

**Assessment of Non-Academic Outcomes (Fall 2003 and Spring 2004)**

Please provide the information below about how your unit assesses the extent to which it meets its expected outcomes. If you need assistance, please contact Dr. Virginia Wheelless at 565-2085 or on Groupwise email. This information is due in the Planning Office no later than February 2, 2004 and will be updated annually.

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**Unit:** Center for Environmental Economic Studies and Research      **Date** February 20, 2004

**Person Completing the Information** Dr. Michael Nieswiadomy      **Email** miken@unt.edu

**Head of the Unit:** Dr. Michael Nieswiadomy      **Email** miken@unt.edu

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**I. Mission:** Provide the mission of the unit and a statement about how it relates to the university's mission.

The primary objective of the Center is to promote, conduct, and coordinate environmental economics research and complementary activities on the University of North Texas campus. To accomplish this mission, the Center focuses on two main areas: research and education. The Center focuses on economic solutions that weigh the cost and benefits in order to maximize society's welfare. The Center's goals are to investigate economic solutions to environmental problems and to disseminate this research both within and outside the discipline of Economics. The Center's research has been focused on the areas of water, endangered species, garbage, biodiversity, and property rights.

**II. Previous Evaluations of the Unit:** Provide a description of the evaluations/assessments conducted in your unit over the last 5 years and changes that have been made based on the results of these assessments.

**We are including the latest report on the Center. This is the basis of current efforts to develop more focused goals and objectives and increase faculty involvement and support.**

Sunset Review Summer 2002  
**Center for Environmental Economic Studies**  
Department of Economics  
Michael Nieswiadomy, director

**Sunset Review Committee:** Mitch Land, chair; Carrie Ausbrooks and Terry Clower

**The committee wishes to thank Michael Nieswiadomy, director; Steve Cobb, chairman; and Dean Warren Burggren for their cooperation and candor during this review process.**

Questions and Responses: **The questions required by the Instructions for Sunset Review Teams and responses follow.**

**1. Are the stated goals and objectives of the unit being met?**  
The stated goals and objectives of this unit are not being met.

2. **Is the unit advancing knowledge or performing a valuable service in a manner that would be unlikely to occur at UNT if the unit did not exist?**

No

3. **Is the unit able to attract strong outside support for its activities (including funding)?**

No

4. **If the unit is intended to be interdisciplinary, does it successfully promote cooperation among the faculty and graduate students from different academic units?**

N/A

4b. **If the unit is not currently interdisciplinary in its focus, would involvement of faculty and students from other units help achieve the goals of the unit?**

Yes

### *Committee Report and Recommendations*

The Center for Environmental Economic Studies has operated well given limited resources. The center depends upon spare time contributed by the director and occasionally other economics faculty. The center has the potential to promote the metropolitan mission of the University of North Texas through timely and relevant research on environmental economic issues and supporting interdisciplinary research with other institutions and departments both within and outside of the College of Arts and Sciences. However, the center is not currently meeting its stated, formal goal; that is, to investigate economic solutions to environmental problems and to disseminate this research both within and outside the discipline of economics. Its informal purpose of providing opportunities for faculty research, which would not be possible otherwise, has not been met.

Given the recognized importance of natural resource management, environmental policy development and administration, and the need of local and regional public and private entities for expertise in environmental economic issues, **the center should use the next evaluation period to substantially expand activities to justify its existence.** The committee urges the Department of Economics, the College of Arts and Sciences, and the university to consider providing fiscal resources as seed funding to support one or more graduate assistants and/or part-time support staff. This will facilitate the director's ability to pursue, engage, and accomplish research projects and expand the center's marketing efforts, particularly if the center accepts the recommendations that follow.

**Specifically, this committee recommends that the center director engage in at least several of the following activities during the next five years:**

- Establish realistic center goals within the framework of its stated objectives.
- Make a realistic assessment of the organizations that would be interested in the expertise offered by center personnel. As opportunities are realized, the center should consider expanding to include additional faculty members and/or graduate students.
- Focus research efforts on applied problems with emphasis on issues directly relevant to Texas and UNT's service area.
- Seek funding opportunities in the following:

- Identify projects with which the center could serve as a subcontractor to environmental engineering consulting firms.
  - Develop relationships with public entities such as municipalities, counties, water development boards, and state regulatory agencies that contract for environmental economic expertise. Limit pro-bono work or projects with low funding levels to only those that will likely lead to more substantial contracts or will enhance public awareness of the center and the university.
  - Market the center's expertise to businesses and advocacy groups with issues before state and federal regulators.
  - Develop formal interdisciplinary operating relationships with other departments and centers at UNT that present opportunities for partnerships on funded research projects.
- Faculty associated with the center should make concerted efforts to take on speaking engagements to groups interested in environmental issues. These efforts have at least three potential goals:
    - Inform the public about environmental economic issues
    - Market the center's expertise to potential clients
    - Market relevant academic programs to prospective students.
  - Design internships for students who are interested in environmental/economic issues, whereby they could complete the research portion of their internship with the center and make use of its resources.
  - Since several courses are listed on the center's website as being related to its work, link the students' course activities to the center and its work and resources.

This committee, therefore, encourages the Center for Environmental Economics to grow toward its potential in service to the department, college, university and community of North Texas.

Respectfully Submitted,

Mitch Land  
Chair

No substantial changes have been made with respect to the above recommendations. The Center **still** receives no financial resources from the university and as a result the Center has not expended any resources or used any facilities. The Center currently exists to support the research activities of one faculty member that spends significant time teaching and with departmental service activities such as job placement. If anything, in the period since the review, tighter budgets have resulted in more pressure on faculty to teach more and larger classes. We are trying to hire a replacement faculty member that does have some experience in environmental research. If successful, this would provide another faculty member to work with the Center. This might help create some time to make presentations to the community and solicit resources for the Center.

**III. Statement of Expected Outcomes:** Provide a brief list of the expected outcomes for your unit for 2002-03 or 2003-04 as of this date. Each outcome listed must be capable of being measured by the means noted in IV below. Please number the outcomes (1 to x). After each outcome, describe how the outcome supports student learning and student development.

Since I am the only person directly involved with the center, the outcomes of the Center are essentially the outcomes of my research. In the past two years, I have published one article, have two articles under review related to environmental issues, and another one will be presented at a conference this summer.

- 1) The published article examines the impact (among several other factors) on a country's freedom of a country's dependency on raw natural resources. Countries with greater dependency on raw natural resources tend to have lower levels of freedom. See "Are Political Freedoms Converging?" with Mark Strazicich in Economic Inquiry, forthcoming, Vol. 42, No. 2, April 2004, 323-340. This journal is a highly respected journal in the field of Economics. I have integrated this research into my lectures in Econ 4440/5440 Economics of Natural Resources and the Environment.

Two other articles examine the factors that affect endangered species.

- 2) One article examines the differences in the number of endangered species across countries in 2002. The article is titled "Environmental Kuznets Curve: Spatial Effects & Biodiversity" and is coauthored by Michael A. McPherson. It is under review at Ecological Economics. We analyze this issue using threatened bird and mammal species and per capita income levels for 114 countries in 2000. For birds (and marginally for mammals), our results indicate that an N-shaped curve may exist. Birds and mammals face a greater threat on islands. For mammals, more species are threatened where freedom is limited, where more riots and demonstrations occur and where no legislature exists, and in Muslim and Communist countries. For birds, more species are threatened where more riots and demonstrations occur and where no legislature exists. Spatial autocorrelation (spatial error dependence) exists. Shocks originating in one country can spill over into surrounding countries. I have integrated this research into my lectures in Econ 4440/5440 Economics of Natural Resources and the Environment.
- 3) Another article examines the differences in the U.S. Fish & Wildlife Service's Endangered Species Act (ESA) listing of endangered species and NatureWatch's listings. The ESA listings are impacted by political variables such as a state's representation on the interior subcommittee of the U.S. House appropriations committee (negatively), the League of Conservation Voters rating of the state's representatives (negatively), and the percent of the population with college degrees (positively). NatureServe's 'at-risk' species are not impacted by these political variables. This implies that ESA listings are not an unbiased source of information about species ecological fragility. The two variables also differ in their relation to hunting/fishing activity (negative for 'at-risk', positive for ESA listings) and federal land ownership (positive for 'at-risk', negative for ESA listings). A significant N-shaped environmental Kuznets curve is found for both variables. The number of species, number of endemic species, rainfall, and miles of coastline all have positive and significant impacts in both models. Population density reveals a U-shaped relation with the 'at-risk' variable. The title of the article is "Ecological and Political Impacts on Species Fragility: An Empirical Analysis of Endangered and At-Risk Species," coauthored with Dr. David Laband of Auburn University. It is under review at Economic Inquiry. I have integrated this research into my lectures in Econ 4440/5440 Economics of Natural Resources and the Environment.
- 4) I am currently working with a Master's student in Economics, Cheri Baker, on an independent study on Tourism Economics. As a result of this project we will present a paper on modeling travel demand to Yellowstone National Park for the 1946-2003 period. This paper will be presented at the Western Economic Association International's 79th Annual conference in

Vancouver, British Columbia, Canada, June 29-July 3, 2004. This project will benefit Ms. Baker as she seeks employment in the tourism industry.

I am also currently working on a paper that estimates the impact of Xeriscape newsletter on water demand and another paper on the impact of hunting on endangered species in the United States.

**IV. Measuring Expected Outcomes:** Describe how the unit measures how the outcomes have been achieved and provide a list of methods and/or tools with the following information:

1. Name of assessment method or tool.

Because the focus of the Center is environmental economic research, the assessment tool is the number of publications in peer-reviewed journals or other outlets. In addition to quantity, the quality of these publications is measured by a journal ranking system within the Department of Economics.

2. If the method/tool is copyrighted, provide the name of the company who “owns” the tool.

N/A

3. Frequency of use - how often is this tool/method used, e.g., every spring semester students, staff, and faculty are surveyed about parking at UNT; customers are asked to complete evaluation forms when services are rendered; or each fall, the Enrollment Management Committee reviews the results of the Graduating Student Survey produced by the IR&A Office.

N/A

**V. Use of Assessment Results:** Describe how the results of the assessments described in IV above are shared with staff in the unit? How are the results used to improve the unit? Help improve student learning? Enhance student development? Meet the university’s vision?

There is no staff or any other resources associated with the unit. The results of the research are shared with the academic community through published articles. The results of this research is also integrated into Econ 4440/5440 Economics of Natural Resources and the Environment to expose students to current breakthroughs in the literature. This helps to increase the research exposure of the Department of Economics and helps produce students that are at the cutting edge of the field. This provides both direct and indirect support for the mission of the university.

**VI. Changes Made Based on Assessment Results:** Describe how the unit has changed (or why it has not changed) based on the results of the assessment of outcomes. Indicate the year the change was implemented. Please indicate how the expected outcomes have changed if applicable.

While the sunset review in the summer of 2002 suggests that the Center is falling short of its mission and vision, I believe this is a narrow view. The Center for Environmental Economic Studies and Research is receiving no resources from the university. The Director operates out of his faculty office with no reduction in teaching load or salary support. The departmental staff (one overworked Administrative

Assistant) does not have the time to provide any support to the activities of the Center. As the only full professor in a department with a very small faculty, the director has a large service responsibility. Given that the operation of the Center depends upon spare time contributed by the director, the university is receiving a substantial return on the lack of resources invested. The environmental economic publications of the director help UNT continue to be recognized as a department that is involved in environmental research. We hope this can continue to grow with the addition of new faculty and other resources.

**Signature of Person Completing the Form:**

\_\_\_\_\_ Date \_\_\_\_\_

**Signature of Unit Head after Reviewing the Form:**

\_\_\_\_\_ Date \_\_\_\_\_