

## **James S. Shortle**

Distinguished Professor of Agricultural and Environmental Economics,  
Department of Agricultural Economics and Rural Sociology  
Director, Environment and Natural Resources Institute  
The Pennsylvania State University  
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### **Education**

B.U.S., University of New Mexico, 1975  
M.A. (Economics), University of New Mexico, 1978  
Ph.D. (Economics), Iowa State University, 1981

### **Fields and Interests**

Applied microeconomics; environmental and natural resource economics; public finance

Market mechanisms for environmental management; vulnerability and adaptation to global environmental change; environmental decision making under uncertainty; coupled models of economic and environmental systems

### **Academic Positions**

1976-1978 - Research Assistant, Department of Economics, University of New Mexico  
1979-1981 - Research Associate, Department of Economics, Iowa State University  
1981-1987 - Assistant Professor, Department of Agricultural Economics and Rural Sociology, Penn State  
1987-1993 - Associate Professor, Department of Agricultural Economics and Rural Sociology, Penn State  
1993 -2003- Professor, Department of Agricultural Economics and Rural Sociology, Penn State  
2003 - Distinguished Professor, Department of Agricultural Economics and Rural Sociology, Penn State  
2005 - Director, Environment and Natural Resources Institute, Penn State University

### **Visiting Positions**

1990-1991 -Visiting Professor, UCD Environmental Institute, University College Dublin  
1995 - Visiting Research Scholar, Department of General Economics, Wageningen University

### **Distinctions**

Phi Sigma Tau (1975)  
PACE Award, Iowa State University (1978-1981)  
Sigma Xi (1986)  
Fulbright Scholar (1990-1991)  
Gamma Sigma Delta (1994)  
Director, Northeastern Agricultural and Natural Resource Economics Association (1994-1997)  
“Best Article” published in the Journal of Agricultural Economics (1994), Agricultural Economics Society  
Research Award of Merit, Penn State Chapter of Gamma Sigma Delta (1999)  
President, Northeast Agricultural and Resource Economics Association (2003-2004)  
University Distinguished Professor, Penn State University (2003)  
“Outstanding Article” published in the Agricultural and Resource Economics Review (2004), Northeast  
Agricultural and Resources Economics Association  
Distinguished Alumnus, Department of Economics, University of New Mexico (2005)

## **Publications (2001-2005)**

- Marshall, E., and J. Shortle. 2005. Using DEA and VEA to Evaluate Quality of Life in the Mid-Atlantic States. Agriculture and Resource Economics Review. 34(2):185-203.
- Borisova, T., J. Shortle, R. Horan, and D. Abler. 2005. The Value of Information for Water Quality Management. Water Resources Research. 41, W06004, doi:10.1029/2004WR003576.
- Horan, R.D., and J.S. Shortle. 2005. When Two Wrongs Make a Right: Second Best Point Nonpoint Trading. American Journal of Agricultural Economics. 87(2):340-352
- Abrahams, N.A., and J. S. Shortle. 2004. Performance of Compliance Measures for Nitrate Nonpoint Pollution Control. Agricultural and Resource Economics Review. 33(1):79-90
- Horan, R.D., J. S. Shortle and D.G. Abler. 2004. Point-Nonpoint Trading Programs and Agri-Environmental Policies. Agricultural and Resource Economics Review. 33(1):61-78
- Abler, D.G., J.S. Shortle and A. Fisher. 2004. Climate Change and Pennsylvania Agriculture. Penn State Law Review. 12(1):117-125
- Abler, D., J. Shortle, J. Carmichael, and R. Horan. 2002. Climatic Change, Agriculture, and Water Quality. Climatic Change. 55:339-359
- Horan, R., J. Shortle, and D. Abler. 2002. Nutrient Point-Nonpoint Trading in the Susquehanna River Basin. Water Resources Research. 38(5):8-1 - 8-13, 10.1029/2001WR000853
- Horan, R., D. Abler, J. Shortle, J. Carmichael. 2002. Probabilistic, Cost-Effective Point/Nonpoint Management in the Susquehanna River Basin. Journal of the American Water Resource Association. 38:467-477
- Kennell, J., J. Lazo, A. Fisher, D. Epp, and J. Shortle. 2002. Perceptions and Values for Preventing Ecosystem Change: Pennsylvania Duck Hunters and the Prairie Pothole Region. Land Economics. 78:228-244
- Horan, R., J. Shortle, and D. Abler. 2002. Ambient Taxes Under m-Dimensional Choice Sets, Heterogeneous Expectations, and Risk-version. Environmental and Resource Economics. 21:189-2002
- Maynard, L., and J. Shortle. 2001. Determinants of cleaner Technology Investment in the U.S. Bleached Kraft Pulp Industry. Land Economics. 77-561-576
- Shortle, J., and R. Horan. 2001. The Economics of Nonpoint Pollution. Journal of Economic Surveys. 15:255-290 (Reprinted in N. Hanley and C. Roberts (Eds.), Issues in Environmental Economics. Oxford UK: Blackwell Publishing)
- Shortle, J., and R. Griffin. 2001. Irrigated Agriculture and the Environment. In J. Shortle and R. Griffin (Eds.), Irrigated Agriculture and the Environment. Cheltenham UK: Edward Elgar
- Shortle, J., D. Abler, and M. Ribaud. 2001. Agriculture and Water Quality: The Issues. In J. Shortle and D. Abler (Eds.), Environmental Policies for Agricultural Pollution. Walingford, UK: CAB International
- Horan, R., and J. Shortle. 2001. Environmental Instruments for Agriculture. In J. Shortle and D. Abler (Eds.), Environmental Policies for Agricultural Pollution. Walingford, UK: CAB International.
- Ribaud, M., and J. Shortle. 2001. Measuring the Benefits and Costs of Environmental Policies. In J. Shortle and D. Abler (Eds.), Environmental Policies for Agricultural Pollution. Walingford, UK: CAB International
- Abler, D., and J. Shortle. 2001. Decomposing the Effects of Trade on the Environment. In J. Shortle and D. Abler (Eds.), Environmental Policies for Agricultural Pollution. Walingford, UK: CAB International

## **Selected Publications Prior to 2001**

- Shortle, J., and D. Abler. 1999 Agriculture and the Environment. In J. Van der Berg (Eds.), Handbook of Environmental and Resource Economics, Cheltenham UK: Edward Elgar
- Horan, R., J. Shortle, and D. Abler. 1999. Ambient Taxes When Polluters Have Multiple Choices. Journal of Environmental Economics and Management 36:186-199. (Reprinted in J. Shortle and R. Griffin (Eds.), Irrigated Agriculture and the Environment. Cheltenham, UK: Edward Elgar 2001)
- Shortle, J., R. Horan, and D. Abler. 1998. Research Issues in Nonpoint Pollution Control. Environmental and Resource Economics 11:571-585
- Shortle, J. S., and D. G. Abler. 1997. Nonpoint Pollution. In H. Folmer and T. Tietenberg (Eds.),

- International Yearbook of Environmental and Resource Economics. Chatham UK: Edward Elgar
- Abler, D. G., and J. S. Shortle. 1995. Technology as an Agricultural Pollution Control Strategy. American Journal of Agricultural Economics. 77:20-32 (Reprinted in S. Batie and R. Horan (Eds.), Agri-Environmental Policy. Ashgate Publishing, 2004)
- Shortle, J. S., and A. S. Laughland. 1994. Impacts of Taxes to Reduce Agricultural Chemical Use When Farm Policy is Endogenous. Journal of Agricultural Economics 45:3-14
- Shortle, J., and D. G. Abler. 1994. Incentives for Nonpoint Pollution Control. In T. Graham Tomasi and C. Dosi (Eds.) The Economics of Nonpoint Pollution Control: Theory and Issues. Dordrecht: Kluwer Academic Press
- Abler, D. G., and J. S. Shortle. 1992. Environmental and Farm Commodity Policy Linkages in the US and EC. European Review of Agricultural Economics 19:197-217
- Shortle, J. 1990. The Allocative Efficiency Implications of Abatement Cost Comparisons. Water Resources Research 26:793-797. (Reprinted in S. Batie and R. Horan (Eds.), Agri-Environmental Policy. Ashgate Publishing 2004).
- Shortle, J. and J. Dunn. 1986. The Relative Efficiency of Agricultural Source Water Pollution Control Policies. American Journal of Agricultural Economics 68:668-677 (Reprinted in S. Batie and R. Horan (Eds.) Agri-Environmental Policy. Ashgate Publishing, 2004 and in J. Shortle and R. Griffin (Eds.), Irrigated Agriculture and the Environment. Cheltenham, UK: Edward Elgar 2001)

#### Research Grants (2001-2005)

Title	Sponsor	Dates
Integrating Ethics Into Graduate Training in the Environmental Sciences (Co-PI)	National Science Foundation (\$285,549)	2005-2008
USDA National Needs Fellowship in Soil and Water Sciences (Co-PI)	U.S. Department of Agriculture (\$138,000)	2005-2008
Biosolids in Pennsylvania: Cost Comparison and Policy Considerations (Co-PI)	Center for Rural Pennsylvania (\$49,653)	2005
Development of a Habitat Conservation Plan for the Bog Turtle ( <i>Clemmys muhlenbergii</i> ) and other wetland species of concern in the Southern Portion of the Delaware West Recovery Unit, in Pennsylvania and Delaware. (Faculty Affiliate)	Pennsylvania Fish and Boat Commission / U. S. Fish and Wildlife Service (\$574,010)	2004-2006
Workshop on Trade and the Environment (Co-PI)	U.S. Environmental Protection Agency (\$25,000)	2004
Consortium for Atlantic Regional Assessment (PI)	U.S. Environmental Protection Agency (\$2,250,000)	2003-2006
Review and Analysis of Market-Based Mechanisms to Reallocate Irrigation Water When Federal Decisions Create Shortfalls (PI)	U.S. Department Of Agriculture (\$53,500)	2003-2006
Economic Effects of Pennsylvania's System of Local Taxation Upon the Current and Future Viability of Pennsylvania Agriculture (Co-PI)	Pennsylvania Department of Agriculture (\$165,000)	2003-2005
Ecological and Socioeconomic Indicators for Integrated Assessment of Aquatic Ecosystems of the Atlantic Slope (Co-PI)	U.S. Environmental Protection Agency (\$6,000,000)	2001-2005
Mid-Atlantic Regional Assessment of Climate Change Impacts (Co-PI)	U.S. Environmental Protection Agency (\$1,623,000)	1998-2001
Agricultural Nonpoint Pollution Control: Policy Options and the Value of Information (Co-PI)	U.S. Department of Agriculture (\$62,485)	1998-2001

Economic and Environmental Benefits of Watershed  
Restoration in Rural Communities (Co-PI)

U.S. Department of Agriculture  
(\$365,000)

1998-2001

## Teaching and Graduate Training

### Courses Taught

*Department of Agricultural Economics and Rural Sociology (Penn State)*

Resource and environmental economics (graduate and undergraduate)

Microeconomic theory (graduate)

Professional development colloquium (graduate)

*Policy Analysis Program (Penn State)*

Environmental Policy Analysis (graduate)

*Department of Agricultural Economics (University College Dublin)*

Resource economics and environmental economics (undergraduate)

### Graduate Student Research Supervision

#### *Committee Chair*

Agricultural, Environmental, and Regional Economics 29

Environmental Pollution Control 4

Policy Analysis 2

#### *Committee Member*

Agricultural, Environmental, and Regional Economics 23

Agricultural and Biological Engineering 1

Economics 5

Energy, Environmental, and Mineral Economics 6

Environmental Pollution Control 9

Forest Science 1

Geography 2

Parks and Recreation 1

Policy Analysis 2

## Service to Professional Associations and Academic Journals

Peer reviews of manuscripts for: *Agricultural and Resource Economics Review, Agricultural Economics Review, American Economic Review, American Journal of Agricultural Economics, Canadian Journal of Agricultural Economics, Climatic Change, Climate Research, Ecological Economics, Environment and Development Economics, Environmental Pollution, Environmental and Resource Economics, European Review of Agricultural Economics, Geo Journal, Journal of Agricultural Economics, Journal of Agricultural and Resource Economics, Journal of the American Water Resources Association, Journal of Environmental Economics and Management, Journal of Environmental Management, Journal of Environmental Quality, Journal of Production Agriculture, Land Economics, Marine Resource Economics, Resource and Energy Economics, Ricerche Economiche, Water Resources Research and World Bank Economic Review*

Member, Professional Activities Committee (1996-1998), Quality of Communication Award Committee (1996-1998), Selected Papers Review (various years 1983-2003) of the American Agricultural

#### Economics Association

Member, Selected Papers Committee of the Association of Environmental and Resource Economists.  
(1992-1995)

Member, Selected Papers Committee, European Association of Environmental and Resource Economists  
(various years 1992-2000)

Co-organizer of a Symposium, Is Nutrient Management a Win-Win Situation? at the 1993 Annual  
Meetings of the American Economics Association

Co-chair, Selected Papers Committee for the 1992 Annual Meeting of the American Agricultural  
Economics Association

Co-organizer of a Symposium, Technical Change In Agriculture as a Public Choice Problem: Conceptual  
and Empirical Issues at the 1989 Annual Meeting of the American Agricultural Economics  
Association.

Member of the 1988 Nominating Committee of the Association of Environmental and Resource  
Economists

Member of the Editorial Council of the *Northeastern Journal of Agricultural and Resource Economics*,  
(1987-1989)

Member of the Northeastern Agricultural and Resource Economics Association Thesis Awards Committee  
(1983-1985 - Chairman 1985), and Selected Papers Review Committee (various years 1982-2003)

#### **Selected Service to Governmental and Nongovernmental Agencies**

Peer reviews of project proposals and/or project reports for the American Association for the Advancement  
of Science Research Competitiveness Service, Intergovernmental Panel on Climate Change,  
Maryland Center for Agricultural and Natural Resource Policy, National Institute for Global  
Environmental Change, National Science Foundation, North Carolina State University Environmental  
Center, Oregon Agricultural Experiment Station, Social Science and Humanities Council of Canada,  
U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Department of  
Commerce, U.S. Geological Survey State Water Resource Centers, the World Bank..

Member (and Secretary), National Technical Advisory Committee of the National Initiative for Global  
Environmental Change (1998-2001)

U.S. Delegate to the Intergovernmental Panel on Climate Change Workshop on Adaptation to Climate  
Change (2000).

Topic Expert (Water Resources), World Meteorological Organization and United Nations Environmental  
Program Intergovernmental Panel on Climate Change (2002)

Member, EPA Science Advisory Board Panel on the Second Generation Model (2004-2006)

Member, National Research Council Committee on Water Quality Problems in the Pittsburgh Region  
(2002-2005).

#### **Selected University Service**

Member, College of Agricultural Sciences Ad Hoc Committees on the Economic Status of Faculty, Gender  
Issues, and Environment (Chair).

Member, Steering Committee of the Penn State Environmental Consortium

Member, Executive Board, Penn State Center for Integrated Regional Assessment.

Member, Advisory Board, Penn State Center for Economic and Environmental Risk Assessment

Member (and occasionally chair), Department of Agricultural Economics and Rural Sociology Faculty  
Advisory Committee, Tenure and Promotion Committee, Graduate Program Committee,  
Undergraduate Program Committee, and Exam Committee.

Member of the Search Committees for faculty and/or administrative positions in Agricultural Economics,  
Rural Sociology, Agricultural Engineering, School of Forest Resources, and for the College of  
Agricultural Sciences Associate Dean For Research.

Member of the Administrative Review Committee for the Director of the School of Forest Resources  
Advisor, Environmental Economics Club.

