

Annual Report for Period:03/2007 - 02/2008**Submitted on:** 03/21/2008**Principal Investigator:** Packard, Jane M.**Award ID:** 0551832**Organization:** Texas Agricul Exp Sta**Title:**

Land Trusts: Mediating Science and Policy on Conservation Lands

Project Participants

Senior Personnel

Name: Packard, Jane**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Collaborated with Co-PI in design, adaptation and implementation of project. Provided theoretical grounding for integration of human systems and biological systems. Recruited, supervised and mentored graduate students. Managed logistical arrangements and linkages with local communities at field site. Administered the overall budget. Prepared first drafts of reports, manuscripts and products for dissemination. Coordinated review and revision of products by team members. Provided principled leadership to meet the challenges of working within an interdisciplinary research team, including fostering positive problem solving approaches.

Name: Weeks, Priscilla**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Collaborated with PI in design, adaptation and implementation of project. Provided theoretical guidance on structure and functioning of land trusts as boundary organizations. Aided in the recruitment of the graduate student. Conducted participant observation via participation on a BTA/NPS committee and attendance at conference. Devised social codes for documents and chose documents to be coded. Supervises research assistant. Administers HARC budget.

Post-doc

Graduate Student

Name: Minion, Jodi**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Collected, analyzed and summarized data. Maintained a database of documents associated with the project. Managed the interface with a transcription service for audio records of interviews. Searched and obtained relevant literature. Attended a conference and submitted a report on how the project could be presented in a relevant manner to a wider audience to enhance the social merit.

Name: Esparza, Andres**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Collected, analyzed and summarized data. Maintained a database of documents associated with the project. Searched and obtained relevant literature. Assisted in preparation of web-based survey questionnaire. Assisted in planning for dissemination of results for diverse audiences, associated with training in cultural competency. Assisted qualitative data collection techniques (i.e. participant observation and field notes). Assisted with design for thematic content analysis of documents and plan for survey distribution. Assisted in editing and revising the annual report for more effective communication with a wider audience.

Name: Srinivasan, Mridula**Worked for more than 160 Hours:** Yes**Contribution to Project:**

Compilation and analysis of data; editorial assistance on preparation of reports and outreach materials; quality control procedures; supervision of undergraduate assistant; literature review.

Undergraduate Student

Technician, Programmer**Other Participant****Research Experience for Undergraduates****Organizational Partners****Houston Advanced Research Center**

Collaboration among members of the research team at Texas A&M University and Houston Advanced Research Center has continued to be fully integrated at all levels, including financial administration, use of hardware, software, meeting and office space. The Co-PI has collaborated on research design, data collection, data analysis and preparation of products. We made the joint decision to request a one-year, no-cost, project extension.

Other Collaborators or Contacts

As a student intern at the Houston Advanced Research Center (HARC), George Gunnoe collaborated on the project during summer 2007, under the direction of Dr. Weeks. Mr. Gunnoe was a law student at Texas Southern University, an historically black college. Additional assistance at HARC was provided by: Stefanie Ritter, Ginny Jahn and Becky Robinson. We have continued to closely integrate this project with the research team of Dr. Michael Paolisso in the Anthropology Department at University of Maryland-College Park. Additional members of the UMD-CP team include: Nicole Dery, Shawn Maloney, and Marty Krizan. As part of this partnership with UMD-CP, we have hired a part-time undergraduate student, Michael Birt.

Activities and Findings**Research and Education Activities:**

The goal of this project is to improve our understanding of how land trusts span the boundary between natural science and social values. During the first year, we completed Task 1, which was to characterize the structural diversity of land trusts in the research area. We identified three land trust organizations that differ in scope along a continuum of 'local', 'regional' and 'international'. A database of public outreach documents from these land trusts was compiled for further analysis. During the second year, we have focused on Task 2: analyzing the database of public outreach documents, to determine the relation between social and scientific themes in the database. This is our way of identifying which of the documents fit our category of 'hybrid objects', defined as documents that cross the boundary between natural science and social values.

Preparation of the case studies associated with our selected land trusts and their outreach materials has been more complex than we expected. Completion of this task has been delayed and we have extended our schedule by one year.

To better understand the dynamic complexities of communication among land-trust organizations, we have attended public meetings of the three organizations chosen for case studies. The 'international' and 'local' organizations partnered on two public education activities: (1) Big Thicket Science Conference and (2) Thicket of Diversity all-taxon biodiversity inventory. They were joined by the 'regional' organization in an ongoing leadership development training program. As a result of this participant observation, our understanding has deepened with respect to the context in which materials prepared by land trusts are used in communication within and between organizations.

Public outreach documents from the land trust organizations in our database have been coded for a range of concepts falling under one of three general dimensions: social, scientific and administrative. The latter was added because, as we reviewed documents, it became apparent that professionalization has been important as organizations developed along the continuum of a local to an international scope.

We are currently in the process of a more detailed contextual analysis of the most relevant documents identified from the first level of coding. By 'relevant' we refer to the criteria used to identify hybrid objects that combine scientific and normative elements. At this more detailed level of analysis, we are examining how the normative elements may shape the manner in which the conservation science is communicated to local communities.

Findings:

One of the most interesting findings that has emerged from our interim analysis, has been the complexity of interactions among the land-trusts, as their key actors negotiate the boundaries of science and society. To more fully understand the dynamics of this interaction, we have devised a procedure for network analysis. We anticipate this approach will build on, and extend previous network analysis, in a manner that will enhance the validity of our results.

We have a preliminary understanding of how each organization makes the choices about which parcels of land to protect. The international organization has focused on partnering for long-term management of the forest community (longleaf pine) that was identified as highest priority in their science-based plan for the region. The regional organization focused on partnering to complete existing plans to protect biodiversity on public lands, in a manner that promises to enhance benefits of tourism for local communities. The local organization considers small acreages that meet the criteria of existing science-based plans, yet are outside the scope of action defined by their partners.

We found that these organizations have to be flexible in responding to dynamic changes resulting from globalization of international markets for forest products. During the previous year, the last timber corporation in the region made the decision to divest its landholdings, some of which were identified as under conservation status. Unanticipated events such as this were not included in the strategic plans within the land-trust community. We are documenting what this has meant for organizations, in terms of redirecting resources, both human and financial.

The land-trust community has also responded to increased scrutiny from the Internal Revenue Service, in terms of emphasizing standards for best practices within organizations. We are interested in how this response to pressures, of a political and economic nature, may have influenced local capacity to implement recommendations based on sound science.

Training and Development:

A third graduate student has been recruited for the final year to complete this research. Ms. Mridula Srinivasan is an ecologist who is interested in cross-training in the cross-cultural dimensions of conservation. As a doctoral candidate who has completed her coursework and fieldwork, she is now able to broaden her experience base by collaborating on this interdisciplinary project while writing her dissertation. Although our former graduate student, Andres Esparza, chose to withdraw from graduate studies due to personal reasons, he expects to reapply in the future at a better time to utilize the training he received during his participation in this project.

Outreach Activities:

We conducted a workshop, titled 'Stewardship of conservation lands: finding common ground in diverse groups', at the annual meeting of the Land Trust Association in October 2007. In addition to presenting interim results, we received input from participants during interactive sessions. This information has been useful in providing grounding for the manner in which we will choose to generalize results of our study, such that the information will be useful for practitioners in the broader land-trust community at the national level.

Journal Publications

Books or Other One-time Publications

Stoopen, J. F., J.M. Packard and R. P. Reading., "Binational collaboration in recovery of endangered species: the Mexican wolf as a case study", (). Book Chapter, Submitted
 Editor(s): L. Lopez-Hoffman and K. Flessa
 Collection: Transborder conservation between the U. S. and Mexico: binational solutions to our shared problems.
 Bibliography: Pages XXX-XXX in , editors. Island Press, Washington, D.C., USA.

Web/Internet Site

URL(s):

<http://www.harc.edu/OurWork/Projects/LandTrustScienceSociety>

Description:

This is the primary portal for providing visibility to the widest possible public audience. It has a link to the TAMU/TAES website, which provides portals for specified diverse audiences.

Other Specific Products

Product Type:

Teaching aids

Product Description:

We are currently in the process of designing instructional materials for outreach activities to be delivered through the global Society for Conservation Biology. These materials will be piloted during a workshop scheduled at the annual meeting in Tennessee, in July 2008. We plan to use the feedback from this workshop in refining materials that will be distributed through the Network of Conservation Educators and Practitioners, a program coordinated through the American Museum of Natural History.

Sharing Information:

We plan to share this curriculum with practitioners at the annual meetings of a national organization, the Land Trust Alliance, as well as its regional networks (Southwest and Southeast). The curriculum will be shared with conservation scientists and scientists-in-training at the annual and section meetings of the global Society for Conservation Biology, through the Education Committee of the Social Sciences Working Group. Participants from diverse institutions of higher learning will be invited to attend these workshops through the membership networks of their professional societies.

Contributions

Contributions within Discipline:

Dr. Weeks has submitted an abstract for a presentation at the annual meeting of the Society for Applied Anthropology. She has taken the lead in revising a manuscript submitted for publication in the journal *Human Organization*. We continue to refine our ideas for integrating theory from political ecology and conservation science. With the rapid pace at which new events have unfolded in our study region, we are cautious about reporting prematurely on contributions we expect to emerge for this discipline. We are confident that extension of the timeline by one year will provide us with the capacity to make a substantial contribution.

Contributions to Other Disciplines:

Our participation in interdisciplinary activities has benefitted greatly from integrated research and education during the previous two years. We have laid the groundwork for a workshop at conservation biology meetings, coordinating through the Social Sciences Working Group of the Society for Conservation Biology. In preparation of a chapter for an interdisciplinary volume (Bernal Stopen et al. in press), Dr. Packard has been invited to participate in a workshop for authors in May 2008. Through the interdisciplinary network at the Houston Advanced Research Center, Dr. Packard has been invited to participate in a revision of a previously published book on the cultural and biological impacts of climate change.

Contributions to Human Resource Development:

We participated in an educational outreach activity designed to appeal to students from groups under-represented in science and technology. At the Biodiversity Day event hosted by the Big Thicket National Preserve, over 300 visitors participated. Our research team assisted with mentoring undergraduate students from Eastfield College, Stephen F. Austin College, and Prairie View College. Graduate students from Texas A&M University and the University of Arkansas at Lafayette also participated.

Contributions to Resources for Research and Education:

We have refined and started to implement a plan for preparing the educational resources to disseminate results of this study. The informative modules we are developing will be delivered through interactive website technology. This will contribute to the visibility of publications in peer-reviewed scientific journals, as well as providing grounding for planned educational activities designed to reach a broader multi disciplinary audience.

Contributions Beyond Science and Engineering:

During the previous year, our ongoing partnership with colleagues at the University of Maryland has encouraged us to explore ways to interface with networks serving rural communities across the nation. We are in the process of expanding our partnerships to include two ongoing programs that provide assistance for landowners within local, regional and national networks.

The Southeast Texas Resource Conservation and Development Council is a regional network of the National Association of RC&D Councils, Inc. These councils work closely with citizens in rural communities to implement projects addressing land conservation, land management, rural community development and water management. They facilitate communication with the U.S. Department of Agriculture (USDA). We are in the process of discussing how citizens might benefit from the results of our research, through workshops made available through the RC&D network.

The Urban Wildlands Interface program of the Texas Forest Service is a partnership with the U.S. Forest Service. The purpose of this program is to promote sustainable forestry practices, while minimizing risk of losses due to fire hazards. These issues are very relevant to non-governmental organizations associated with land conservation. We are seeking ways through this network of forest-landowners to communicate the results of our joint research.

Special Requirements

Special reporting requirements: None

Change in Objectives or Scope: None

Animal, Human Subjects, Biohazards: None

Categories for which nothing is reported:

Any Journal

**TITLE: Land Trusts: Mediating Science and Policy on Conservation Lands
NSF# 0051832
Jane Packard, Principal Investigator, Texas A&M University
Priscilla Weeks, Co-Principal Investigator, Houston Advanced Research Center**

2006 Annual Report to Ethics and Values of Science, Engineering and Technology Program of the National Science Foundation

The *goal* of this project is to improve our understanding of how land trusts span the boundary between natural science and social values in the identification and management of private conservation lands. We *hypothesized* that those land trusts that construct and manage hybrids, which resonate with community values, gain legitimacy and appear more accountable to local communities and therefore experience relatively more ease in negotiating with communities affected by land conservation policies. We predicted that land trusts at a local scale would (a) borrow more heavily from local social values than from global (extra-local) scientific models in the process of constructing hybrid conservation concepts and (b) rely more heavily on informal social processes to manage the tension between local applications and science-based policies

Specific Objectives:

1. Identify conservation hybrids used by diverse land trusts with diverse structures to span the boundary between social values and conservation science.
2. Unpack the hybrids into their social and scientific components.
3. Use a comparative case study approach to analyze how diverse land trusts rely on diverse strategies to construct and manage conservation hybrids.

Tasks:

1. Characterize the structural diversity of land trusts in the research area (year 1).
2. Identify the social and scientific components of the hybrids used by land trusts to span the boundary between social values and conservation science (years 1 & 2).
3. Assess the relationship between ease of negotiating with local communities and the interaction styles employed by the land trusts in the case study (year 2).

Progress to date:

Task One: Characterize the structural diversity of selected land trusts. One end product of this task is the identification of three land trusts, operating at different geographic levels, to use as cases. These have been identified. They are the Nature Conservancy, Conservation Fund and the Big Thicket Natural Heritage Trust.

The Nature Conservancy (TNC) is an international conservation non-governmental organization with its headquarters in Arlington, VA.. TNC owns both fee simple nature preserves and conservation easements on private lands in the study region. It also has a local office with two staff members. TNC considers itself as taking a science based approach and its field staff hold degrees in the natural sciences. Staff based in the Big

Thicket partner with other organizations. One sits on the Board of the Big Thicket Association and is active in organizing the Big Thicket Science Conference.

The Conservation Fund is a national level organization, also based in Arlington, VA. It is a dual mandate organization dedicated to land conservation and community development. For the past several years, The Conservation Fund has been instrumental in procuring conservation lands to expand the Big Thicket National Preserve. Last year, it contracted with Fermata, a leading eco-tourism development company to promote the economy of the region.

Big Thicket Natural Heritage Trust (BTNHT) is a young local land trust that is an offshoot of the Big Thicket Association (BTA). BTA members fought for the creation of the Big Thicket National Preserve and serve as a de facto preserve 'friends group.' The BTNHT appears to function as a working committee of the BTA and because of this, the BTA/BTNHT will be considered as one organizational unit in the present study. In a variety of ways, members of BTA/BTNHT partner with all of the players discussed above. This local organization invited the Conservation Fund to help it draft a strategic plan for the Preserve. Members of its Board attend the Fermata meetings sponsored by Conservation Fund and it works with Nature Conservancy on the Big Thicket Science Conference.

II. Task Two: Identify the social and scientific components of the hybrids. These hybrid concepts are embedded in NGO documents and underpin discussions in meetings and interviews. Most of the relevant documents have been collected and organized. They consist of: (1) documents describing standard operating procedures and mission statements, (2) land appropriation strategies, (3) project and land acquisition descriptions, (4) ecological assessments and management plans. In addition to collecting these documents, the research team members have been regular attendees at relevant meetings and conferences and have conducted informal interviews.

Electronic and hard copies of these documents have been archived and a bibliographic database has been prepared to facilitate retrieval and analysis of the textual content. The number of documents archived for the national organization (n = 95) is higher than the number of documents for the regional (n = 30) and local organizations (BTA/BTNHT, n = 37).

To aid in collection of these documents and in the development of ideas for the textual analysis, Jodi Minion attended the Land Trust Alliance national meeting in Nashville Tennessee. This helped to place our study region in the context of the broader national efforts to enhance professionalism within land trust organizations. The information was also useful in developing a strategy for dissemination of the research results.

Upcoming Activities:

Task Two: Formal interviews will be conducted this summer and the interview schedule is currently being constructed. Textual analysis of the documents collected will begin this spring.

Task Three: The PIs and graduate student will spend most of the summer doing ethnographic field work and conducting a network analysis.

Personnel News:

During the summer, **Jane Packard** and **Pris Weeks** coordinated the fieldwork on both the present study and the associated research of cultural models of conservation lands (funded by USDA). A total of 40 interviews were conducted and transcribed. Since the local and national land trust organizations have local offices in the study region, their staff were included in these interviews. This parallel analysis of cultural models is ongoing, with plans to prepare and distribute questionnaires during the spring. During this process, **Weeks** and **Packard** participated in local meetings. **Packard** continued to return to the study area for participant observation as opportunities arose during the fall. In early summer, **Packard** and **Weeks** attended the southwest regional meeting of the Land Trust Alliance in San Antonio, which was productive in terms of networking and insight as to how the organizations chosen for our case studies compare with organizations within the region.

Following a national search, **Jodi Minion** joined the research team as a Graduate Research Assistant in the Department of Wildlife and Fisheries Sciences for the fall semester. She successfully completed the scheduled tasks and traveled to the national meeting of the Land Trust Alliance. She decided to transfer to another program within the department and we wish her success in pursuing a Master of Science degree with more of a public policy focus. As an undergraduate, **Jodi** had participated in a REU project supported by NSF and we are pleased that she has committed to pursue a career in science.

We are currently in the process of evaluating applications to refill the position of Graduate Research Assistant. After an interview on campus, the top applicant has been offered the position, pending acceptance into the graduate program. We were impressed with the quality of the applicants and are optimistic about the potential for adding a valuable new member to the research team.