

## LTER EDUCATION REPRESENTATIVES WORKSHOP

March 18-19, 2002  
Sevilleta Field Station, New Mexico

### Goals:

To develop a strategic plan for LTER Education that relates to the goals stated in the LTER White Paper.

White Paper goal: To build relationships to benefit formal and informal education at all levels:

- |                 |   |
|-----------------|---|
| Site level:     | Develop local k-12 links<br>Share strategies with other sites<br>Pursue external funding  |
| Network level:  | Share successful stories among sites<br>Help to develop assessment activities   |
| Network Office: | Provide summary of K-12 efforts<br>Sponsor Workshops to coordinate and develop programs<br>Help identify external funding sources |

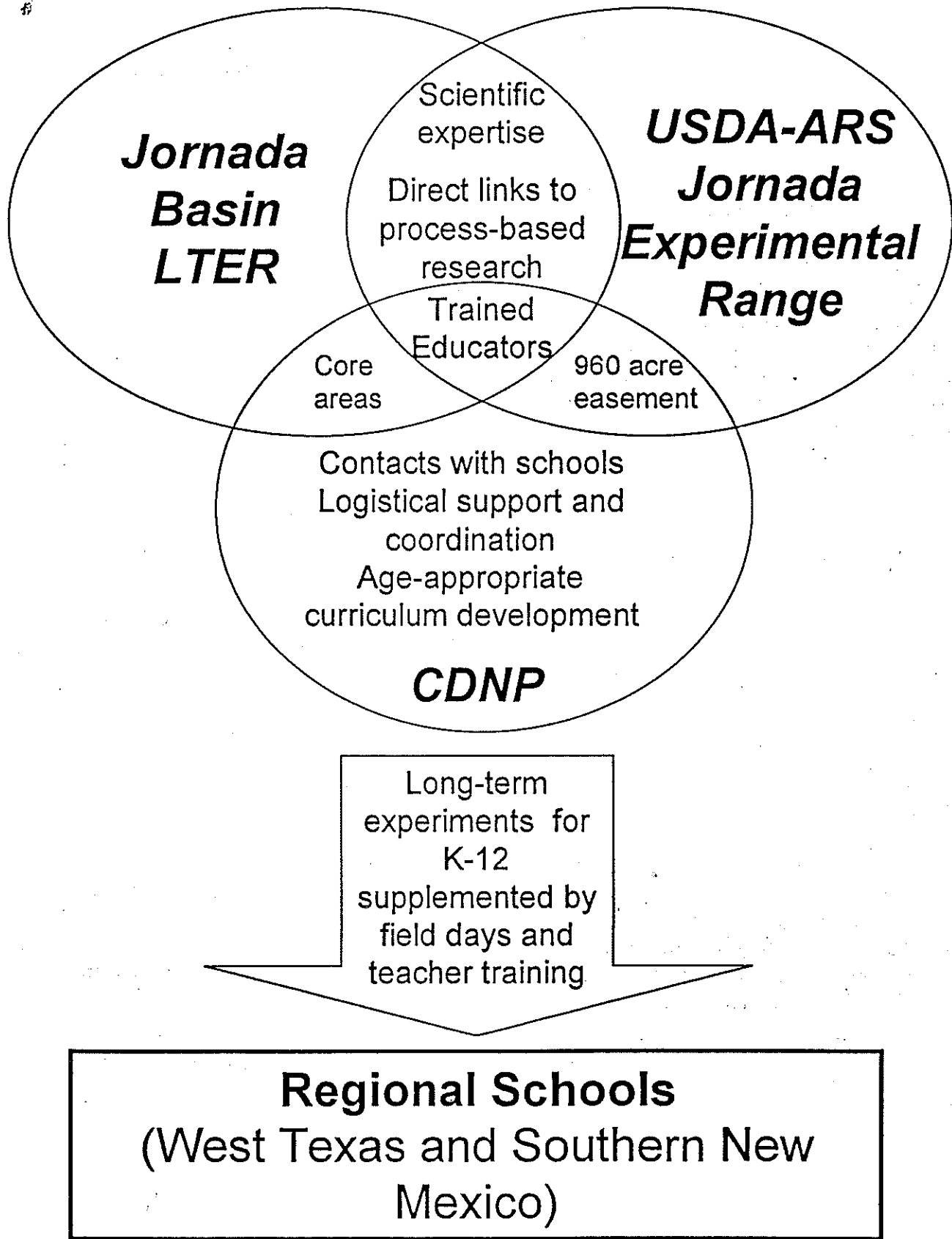


Fig. 1. Relationships between the Jornada LTER, Agricultural Research Service, the Chihuahuan Desert Nature Park and the schools.

## **JORNADA BASIN LTER MODEL COLLABORATION WITH LOCAL NONPROFIT ORGANIZATION**

### **LTER scientists:**

- 1) provide the scientific basis of curriculum
- 2) guide students on field trips
- 3) assist students with data collection
- 4) participate in teacher workshops

### **Chihuahuan Desert Nature Park staff scientists and volunteers:**

- 1) handle scheduling and other administrative tasks
- 2) ensure that all curriculum materials are age-appropriate
- 3) work with students in all educational programs
- 4) coordinate and run teacher workshops

### **Benefits to the Jornada LTER:**

- Large outreach program to local K-12 students and teachers with minimal investment in administrative costs (over 8,000 K-12 students and 300 teachers reached in 2001)
- Almost all LTER scientist time spent on outreach is during contact time with students or teachers (very little time spent on scheduling, fundraising, or other administrative issues)
- Help from trained educators in creating age-appropriate activities and lessons using the latest scientific research
- NSF funding is essentially matched by Chihuahuan Desert Nature Park contributions (including volunteer time and donated supplies)

### **Benefits to the Chihuahuan Desert Nature Park:**

- Addition of a new program that fits perfectly with the organization's mission to increase scientific literacy by fostering an understanding of the Chihuahuan Desert
- Assistance designing inquiry-based activities on scientific topics outside the expertise of the Chihuahuan Desert Nature Park staff scientists
- Assistance leading field trips and teacher workshops
- Easement on 960-acre site from the USDA/ARS Jornada Experimental Range for use in educational programs for K-12 students, teachers, and other adults

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 Working Groups

Day 1

Group 1 K-12	Group 2 Teachers	Group 3 Undergraduates	Group 4 Graduates & Post-Docs	Group 5 Faculty & Beyond
Elser Sparrow Steiner Hembree Bohanan Dwyer Waide	Baker McKee Saltz Green McKnight Eichhorst Sprott	Berkowitz Bestelmeyer Childers Buchsbaum Parmenter Day	Moore Kloeppe Fitzgibbon Buxbaum Hartley Lenihan Ortega	Klug Ebert-May Meyers Wright Smith Hueth Gosz

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Day 2

Group 1 K-12	Group 2 Teachers	Group 3 Undergraduates	Group 4 Graduates & Post- Docs
McKee	Elser	Sparrow	Berkowitz
Kloeppe	Bestelmeyer	Klug	Green
Wright	Bohanan	Ebert-May	Baker
Eichhorst	Moore	Buxbaum	Hembree
Saltz	Steiner	Smith	Lenihan
Parmenter	Hueth	Meyers	Hartley
Buchsbaum	Childers		Fitzgibbon

## Education in LTER – A Brief History

Products: <http://intranet.lternet.edu/committees/education/>

- ♦ 1980 – National Science Foundation (NSF) Division of Environmental Biology (DEB) opens special competition for Long Term Ecological Research grants.
- ♦ 1980—Present – LTER Network grows to 24 sites.
- ♦ 1980—Present– All LTER sites involved in education and training for graduate students and post-doctoral students in LTER research. Also, many LTER sites host summer undergraduate students to participate in field research at LTER sites through the Research Experience for Undergraduates program.
- ♦ 1980—Present– Many LTER sites active in informal K-12 outreach, for example guiding field trips for students and teachers.
- ♦ 1997 – NSF offers special LTER award competition for ‘Urban LTER’ sites, augmented by SBE and EHR for outreach and K-12 education (Central Arizona-Phoenix and Baltimore Ecosystem Study join LTER Network).
- ♦ Spring 1998 – ‘Schoolyard LTER’ supplements from DEB available upon request to all sites
- ♦ Spring 1998 – First ‘LTER Education Roundtable’ meeting in Ft Collins CO.
- ♦ Oct 1998 – Funding for LTER Schoolyard (\$15k NSF/DEB) 1998-1999 (1st year)
- ♦ Fall 1998 – Diane Ebert-May awarded \$50k planning grant to investigate how to involve LTER scientists in k-12 education (WHICH NSF DIVISION?)
- ♦ 1998 – Diane Ebert-May organizes first LTER Education workshop (Biosphere II, AZ) “What does inquiry learning look like”
- ♦ Oct 1999 – Funding for LTER Schoolyard (\$15k NSF/DEB) 1999-2000 (2nd year)
- ♦ 1999 – Diane Ebert-May organizes second LTER Education workshop (Kellogg Biological Station, MI) “Writing Proposals to fund education at LTER sites”
- ♦ Mar 2000 – Funding for LTER Schoolyard (\$15k NSF/DEB) 2000-2001 (3rd year)
- ♦ Summer 2000 – LTER All Scientists Meeting (Snowbird, UT) = 2 education workshops
- ♦ Fall 2000 – Post-All Scientists follow-up workshop Schoolyard LTER (San Diego, CA)
- ♦ Jan 2001 – Funding for LTER Schoolyard (\$15k NSF/DEB) 2001-2002 (4th year)
- ♦ Sept 2001 – Sonia Ortega (NSF EHR) joins LTER Network Office on Education Detail
- ♦ Mar 2002 – LTER Education Summit, Sevilleta NWR, New Mexico