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## **NAREA Awards**

### ***Outstanding Master's Thesis Award***

## **Costa Rica's Payments for Environmental Services Programs: An Economic Analysis of Program Participation and Performance**

**Simon Zbinden**

**Cornell University**

**Advisor: David R. Lee**

A recent innovative policy approach to address deforestation and resource degradation in developing countries is the use of direct economic incentives to landowners to promote sustainable land and forest use. This thesis analyzes participation in the Payments for Environmental Services (PSA) program in Costa Rica, a country which has long been a pioneer in the design of environmental programs. Since 1997, the PSA program has provided payments to more than 4,400 farmers and forest owners, covering more than 284,000 hectares of land and forests. This study analyzed factors influencing program participation in three PSA program options: reforestation, forest protection, and sustainable forest management. Binomial and multinomial logistic regression models were estimated to identify the determinants of participation among 247 randomly surveyed program participants and nonparti-

cipants in Costa Rica's northern lowlands. Results show that participants generally had much larger farms, more assured land tenure, better educations, higher incomes, a higher dependence on off-farm income, and were more likely to be urban-dwelling. The econometric results indicate that the primary determinants of participation were farm size, human capital and household economic factors, and information availability.

The principal conclusions are that while the program has been successful in targeting protected and reforested areas, it has not achieved equity goals. The PSA program does not appear to be "pro-poor" as sought by policy makers. Scale economies in program design and operation make participation relatively more efficient and profitable for larger landholders. Achieving both environmental and poverty objectives with a single program remains a challenge.

### ***Master's Thesis Award of Merit***

## **Estimating the Value of Permanently Preserved and Developable Open Space in an Urban Fringe County**

**Shawn Joseph Bucholtz**

**University of Maryland**

**Advisor: Loretta M. Lynch**

This thesis investigates how adjacent permanently preserved open space and developable open space affect housing values in an urban fringe county using a hedonic model of housing prices in Montgomery County, Maryland. The value of open space is measured in two

areas around a residential parcel: the viewshed and the neighborhood. Three important methodological issues are examined when estimating the value of open space. First, the proposed hedonic model incorporates spatial dependence in the error term, using a generalized-

banded approach to building a more flexible spatial weight matrix, based upon boundary relationships at the city-block and subdivision levels. Findings show that parameter estimates are robust to changes in the specification of the weight matrix. Second, this analysis tests for sensitivity of the land use parameter estimates to changes in the size of the viewshed and neighborhood. It is found that the land use parameter estimates are robust to changes in the size of the viewshed or neighborhood. Third, the thesis tests for endogeneity of the land use measures and finds that endogeneity

varies depending on the size of the viewshed. An Instrumental Variables approach to estimating the model is used to address the endogeneity issues.

In the final part of this thesis, the land use parameter estimates are used to determine the total change in residential property values from two local conversions of developable open space to permanently preserved open space. These local conversions are found to increase nearby property values in the viewshed, but decrease property values in the neighborhood. In almost all cases, the net change in value was negative.

## ***Honorary Life Member Award***

*This award recognizes members who have actively participated in the affairs of the Association and, while maintaining an active interest in their profession, have recently retired from the formal professional position that comprised the major reason for their involvement in the Association.*

### **Neil H. Pelsue, Jr.**

Neil Pelsue is Associate Professor Emeritus of Community Development and Applied Economics and Vermont Extension, University of Vermont. He received his B.S. degree in Agricultural Economics from the University of Vermont in 1963, after which he worked at the Boston Federal Milk Market Administrator's Office. In 1967, he received his M.S. in Agricultural Economics from the University of Massachusetts, and his Ph.D. in Agricultural Economics from Purdue University in 1971. He joined the Agricultural and Resource Economics faculty at the University of Maine, and moved to the University of Vermont in 1976, where he served on the faculty until his retirement in June 2003.

Neil followed a unique path in his professional career that is experienced by few faculty at land-grant universities—holding appointments in teaching, administration, research, and extension. His primary research and extension focus was in agricultural marketing, with a special emphasis on dairy marketing and policy.

Neil's different professional roles are reflected in his diverse range of publications. He published a wide variety of information helpful to agricultural producers and marketers, legislators, and colleagues. Neil taught a broad range of courses in economics, research methods, and marketing. He especially enjoyed advising both undergraduate and graduate students, and mentoring new faculty in extension, research, and teaching. Neil always focused professionally not just on teaching or conducting research through providing facts and information, but sought to motivate students in learning

how to use analytic tools, access the appropriate information, and rationally analyze relevant data in order to apply the information in their decision making.

Neil's administrative experience included nine years (1984–1993) as Chair of the University of Vermont's Agricultural and Resource Economics Department (now the Department of Community Development and Resource Economics), leading an effort to introduce a Small Business Management program into the curriculum. Later, he served as Chair of the Southern Vermont Extension Region for five years. He also served two stints as Interim Coordinator for the USDA Sustainable Agriculture Research and Education Program for the Northeast Region.

Neil held memberships in AAEA, FDRS, NACAA, and NAREA and its predecessor organizations. He served NAREA on the Finance, Master's Thesis Awards, Nominations, and Resolutions Committees, the Editorial Review Board, as President in 1987, and chaired the Local Arrangements Committee for the 1995 Vermont meetings. He also served on the Thesis Review Committee for AAEA and was on the first Advisory Board for *Choices*.

Neil was an active participant in the Vermont and New England agricultural industries. He served on a number of university, state, and regional committees focusing on sustaining the viability of agriculture in the region. He also was, and is, active in the community—coaching youth sports teams, serving on the local school board, and as director/trustee of Vermont Electric Cooperative, the local hospital, church, and historical society.

## ***Distinguished Member Award***

*This award recognizes members who have made continuous and outstanding contributions to the Association, the region, and the profession. The award recognizes members for significant recent professional achievement in the context of an overall meritorious record. Recipients must be members in good standing and receive nomination from three other members. A recipient can receive the award more than once, based on recent achievements.*

### **Loretta M. Lynch**

Loretta (Lori) Lynch is an Associate Professor in the Department of Agricultural and Resource Economics, the University of Maryland. She has been on the faculty at Maryland since 1996. She received her Ph.D. from the University of California, Berkeley, and her Master's and Bachelor's degrees from the University of California, Davis.

Lori has published 17 journal articles, six book chapters, and numerous extension publications. She has developed an original and innovative extension program focused on resource and environmental issues, for which she has won several awards from the Maryland Extension Specialist Association, the Northeast Extension Directors, the University of Maryland's College of Agriculture and Natural Resources, and the College of Agriculture and Natural Resource's Alumni Association.

Her work has earned the recognition of the Secretary of Natural Resources, and she has received requests to testify to Maryland Assembly and U.S. Congress House of Representatives Committees. Lori has recently been asked to work with a team of land-use professionals from the Lincoln Land Institute and the Chinese Department of Land Resources on a farmland preservation strategy for China.

Lori Lynch is currently serving as co-editor of the *Agricultural and Resource Economics Review* and as associate editor of the *Journal of Soil and Water Conservation*. She recently served on the Board of Directors of the Northeastern Agricultural and Resource Economics Association, as well as co-chairing the ad hoc workshop committees in 2002–2003 and 2004–2005.

## ***NAREA Award for Outstanding Public Service Through Economics***

*This award was created to recognize and encourage contributions to the general public welfare. The intent is to recognize that agricultural, environmental, consumer, resource, or community development economics can be applied to solve important problems affecting the quality of life of the general public, and that such contributions may come outside the traditional, sometimes narrowly defined, contributions to research, teaching, or extension. The award may be given to anyone, including noneconomists and nonmembers of NAREA.*

### **Paul R. Portney**

Paul R. Portney is President of Resources for the Future (RFF), an independent, non-partisan research and educational organization specializing in natural resources and the environment. Portney joined the staff of RFF in 1972; from 1986–1989, he headed two of its research divisions; in 1989, he became its Vice President, and was named President in 1995. In 1977, he took leave to become a Visiting Professor in the Graduate School of Public Policy at the University of California at Berkeley. Between 1992–1996, he was a Visiting Lecturer at Princeton University's Woodrow Wilson School. In 1979–1980, Portney served as Chief Economist at the Council on Environmental Quality in the Executive Office of the President.

Portney received his B.A. in Economics in 1967 from Alma College (Michigan), and his Ph.D. in Economics from Northwestern University. He is currently a mem-

ber of the Sustainable Forestry Board and the Board of Directors of The Johnson Foundation, where he chairs the Finance and Investment Committee. He recently joined the Advisory Council of the Comptroller General of the United States. In 2001, he was chairman of a National Academy of Sciences' Committee on the future of Corporate Average Fuel Economy standards. From 1994–1997, Portney served as a member of the Executive Committee of EPA's Science Advisory Board (SAB) and chairman of the SAB's Environmental Economics Advisory Committee. Portney has published widely on the costs and benefits of environmental regulation, including the second edition of his book, *Public Policies for Environmental Protection*, used in college and university classrooms around the country. He also lectures frequently on developments in U.S. and international environmental policy.

***Journal Article of the Year for 2003*****Modeling and Managing Urban Growth at the Rural-Urban Fringe: A Parcel-Level Model of Residential Land Use Change****(*ARER* Vol. 32, No. 1, April 2003: 83–102)****Elena G. Irwin (Ohio State University, Columbus), Kathleen P. Bell (University of Maine, Orono), and Jacqueline Geoghegan (Clark University, Worcester, MA)**

As many local and state governments in the United States grapple with increasing growth pressures, the need to understand the economic and institutional factors underlying these pressures has taken on added urgency. From an economic perspective, individual land use decisions play a central role in the manifestation of growth pressures, as changes in land use pattern are the cumulative result of numerous individual decisions regarding the use of lands. In this study, the issue of growth management is addressed by developing a spatially disaggregated, microeconomic model of land conversion decisions suitable for des-

cribing residential land use change at the rural-urban fringe. The model employs parcel-level data on land use in Calvert County, Maryland, a rapidly growing rural-urban fringe county. A probabilistic model of residential land use change is estimated using a duration model, and the parameter estimates are employed to simulate possible future growth scenarios under alternative growth management scenarios. Results suggest that “smart growth” objectives are best met when policies aimed at concentrating growth in target areas are implemented in tandem with policies designed to preserve rural or open space lands.