

**Long Term Ecological Network
Network Office
Strategic Planning Off Site
University Research Center
June 5-6, 2003**

June 5th

9:00 - 10:00 Introductions

Objectives of strategic planning initiative
Executive Director Perspective

10:00 - 10:30 Environmental Scan

BREAK

10:45 - 12:00 Environmental Scan (continued)

LUNCH

1:15 - 2:00

Strengths, Weaknesses, Opportunities, Threats
Driving Forces
Critical Uncertainties

BREAK

2:15 - 3:00

Identification of Key Issues

June 6th

9:00 - 10:00

Review and comment on Issues Development'

10:00 - 10:30

Review and discussion of NSF Requirements

BREAK

10:45 - 12:00

Development of NSF material - assignments
Next Steps

Network Office Strategic Plan June 5-6, 2003

Our web page says that the LTER Network:

- Is a collaborative effort involving more than 1100 scientists and students
- Addresses ecological processes over long temporal and broad spatial scales.
- Conducting major synthetic and theoretical efforts
- Providing information for the identification and solution of ecological problems

How much of this do we really believe?

These words represent a dream (not even a vision) of what LTER could be. The challenge to LTER is that too few people are working with too little focus to achieve this dream. Who's job is it to work towards this dream? It's the responsibility of everyone in the LTER Network, but the people in this room are the only full time staff that the LTER Network has. We're the only people who have the luxury (and the responsibility) of devoting all our intellectual energies to the challenges facing LTER. So the success of the LTER venture is affected greatly but what we do.

How can we help achieve the LTER dream?

- Think outside the LTER box
- What's the LTER box?
 - It's the safe place where all LTER sites go at renewal time.
 - It represents the tried and true approach to LTER
 - It's reactive to NSF, reviewers, and the community
 - It lacks a visionary, optimistic approach
 - It fosters in a vacuum of creative thought at the Network level
 - It is fed by a vacuum in agency leadership
 - It is perpetuated by the expectation that the community will self organize
 - It doesn't focus on opportunities
 - It can't adapt to changing conditions

If this is the problem, what can we do to effect a solution?

- Support site science
- Strengthen synoptic science
- Expand the influence of LTER
- Create new opportunities (IT)

What resources do we have to work with?

- Interesting and varied ecosystems
- Human capital/individuals
- History that gives us momentum
- A perspective that focuses on the right scientific scale
- Conviction
- Potential for community action
- Institutional breadth that provides untapped leverage

What can we exploit to achieve our goals?

Change – nothing grows without change, and we are fortunate to be living in a climate of change

- Changes in leadership at NSF provide a window of opportunity
- Large scale programs are under consideration (NEON)
- Favorable funding climate, although Congress and Administration differ in approach
- The development of the Network Strategic Plan focusing on science issues
- The probability of new sites
- Reorganization in national priorities in science
- Desire for community involvement
- Our own strategic plan providing for growth

- New UNM president
- New Chair

What can distract us?

- Focusing too narrowly
- Taking the easy road by focusing on service to sites at the exclusion of all else
- Dissipation of effort, lack of focus
- Being afraid to grow ourselves and the network. We need growth, but it must be planned.
- Thinking that the strategic plan is just a survival strategy rather than a useful tool to achieve the LTER dream.

LTER Network is... - Optimistic
 Dream what LTER could be
 Find way to achieve

Support site science

Focus on strengthening synoptic science

~~Expand influence~~ Expand influence

Create new opportunities

(IT)

(Think outside box - We're the only ones who are full time LTER thinkers)

What are resources?

- Systems
- human capital / individuals
- history + momentum
- perspective - right scale
- conviction
- community
- political health

Opportunities
 Vacuum in creative thought
 Vacuum in agency leadership
 Emphasis on community

What can we exploit?

- timing
- Rita out
- Mary out
- NEON
- Network strategic plan
- need for community voice
- ~~political health~~
- reorganization in national priorities in science

What are the ~~drawbacks~~ distractions

- ~~detail~~ reductionism
- overemphasizing sites
- taking the easy road
- isolationism (esoteric science)
- diffusion of effort
- being afraid to grow

focused narrow in time + space

new sites strategic plan

The LTER Network is . . . Collaborative effort

Does anyone believe?

1100 scientists
long temporal + broad spatial scales

conducting major synthesis + theor. efforts
Providing information for

Dream (not even vision) of what LTER could be.

~~Opportunity~~ Challenge is that too few people are working to achieve this dream

Who's job is it? Everyone's, but we're the only full-time ^{thru} employees the Network has, so success of the venture rests largely on our shoulders

Lacks Visionary, Optimistic approach To ~~achieve this~~ fulfill this dream, think outside LTER box

Vacuum in creative thought at network level
Vacuum in agency leadership - ~~is~~ Expectation that community will self-organize

Doesn't Focus on opportunities
~~can't~~ Can't adapt to changing conditions

- Safe place where all LTER sets go at renewal time
- reactive to NSF, reviews, community

If that's the problem

What's our role

- support site science
- strengthen synoptic science
- expand influence of LTER
- Create new opportunities (IT)

How to do this.

What are resources of LTER networks?

- Interesting and varied ecosystems
- Human capital / individuals
- History → momentum
- Perspective - ~~is~~ right scale
- ~~Convection~~
Potential for
Community action
- Institutional breadth ~~provides~~ provides untapped leverage

What can we exploit?

- Change - nothing grows without change
- Living in times of change
 - leadership at NSF - window of opportunity
 - NEON
 - Favorable funding climate
 - Network strategic plan ~~changes~~
 - New sites - growth
 - Our own strategic plan gives ^{growth} ~~us~~ ~~up~~
 - Reorganization in national priorities in science
 - Desire for community involvement

What are the distractions?

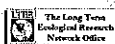

- ~~Reduction~~ Focusing too narrowly ~~in one area~~
- Taking the easy road by overemphasizing sales
- Dissipation of effort
- Being afraid to grow ourselves and the network
- Planned growth
- Not just a survival strategy

(SOW)
Coop. Agreement

Long Term Ecological Research


Network Office Strategic Planning

Environmental Scan, Issues Development
and
Strategic Discussions
June 5-6, 2003


Agenda – Thursday, June 5th

- 9:00 to 10:00
 - Introductions
 - Objectives of Meeting
 - Executive Director Perspectives
- 10:00 to 10:30
 - Environmental Scan
- Break
- 10:45 to 12:00
 - Environmental Scan (continued)
- Lunch
- 1:15 to 2:30
 - Strengths, Weaknesses, Opportunities and Threats
 - Driving Forces
 - Critical Uncertainties
- 2:30 to 3:00
 - Identification of Key Issues (*moved to Friday*)




Agenda – Friday, June 6th

- 9:00 to 10:00
 - Review of Issues Development
- 10:00 to 10:30
 - Review of NSF Requirements
- Break
- 10:45 to 12:00
 - Development of NSF Requirements
 - Next Steps




Objectives

- To establish an open environment for strategic discussions on the future role of the Network Office
- To create a "long view" of the future using the tools of strategic and scenario planning
- To identify critical uncertainties and how the organization might address them



Objectives (Continued)

- To address the requirements of the NSF Cooperative Agreement and Panel Site Review
- To provide a "short turn around" document to the National Advisory Board on June 20th

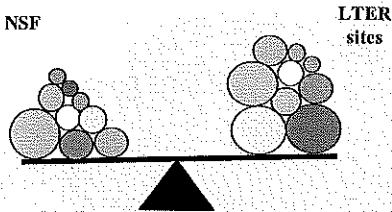



Executive Director Perspectives

Balancing needs of the stakeholders

NSF

LTER sites

Executive Director Perspectives

- The Home Page for LTER states a vision for the Network – this is a dream of what LTER should be:
 - The Long Term Ecological Research (LTER) Network is a collaborative effort involving more than 1100 scientists and students investigating ecological processes over long temporal and broad spatial scales.
 - The Network promotes synthesis and comparative research across sites and ecosystems and among other related national and international research programs.
- Who's job is it to work toward this dream?



Executive Director Perspectives

- The entire Network works toward this dream, but the NET has full time staff with the job of facilitating this dream – How?:
 - Thinking outside the box (don't just be reactive, exhibit leadership; don't assume Network will self-organize; learn to adapt to changing positions; etc.)
 - Supporting site science
 - Strengthen synoptic science
 - Expand the influence of LTER
 - Create new opportunities (e.g. IT)



Executive Director Perspectives

- What resources do we have to work with?
 - Interesting and valid ecosystems
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 - Potential for community action
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Executive Director Perspectives

- What can we do – ^{to exploit} change:
 - Changes in leadership at NSF are in the offing and provide window of opportunity (as well as new president at UNM)
 - Large scale programs are under construction (NEON)
 - Favorable funding climate, although Congress and Administration differ in approach
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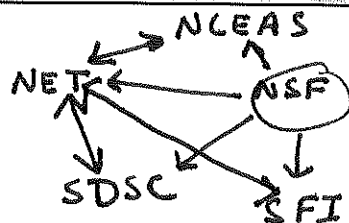
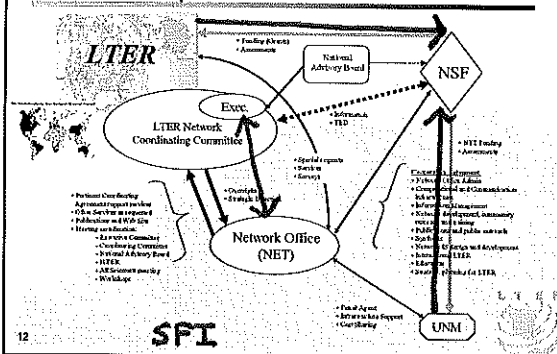


Executive Director Perspectives

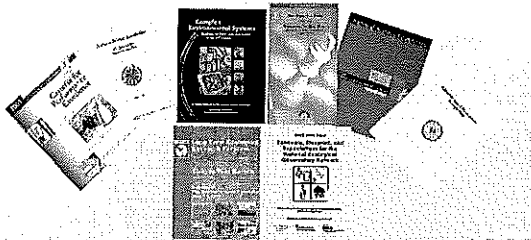
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The Complex Environment

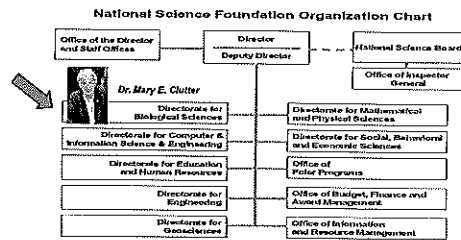


Understanding the Landscape



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Our Customer and Stakeholder



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Our Customer and Stakeholder

"To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes..." (P.L. 810507, 1950)

- Strategic Outcome Goals
 - People
 - Ideas
 - Tools
- Management Goals
 - Proposal and Award Management
 - Business Practices
 - Human Capital

President's Management Agenda Scorecard	Baseline 9/2004	Current 8/2005	Target 7/2006
Strategic Management of Human Capital	●	●	○
Business Practices	●	●	○
Proposal Management	○	○	○
Engineering & IT	○	○	○
Education & Outreach	○	○	○

Legend: ● = On Track, ○ = Behind Schedule, ● = On Track, ○ = Behind Schedule

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NSF Strategic Outcome Goals

- People
 - *Developing* "a diverse, internationally competitive and globally engaged workforce of scientists, engineers, and well-prepared citizens."
- Ideas
 - *Enabling* "discovery across the frontier of science and engineering, connected to learning, innovation and service to society."
- Tools
 - *Providing* "broadly accessible, state-of-the-art and shared research and education tools."

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NSF Crosscutting Activities

- Networking and Information Technology Research and Development (NITRD)
- National Nanotechnology Initiative
- Climate Change Science and Technology
- Homeland Security and Antiterrorism R&D
- Molecular-level Understanding of Life Processes
- Education Research

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NSF Priority Investment Areas

- Biocomplexity in the Environment (BE)
- Information Technology Research (ITR)
- Nanoscale Science and Engineering (NSE)
- Mathematical Sciences
- Human and Social Dynamics (HSD)

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Another Customer and Stakeholder

- Vision
 - To offer New Mexicans access to a comprehensive array of high quality educational, research, and service programs
 - To serve as a significant knowledge resource for New Mexico, the nation, and the world
 - To foster programs of international prominence that will place UNM among America's most distinguished public research universities



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NSF Panel Site Review (2002)

- Funding continued for six years despite recommendation by Review Panel for only one year and a follow on review
- Assessments and evaluations must be completed by the middle of Year 2 (September of 2004)
- Detailed tasking to ensure value-added to Network development



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Cooperative Agreement Tasking

- Network office administration and service activities
- Computational and communication infrastructure
- Information management and methods development
- Network development, community outreach and training
- Publications and public outreach
- Synthesis
- Network information systems design and development
- International LTER
- Education
- Strategic planning for the LTER Network



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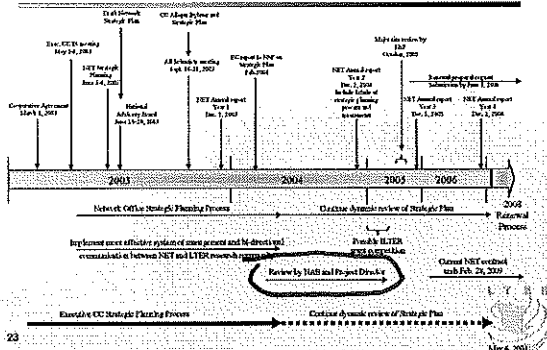
NSF Requirements – Strategic Planning

- Include:
 1. Mission statement, management organization chart, and defined scope of external relations
 2. Mechanisms for personnel evaluation
 3. Reporting structures and mechanisms of accountability
 4. Relations to NSF, UNM, and LTER leadership
 5. Processes for program evaluation, priority setting, and priority implementation
 6. Defined role in LTER-wide initiatives
 7. Defined role in LTER-related research
 8. Assessment of the most effective structures and activities for independent advisory groups
- Engage independent consulting firm
- Incorporate other five-year plans and developments
- Implement new relationships between UNM and NET
- Design a complete evaluation by the LTER community of the activities of the NET
- Coordinate results of evaluations of ILTER and educational activities
- Coordinate NET strategic planning with LTER Network strategic plan



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LTER Net Timeline



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SWOT Exercise

- Strengths
 - Technical expertise
 - Holistic perspective of entire network
 - Organization exists to think about the Network as a whole
 - UNM Environment – LTER sites
 - Elements of UNM chain knowledgeable and supportive
 - UNM is the right site
 - External organizational involvement (prestige)
 - Network has excellent Program Officers who understand the culture
 - Network IT group has good diversity
 - UNM provides flexible and timely administrative support
 - Healthy academic environment in the office
 - Good geographic location – accessibility to other sites
 - Network Office is recognized internationally
 - Resident NSF staff
 - Good collaboration with NSF
 - Good communication with NSF Program Manager
 - Recognized by NSF as a prominent and saleable program
 - U.S. and UNM looked to for LTER support – and did it
 - Well recognized nationally
- Weaknesses
 - No leverage over other sites
 - Need better flow to community – customer needs
 - Communication with and between sites
 - Perception of how money is spent
 - Clients in competition for resources
 - Difficult to convey value-added
 - Top heavy staff – ~~unproductive~~
 - Sites don't have deliver in participate in network wide activities
 - Not funded to provide direct benefit services to sites
 - Right definition of how data is structured
 - Outside involvement not recognized by NSF
 - Lack of sense of team, more adding on than building
 - Well-recognized – demands on time
 - Dispersed in different ~~rooms~~
 - Communication
 - Unrealistic expectations based on vision statement
 - Need operation level of management (OOC)
 - Need more diversity – in gender and thinking



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Not yet on campus

SWOT Exercise

- Opportunities**
 - Possible participation in formation of NEON coordinating office
 - Fund leveraging by LTER - e.g. World Bank
 - Coalition building and international protocol
 - Outreach to private sector, public and Congress
 - Telling success stories
 - Linking strategic plans (Network and NET) to budget request
 - Linkage to OSTP - opportunity to influence policy
 - Benchmark
 - Changes in Leadership - NSF and UNM
 - Public presentations made by staff - inside and outside
 - Increased integration of research and education
 - Develop meaningful international scientific collaborations
 - Linkage to other organizations (ESA)
 - Collaborations with other agencies
 - Global Change, Biodiversity, Information Management
 - Examine leadership vs. service
 - Growing interaction with other NSF offices - e.g. Social Sciences
 - Partnering with other organization's Outreach
 - Inter-Science collaborations
 - Political interactions - or partnering with those who have them
 - Cross-site collaborations, e.g. Education
 - Who is responsible for the security of the Nation's ecosystem?
 - Global context for Ecological System Integrity
- Threats**
 - Evolving role of big companies to develop networks for DHS
 - NEON
 - Decline of great science projects
 - Regulatory processes to allow with international partners
 - NCEAS overlap with missions
 - Congress changes the way they think about science
 - Review panel to give negative review & cut funding
 - Energy policies
 - Changes in leadership - NSF and UNM
 - Political and ethical issues - Homeland Security

lack of appreciation by sites
Rogue review panel
lack of interest by sites

staff turnover
Ethical considerations outweigh opportunities
Physical science community

Driving Forces/Critical Uncertainties

- National Science Board - role in selection of Director and other confirmed positions
- Intelligent Design Movement
- Unforeseen turnover at NET (succession planning and critical function documentation)
- Growth of military-industry networks driven by Homeland Security
- Economy
- Political agendas
- Spread of West Nile/SARS/other pathogens

Global change
Terrorism
ILTER plans
Competition from Biomedical Research
Comp. from other HHS agencies

Key Issues

- How can the NET meet the growing and competing demands of the NSF (as identified in the Cooperative Agreement and implied in recommendations from the Panel Site Review) and the user community?
 - Succession Planning
 - Metrics of success
 - Critical function documentation
 - Resource planning
 - Infrastructure growth, maintenance and replacement
 - Budget requests for new initiatives and additional support
 - Prioritization
 - Efficiency (including functioning as a complete team)
 - Staffing
 - Communication between and among the NET staff and Sites

Comm. with NSF

Key Issues

- What role should the NET play in driving long-term growth strategies of the Network? (If not the NET, then who?)
 - Active development of strategies with Executive and Coordinating Committees
 - Direct involvement with Synthesis and other Network-wide initiatives
 - Network IT Infrastructure coordination - meeting new federal requirements
 - Educational outreach strategies
 - NEON involvement
 - Development of economic impact issues - estimate that \$137B annually in losses due to non-native species
 - Homeland Security and International security involvement
 - International LTER engagement
 - Partnerships with other related organizations and associations

Expand influence
Create opportunities

Key Issues

- What long-term organizational entity/relationships are necessary to assist growth and success?
 - Institute within UNM
 - Nonprofit educational entity
 - Partnerships (Partnership for Biodiversity Informatics, Santa Fe Institute, NCEAS, San Diego Supercomputer Center, University of Kansas, etc.)
 - Chief Operating Officer or Deputy Director to handle day-to-day management functions
 - Status Quo

Evaluation by sites

Key Issues

- What increased level of effort is needed to influence policy, legislation and public opinion?
 - NSB selection - Research Bios, evaluate/comment on new selections
 - Leveraging lobbying influence of UNM and other LTER institutions
 - Leveraging public opinion
 - Engagement in Agency strategic planning and policy making
 - Development of "ecological message" and creation of national/international voice - consider Sabatian dealing with these issues, AAAS Fellows. This is also an important function of the Executive Director if time is available. Coordinate with Aldo Leopold Leadership Program

Issue Development

KEY ISSUE: How can the LTER Network Office (NET) meet the growing and competing demands of the NSF and the Network while enhancing its role to help guide the development of the Network in its third decade?

RECOMMENDATION: Through a robust and dynamic strategic planning process, evaluative feedback, and monitoring of external events and drivers, the NET can assist the LTER Network in developing and implementing long-range strategies for success.

- Can the LTER NET meet the growing demands of NSF and the user community?
- Can NET play a role in the long-term growth strategies of the Network?
- What long term organizational relationships are necessary to assure growth and success?
- How can NET influence policy, legislation and public opinion?

The NET has developed a broad scope of work for itself, both defined in the new accepted Cooperative Agreement with NSF.

- The LTER Network is recognized internationally and NET has assisted in the development of the LTER concept.
- NET and NSF have begun to coordinate Network-wide IT infrastructure requirements and practices.
- NET will continue to help the LTER Network develop strategies for growth and success.
- LTER is a strong support of NET and within the University of New Mexico leadership.
- Leadership at UNM is open to any national and global discussion.
- NET and PR and research resources will understand the need to influence public opinion and policy making.

Issue Development

Situation: The LTER Network has entered its third decade. It is now re-evaluating its history and future role, for the quality of research and a national and international reputation. It has recently been reauthorized by NSF and the user community. It has recently been reauthorized by NSF and the user community. It has recently been reauthorized by NSF and the user community.

Complication: A recent 3-year review report by NSF, and a "Panel for Review" conducted by NSF of the Network Office (NET) have identified areas for improvement. The feedback from the review is a growing national effort to improve the level of services through research and development.

Question: What strategies and actions are necessary for the NET to meet growing and competing demands while helping to shape the future direction of the LTER Network and ecology of the user?



What strategies and actions are necessary for the NET to meet growing and competing demands while helping to shape the future direction of the LTER Network and ecology of the user?

<p>Priority on growth and development:</p> <ul style="list-style-type: none"> • Develop a strategic plan for the next 10 years. • Identify key areas for growth and development. • Develop a budget for the next 10 years. • Develop a marketing plan for the next 10 years. 	<p>Identify key areas for growth and development:</p> <ul style="list-style-type: none"> • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development. 	<p>Identify key areas for growth and development:</p> <ul style="list-style-type: none"> • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development. 	<p>Identify key areas for growth and development:</p> <ul style="list-style-type: none"> • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development. • Identify key areas for growth and development.
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