and a Long-Term Strategic Plan

The LTER/CC will begin development of both short- and long-term plans. A Strategic Plan will be put together by the LTER/EXEC. This plan will have several parts, including a short-term GIS section, a longer-term technology plan, and a long-term goals and implementation section. The LTER/EXEC will utilize extensive input from several committees and working groups. This plan will be developed during 1989 and presented to the LTER/CC at their October 1989 meeting.

A short-term plan for Geographic Information Systems (GIS) use, training, and network coordination will be developed by a working group: David Foster (Harvard Forest, HFR), chair, and experts from Central Plains (CPR), North Temperate Lakes (NTL), Sevilleta (SEV), and Niwot Ridge (NWT).

A long-term plan for Technological Improvements will be developed, following the initial work of an NSF Advisory Committee (H.H. Shugart, chair). This committee consists of: Jim Gosz (SEV), chair; Melillo (HFR), Lillesand (NTL), Kjerfve (North Inlet, NIN), Gage (Kellogg, KBS) and Stafford (Andrews, AND).

C. The LTER Network Office will be moved to the University of Washington, Seattle, where Franklin is located. The office will be restructured in order to provide increased network-wide coordination. The new office will consist of the Chair of LTER/CC (Franklin), an LTER Research Coordinator (currently Bledsoe), an administrative assistant (Judy Brenneman's successor), a network data manager (to be hired), and a Network Manager (to be hired).

D. The LTER/CC recommended that NSF give priority in its allocation of LTER supplemental funds (for Sci/Technology) in FY 1989 to 2 categories:

(a) M.S.I. (Minimum Standard Installation) technologies for all LTER sites. These M.S.I.'s are defined under Topic 12-(b).

(b) Proposals which have the largest implication for the network as a whole.

DETAILED COMMENTS ON AGENDA ITEMS:

1. General introductory comments by Franklin.

2. Dr. Clutter:
Dr. Clutter is the new Acting Asst. Director of BBS. The BBS has several divisions including BSR (Biotic Systems & Resources Division), John Brooks Director. Clutter commented on the possible doubling of NSF's budget by 1993. She stated that the number one priority for research dollars will be in the areas of education and human resources. She also emphasized the importance of programs to attract women and minorities in science. The S & T Centers (no more than 10% of NSF's budget) will continue. She said she had come to learn about LTER.

3. What's happening at NSF?
Callahan outlined NSF's FY 1989 budget with LTER-associated funding for the 3 new LTER sites and for the Sci/Technology Supplements. Funding was about half the requested amount; about $1.1 million is available for the Supplements. He surveyed the LTER/CC for estimates of response to NSF's new program to fund supplements to current grants, supporting nonLTER scientists to work at LTER sites. At least 35 supplements are expected. He mentioned NSF's new Mid-Career Fellowships. Bledsoe outlined the new 6 year funding cycle.

Proposed New LTER 6-Year Funding Cycle

EVEN YEARS: Renewal proposals, Feb; Panels, Apr; Renewals, Oct.
ODD YEARS: Mid-Term Project Reviews at sites

GUIDELINES: Sites, grouped in 3 cohorts, will receive 6 year grants. Site reviews are in the 3rd year, panel reviews in the 6th year. The panel could recommend either renewed funding or conditional funding with a mandatory review 2 years hence. Panels could not recommend a decline until after the second review. However, the Foundation reserves the right to terminate a project, which upon evaluation, is not fulfilling the obligations of an LTER program.

Projects	Renewal Proposals	Panel Review	Renewal Date	Mid-Term Review	Annual Reports
Cohort I	Feb 1,1990	Apr 1990	Oct 15,1990	1989*	June
Cohort II	Feb 1,1992	Apr 1992	Oct 15,1992	1990*	June
Cohort III	Feb 1,1994	Apr 1994	Oct 15,1994	1991	June

*Out of phase

	Renewal Years:	Mid-Term Reviews:
Cohort I	1990, 1996, 2002,...	1993, 1999, 2005,...
Cohort II	1992, 1998, 2004,...	1995, 2001, 2007,...
Cohort III	1994, 2000, 2006,...	1997, 2003, 2009,...

COHORT I	COHORT II	COHORT III
Andrews	Bonanza Creek	Cedar Creek
Central Plains	Hubbard Brook	Jornada
Coweeta	Kellogg Biol Stn	Harvard Forest
N Inlet	Arctic Tundra	Luquillo, Puerto Rico
Niwot	VA Coast Reserve	Sevilleta, NM
N Temp.Lakes		

Konza?

4. Wide-Area Networking

Bob Robbins (NSF) and Karen Roubicek (BBN, Inc.) outlined an NSF-sponsored workshop on networking for 1 rep from each LTER site. This workshop, sponsored by NSFNET Program, DNCRI (Division of Networking & Communication Research & Infrastructure, Dr. Dan Vanbelleghem, contact person)will be held at the Univ. of Illinois Super-Computer Center, spring 1989. Details are being worked out by Vanbelleghem.

5. Strategic Plan

Franklin described the increasing demands on the LTER Network as well as increasing opportunities. He stressed the importance of LTER being in control of their future and outlined the need for a 5-Year Strategic Plan - including Goals, Structures needed to achieve these goals, Resources, Cross-site Research, International Activities, etc. This document will be useful for communication and planning within the LTER Network as well as for education of outside agencies.

Franklin said the LTER/EXEC would develop a draft of this plan, utilizing extensive input from several committees and working groups. This plan will be developed during 1989 with discussion at LTER/CC meetings, followed by presentation to NSF, hopefully by fall 1989. The final plan will be evaluated each year and modified if needed. Various working groups and committees will be formed to work on this plan. Franklin designated 2 such groups to work this fall.

A short-term plan for Geographic Information Systems (GIS) use, training, and network coordination will be developed by a working group: David Foster (Harvard Forest, HFR), chair, and experts from Central Plains (CPR), North Temperate Lakes (NTL), Sevilleta (SEV), and Niwot Ridge (NWT).

A long-term plan for Scientific and Technological Improvements will be developed, following the initial work of the NSF Advisory Committee (H.H. Shugart, chair). This committee consists of: Jim Gosz (SEV), chair; Melillo (HFR), Lillesand (NTL), Kjerfve (North Inlet, NIN), Gage (Kellogg, KBS) and Stafford (Andrews, AND).

6. Potential Intersite Projects

Melillo outlined 3 workshops to be organized by the Harvard Forest LTER and to be held in 1989. #1: May 1989 Litter Decomposition Workshop, designed to identify factors controlling decomposition dynamics acrooss sites in the LTER Network and to evaluate the relative importance of above- vs. below-ground litter. #2: Sept 1989 Trace Gas Exchanges Workshop, focusing on gaseous exchanges between upland soils and the upper atmosphere. #3: Nov 1989 Remote Sensing Workshop with an emphasis on using these tools to detect plant canopy chemistry.

Gosz described a proposal from The Technology Application Center, Albuquerque NM, to purchase and archive remotely-sensed data for all LTER sites on a routine basis several times each year. After discussion, the LTER/CC decided to postpone a response to TTAC and allow time to explore other options, particularly from persons at LTER sites.

7. International Activities

Melillo reported on a 4-day Sept 1989 meeting in Germany. A number of mostly European scientists discussed with several LTER representatives the formation of an "LTER-like Network" in Europe. Representatives from China and Australia were also very interested. Franklin said that 10+ sites are being established in China, with an emphasis on agro-ecosystems. Possible reciprocal visits between Chinese and U.S. LTER programs were discussed.

8. Data Managers' Meeting

Vernberg and Bledsoe handed out a report by Michener (NIN) and Stafford (AND) on the Aug 1988 Data Managers' meeting. In this report, Michener outlined critical problems and possible solutions:

(1) Lack of adequate archival hardware.
(2) Lack of support for intersite communication. Solutions - more use of Bitnet, establishment of LTER Bulletin Board. The 2nd solution, an LTER Bulletin Board, has just been implemented by Tom Kirchner at Central Plains.
(3) Lack of funds for hardware/software for upgrading data mgmt.
(4) High turnover of data mgmt. personnel due to low salaries.
(5) Inadequate support for data mgmt at some sites.

9. AERC Meeting

Gosz described the Oct 1988 AERC meeting. EPA gave a presentation, outlining a long-term research program for next year, with about $35 million in funds (about 50% for ecological research). Gosz and others plan to contact EPA, DOE, NASA, etc. for further information. Gosz also commented on future lobbying activities by AERC. Dr. Clutter expressed her strong concerns that lobbying of Congress might have major negative effects on future funding for NSF, particularly if funds are "ear-marked" by Congress for certain programs.

Melillo, also attending the AERC meeting, reported that this group will organize an NSF-sponsored workshop in spring 1989 to consider the establishment of a national center for synthesis, comparative ecosystems analysis and modeling. An AERC Steerling Committee will prepare the proposal.

10. GIS Training

Franklin asked David Foster's committee to meet in Dec and workout details for an LTER training session for GIS. About 2 persons per site would be able to attend. A likely candidate for this training is ESRI (Environmental Systems Research Institute, developer of ARC/INFO software).

11. Criteria for Review of LTER Renewal Proposals

Bledsoe reported on criteria developed first by Dueser's committee and modified by the LTER/EXEC. This development of criteria was in response to a request by NSF at the June LTER/EXEC meeting. The LTER/EXEC suggested a new structure for LTER Renewal proposals - consisting of 2 sections. The first section (20-30 pages) would be organized in any manner desired by the site and would cover any material they wished. The second section would have a list of specific topics to be addressed, such as: long-term data sets and continuity of experiments/data; inter-site activities; leadership, management and organization; synthesis and modeling; new projects; data management; the 5 core areas; related research at LTER sites; dissemination of knowledge to a wider community; etc.

In the discussion, many people commented on the difficulties in conveying the sense of an LTER site with all its complex, multi-investigator projects. The value of ad hoc reviews was debated. One person suggested that the panel make site visits, and another person suggested that each LTER submit, with its proposal, a video! No decisions were made at this time; the LTER/EXEC will draft a response in time for use by sites preparing renewal proposals in the summer of 1989.

12. Supplemental Requests for Sci/Technology

Callahan outlined NSF's guidelines for supplemental requests for Scientific and Technological Improvements for FY 1989. Basically new proposals are required, the deadline is Feb 1, 1989, a focus on network-wide benefits from funding is strongly encouraged, and proposals will have to be <u>extraordinary</u> for the annual budget request to exceed $150,000 ($200,000 maximum). A summary of NSF's guidelines, based on Callahan's comments, is included below:

GUIDELINES FOR SUBMISSION OF SUPPLEMENTAL REQUESTS:

1 FY 1989 funding requires new requests; all sites are eligible. There will be an open competition for FY 1989 funds for supplemental requests for Scientific/Technological Improvements at LTER sites. Any site who wishes to be considered for funding must submit a request. Current requests, if any, should be resubmitted. Any site, whether funded in FY 1988 or not, may submit a request.

2 All supplements are for 1 year; new requests must be submitted each year. New requests may include substantial components of previous requests, if desired. Requests with a multi-year context are encouraged, but there can be no out-year committment, since the availability of these supplemental funds to NSF is uncertain for out-years.

While there can be no out-year committment, NSF strongly encourages multi-year plans. These plans are very useful in evaluation of the proposals, network-wide coordination, budget planning at NSF, and development of new programs/initiatives at NSF. NSF does expect that funding for the SciTechSuppl. will be available for some years into the future.

3 Topics: GIS, Remote Sensing, Computer Networks, Database Development, other technologies (Shugart report).

The topics for which Sci/Tech supplemements may be requested include acquisition of:

a) Geographic Information System capability
b) Remote-sensing analysis capability
c) Computer networks (LAN, WAN, etc.)
d) LTER Database management system
e) other technological improvements in the context of the LTER Sci/Tech Report (Shugart et al. 1988).

This listing indicates that topics other than or in addition to GIS technology may be the focus of the proposal.

4 Requests with multi-site components or with benefits to the network are more likely to receive favorable consideration.Requests which have a multi-site component or significant advantages to the LTER network or which are supportive of an overall LTER plan will be considered for funding before those without these aspects.

5 Investigators should realize that a request would have to be extraordinary to receive more than $150,000-$200,000/year to a site. Total FY 1989 funds available for LTER Sci/Tech Supplements are about $1,100,000,

6 Accountability for previous year's funding is important. Sites who were funded in FY 1988 and who submit requests for FY 1989 must indicate how FY 1988 funds have been and are being used. NSF recognizes that these sites have had only about 5 months (Sept 1, 1988 - Feb 1, 1989) of funding from FY 1988.

Franklin responded to Callahan's comments with an outline of MSI's developed by the LTER/EXEC. He stated that two items should be given consideration in selection of supplemental funds. The highest priority should be given to proposals that bring a site up to a least common denominator (MSI) in computer/GIS capabilities. The next priority should be given to proposals that have the largest impact on the network or that increase its ability to function as a network.

After considerable discussion among members of the LTER/CC on the merits/demerits of MSI's, there was a consensus that a major objective should be to move all sites to MSI's in FY 1989. The LTER/CC voted to recommend to NSF 2 priorities for funding Supplemental Requests for FY 1989:

(1) MSI (previously called LCD's or least common denominator) technologies which must exist at all LTER sites (including the network office) for the network to achieve its goals.

(2) Proposals with the largest implication for the network as a whole.

Based on preliminary cost estimates for MSI's of about $80,000 per site, several persons suggested that NSF might be able to fund all sites who needed MSI's, assuming that about $1,100,000 was available and that 5-6 sites had already been funded. Other persons argued for inclusion of proposals with network implications. After much discussion, both categories were included in the recommendation to NSF as priorities for FY 1989 funding.

In a discussion of costs, several persons said that multi-year committments to personnel (such as a GIS technical expert) are a problem. Core budgets are increasingly being squeezed to accomodate recurring costs. It was pointed out that LTER was designed only to be a base of funding around which a larger program was to be built. Other sources of funding for LTERs were discussed. Callahan pointed out that some sites which allocate little or no funds for salary support for senior PI's have an easier time with budgetary problems.

The discussion ended with agreement by the LTER/CC to support the MSI concept with the recognition that not all sites may either choose to request funds in FY 1989 or choose to pursue network activities.

13. The LTER Network Office

Franklin outlined the need for more support and structure for the Network and described the staff of the Network Office, which is moving to the University of Washington this fall. The office will be restructured in order to provide increased network-wide coordination. The new office will consist of the Chair of LTER/CC (Franklin), an LTER Research Coordinator (currently Bledsoe), an administrative assistant (Judy Brenneman's successor), a network data manager (to be hired), and a Network Manager (to be hired).

Position description for the Network Manager will be written in Dec; descriptions for the other 2 positions are available from the Network Office. Judy Brenneman, the current administrative assistant decided not to relocate to Seattle, sadly for the LTER Network Office and for all the sites. Judy's long-term committment to the Network was recognized by Franklin during the LTER/CC meeting. Judy will change jobs sometime early in 1989.

Structure of Network Office

LTER Coordinating
Committee (17 Sites)

LTER Executive
Committee (4 members)

Chair, LTER/CC
Jerry Franklin

LTER Research
Coordinator (NSF)
Caroline Bledsoe

Network Manager
(to be hired)

Administrative
Assistant
(to be hired)

Network
Data Manager
(to be hired)

14. Progress on Current Intersite Projects

Magnuson reported on the Spatial and Temporal Diversity Workshop which was held at Trout Lake in April 1988. He discussed how the data from 12 different sites were used by the representatives from these 12 sites. A series of 3-4 manuscripts are being written.

Pat Webber commented on the Climate Workshop held in August at the Niwot Ridge site. Dave Grigal, speaking for Dave Tilman, said that progress had been slow on Tilman's intersite project, due to an intensive field season. Tilman plans to work on the project this fall.

Jim Gosz commented that an anti-El Nino signal was developing the the South Pacific Ocean. He thought that the LTER Network might want to look for evidence of this effect at all the sites.

15. Discussion of All Scientists' Meeting in 1990

The last meeting was held at Lake Itaska in 1983, with about 10 persons/site attending. The meeting lasted 3-4 days and was considered to be very successful. Increased size of the meeting (17 sites x 10+ persons/site = 200+ persons) and increased costs were discussed. Gus Shaver and others spoke enthusiastically in favor of a meeting and its importance in development of an "LTER spirit". Franklin asked all site representatives to talk with their groups to determine interest in such a meeting and to report their findings at the April 1989 LTER/CC meeting.

16. Dates, Scheduling for Future Meetings & Workshops

		1988
DEC	19	David Foster's GIS committee
		1989
JAN		
	6-7	LTER/EXEC mtg., Washington DC
	6-7	Long-Term Sci/Tech committee mtg (Gosz etc.)
	16-18	Spatial/Temporal writing group, Trout Lake WI
FEB		
MAR		
	1-2	LTER Modeling Workshop, Univ. Virginia
	6-7??	Possible AERC workshop on Natl Center
APR		
	12	LTER Exec committee, Sevilleta, N Mexico
	13-15	LTER/CC mtg., Sevilleta, N Mexico
	26-28	Possible NSFNET Networking Workshop, Ill. super computer center, Illinois
MAY		(Decomposition workshop, Mellilo)
JUN	1-2	LTER/EXEC mtg., Washington DC
JUL		
AUG		
	6-11	Ecol Soc America mtg, Toronto, Canada
	6-11	LTER Data Managers symposium, with ESA
SEP		(Trace Gas workshop, Melillo)
OCT		
	11	LTER Executive committee mtg., Harvard Forest
	12-14	LTER/CC mtg., Harvard Forest & Hubbard Brook
NOV		(Remote Sensing workshop, Melillo)
DEC		

17. Rotation of Members of LTER Executive Committee

Members rotate, one per year. Vernberg's replacement will be elected in April 1989, replacing Vernberg at the Oct 1989 LTER/CC meeting. Lauenroth will be replaced in 1990, Magnuson in 1991. An alternate for the LTER/EXEC, replacing Tilman, will also be elected in April 1989.

18. Publication Plans

The LTER Network News is published twice a year. Issue #4 was distributed at the meeting; issue #5 is planned for completion in January 1989. An increase to 4 issues per year was discussed; no decision was made. Judy Brenneman will update the LTER Guide Book (the "blue book", edition #5) by mid-December and the LTER Directory by early 1989.

19. Other Activities

The activities of EPA in long-term research will be investigated by several persons (Gosz, Melillo, Magnuson?).

Melillo gave a brief report on the U.S. IGBP activities and the international IGBP program. There seems to be some confusion about the program and its possible sources of funding.

20. Goal Setting Exercise

In a continuation of an exercise begun at the April 1988 LTER/CC meeting, a number of research and operational goals were discussed. Then everyone voted on goals, resulting in the following rankings.

RESEARCH GOALS: (topic 1, most important)

1 Conduct parallel manipulative experiments across LTER sites and test predictions

2 Conduct comparative studies to test ecological theories in a broad array of ecosystems

3 Predict and test predictions of effects of climate change on ecosystems

4 Synthesize long-term, landscape-level ecological principles across sites

5 Develop predictions across scales, from small scale to global

6 Determine sensitivity indices, directions of ecosystem change

7 Compare ecosystem processes that buffer change

8 Extrapolate LTER results to a broader geographic region

9 Conduct comparative analyses with remotely-sensed data

10 Incorporate studies of biodiversity into LTER research

OPERATIONAL NETWORK GOALS

1 Develop network capability (LAN, WAN)

2 Develop GIS capability

3 Develop LTER as a leader in U.S. IGBP

4 Develop question-driven intersite data bases

5 Transfer information from basic research to applied problems

6 Develop interactive computer-based data base management system

7 Develop a body of expertise for solving fundamental problems

8 Develop LTER as a leader in a National Ecosystems Center

9 Foster research with nonLTER persons/sites

10 Educate/train persons in comparative ecosystem analysis