

# HEIDI J. ALBERS

Haub School of Environment and Natural Resources  
University of Wyoming  
Laramie, WY 82072  
Mail: Bim Kendall House 804 E Fremont  
E: [halbers@uwyo.edu](mailto:halbers@uwyo.edu)

## CURRENT POSITIONS

Knobloch Wyoming Excellence Chair in Conservation Economics and Finance. Haub School of Environment and Natural Resources and Department of Economics and Finance, College of Business. University of Wyoming. (8/14 – present)

Research Associate, Environment for Development – Tanzania (5/08-present)

## PRIMARY PREVIOUS POSITIONS

Professor, Forest Ecosystems and Society and Applied Economics Graduate Program, Oregon State University. Research, teaching, and advising in natural resource and development economics for undergraduate forestry programs, the graduate Environmental Science degree, and the PhD in Applied Economics program. (8/04-8/14, promoted from Associate Professor to Full Professor in 6/09)

Fellow, Resources for the Future. Quality of the Environment Division. Research and outreach in biodiversity and land conservation. (10/98-7/04, promoted to “indefinite appointment” 3/03)

Assistant Professor, Food Research Institute, Stanford University (1/93-9/98, Institute closure). Teaching, advising, and research in the economics of natural resources in developing countries (PhD, masters, and undergraduate levels).

## EDUCATION

Ph.D. in Economics. University of California at Berkeley, Department of Economics. (1993) Fields: Natural Resource and Environmental Economics, Development Economics. Dissertation: “Economic Management of Tropical Forests: Irreversibility, Uncertainty, and Spatial Constraints.”

Master of Environmental Studies. Yale School of Forestry and Environmental Studies. (1987) Focus on natural resource economics.

Bachelor of Science. Duke University. (1985) Majors: Geology and Economics.

**PUBLICATIONS** (refereed or peer-reviewed)

- “PAC Optimal MDP Planning with Application to Invasive Species Management.” Majid Alkaee Taleghan, Thomas G. Dietterich, Mark Crowley, Kim Hall, HJ Albers. Forthcoming in *Journal of Machine Learning Research*.
- “Insiders, outsiders, and the role of local enforcement in forest management: An example from Tanzania.” EJZ Robinson, HJ Albers, G Ngeleza, and R Lokina. *Ecological Economics* 107:242-248. November, 2014.
- “Backup coverage models in nature reserve site selection with spatial spread risk heterogeneity.” Bertrand Hamaide, Heidi J. Albers, and Gwenlyn M. Busby. *Socio-Economic Planning Sciences*. 48(2): 158-167. 2014.
- “The role of incentives for sustainable implementation of Marine Protected Areas: An example from Tanzania.” Elizabeth J Z Robinson, Heidi J Albers, and Stephen L Kirama. *International Journal of Sustainable Society*. 6(1/2):28 – 46. Special Issue: The contribution of protected areas to sustainability (guest eds. M. Getzner and M. Jungmeier). 2014.
- “Implementing REDD through Community-Based Forest Management: Lessons from Tanzania.” Elizabeth J Z Robinson, Heidi J Albers, Charles Meshack, and Razack Lokina, *Natural Resources Forum* 37(3): 141-152. A United Nations Sustainable Development Journal. August 2013.
- “The Impact of Buffer Zone Size and Management on Illegal Extraction, Park Protection, and Enforcement.” EJZ Robinson, HJ Albers, and Gwen Busby. *Ecological Economics*. Volume 92, Pages 96–103, August 2013.
- “A Review of the Spatial Economics of Non- timber Forest Product Extraction: Implications for Policy.” HJ Albers and EJZ Robinson. *Ecological Economics* 92:87-95. August 2013.
- “Deploying Initial Attack Resources for Wildfire Suppression: Spatial Coordination, Budget Constraints, and Capacity Constraints.” Yohan Lee, Jeremy S. Fried, Heidi J. Albers, and Robert G. Haight. *Canadian Journal of Forest Research* 43(1): 56-65. 2013.
- “The Relevance of Samuelson to 21<sup>st</sup> Century Tropical Forests.” EJZ Robinson and HJ Albers. *Journal of Natural Resources Policy Research*. 4(3):209-213. 2012.
- “Road-Network Agglomeration, Road Density, and Protected-Area Fragmentation.” HJ Albers, AW Ando, M Bu, and MG Wing. *Letters in Spatial and Resource Sciences*. 09 February 2012.

- “Wildfire Risk Management in a Landscape with Fragmented Ownership: Spatial Interactions.” Gwenlyn M. Busby, Heidi J. Albers, and Claire Montgomery. *Land Economics* 8(3) 496-517. 2012.
- “Stochastic Simulation Model of Fire Occurrence in the Republic of Korea.” Byungdoo Lee, Yohan Lee, Myung Bo Lee, Heidi J. Albers. *Journal of Korean Forestry Society*. Vol. 100. No. 1, pp. 70 – 78. 2011.
- “The trees and the bees: Using enforcement and income projects to protect forests and rural livelihoods through spatial joint production.” HJ Albers and EJZ Robinson. *Agricultural and Resource Economics Review* 40(3):424-438. December 2011.
- “Maintenance Costs, Price Uncertainty, and Abandonment in Shade-Grown Coffee Production: Coastal Oaxaca.” H.J. Albers, B. Avalos Sartorio, M. Batz, and A. Blackman. *Gaceta de Economía del Instituto Tecnológico Autónomo de México*, special edition on "Economía del Medio Ambiente y Recursos Naturales", published jointly with INE (Instituto Nacional de Ecología), 2011.
- “Sizing Reserves within a Landscape: The Roles of Villagers’ Reaction and the Ecological-Socioeconomic Setting.” Elizabeth J.Z. Robinson, Heidi J. Albers, and Jeffrey C. Williams. *Land Economics* 87(2):233-249. 2011.
- “Optimal Spatial Patterns of Fuel Management and Timber Harvest with Risk.” Masashi Konoshima, Heidi .J. Albers, Claire A. Montgomery, and Jeffrey L. Arthur. *Canadian Journal of Forest Research*. 40:95-108. 2010.
- “Spatial Management of Invasive Species: Pathways and Policy Options.” J. N. Sanchirico, H.J. Albers, C. Fischer, and C. Coleman. *Environmental and Resource Economics* 45(4): 517-535. 2010.
- “Wildfire Risk Management on a Landscape with Public and Private Ownership: Who Pays for Protection?” Gwenlyn Busby and Heidi J. Albers. *Environmental Management* 45:296-310. 2010.
- “Spatial Modeling of Extraction and Enforcement in Developing Country Protected Areas.” H.J. Albers. *Resource and Energy Economics*. 32(2):165-179. 2010.
- “Invasive Species in a Spatially Heterogeneous World: Spatial vs. Uniform Policies.” Heidi J. Albers, Carolyn Fisher, and Jim Sanchirico. *Resource and Energy Economics*. 32:483-499. 2010.
- “Optimal Enforcement and Practical Issues of Resource Protection in Poor Countries.” Elizabeth J Z Robinson, Ajay Mahapatra Kumar, and Heidi J Albers. *Journal of Natural Resources Policy Research*. 2(1):25- 38. Special issue on natural resources and poverty. 2010.

- “Spatial and Temporal Aspects of Non-Timber Forest Product Extraction: The Role of Community Resource Management.” E.J.Z. Robinson, H.J. Albers, and J.C. Williams. *Journal of Environmental Economics and Management*. 56(3):234-245. 2008.
- “Equilibrium Patterns of Land Conservation: Crowding In/Out, Agglomeration, and Policy.” Heidi J. Albers, Amy W. Ando, and Michael Batz. *Resource and Energy Economics* 30(4):492-508. 2008.
- “A Spatial-Econometric Analysis of Attraction and Repulsion of Private Conservation by Public Reserves.” Heidi J. Albers, Amy W. Ando, and Xiaoxuan Chen. *Journal of Environmental Economics and Management* 56(1):33-49. 2008.
- “Spatial Endogenous Fire Risk and Efficient Fuel Management and Timber Harvest.” Masashi Konoshima, Claire A. Montgomery, Heidi J. Albers, and Jeffrey L. Arthur. *Land Economics* 84(3):449-468. August, 2008.
- “Land Cover in a Managed Forest Ecosystem: Mexican Shade Coffee.” Allen Blackman, Heidi J. Albers, Beatriz Avalos, and Lisa Crooks. *American Journal of Agricultural Economics*. 90(1):216-231. February, 2008.
- “Spatial-Temporal Aspects of Cost-benefit Analysis for Park Management: An Example from Khao Yai National Park, Thailand.” Heidi J. Albers and Elizabeth J. Z. Robinson. *Journal of Forest Economics* 13(2-3):129-150. August, 2007.
- “Implications of Agricultural Policy for Species Invasion in Shifting Cultivation Systems.” Heidi J. Albers, Michael J. Goldbach, and Daniel T. Kaffine. *Environment and Development Economics* 11:4:429-452. August, 2006.
- “The Economics of Terrestrial Biodiversity Conservation in Developing Nations.” Heidi J. Albers and Paul Ferraro. in **Economic Development and Environmental Sustainability: New Policy Options**. Ramon Lopez and Michael A. Toman, editors. Oxford University Press. Oxford, UK. 416 pp. August 2006.
- “The Impact of Non-Timber Forest Product Sales on Rural Households’ Cash Income in India’s Dry Deciduous Forest.” Ajay Kumar Mahapatra, Heidi J. Albers, and Elizabeth J. Z. Robinson. *Environmental Management* 25:3, March, 2005.
- “Biodiversity.” Jeffrey A. McNeely, Daniel P. Faith, and Heidi J. Albers, Coordinating Lead Authors. Chapter 5 in **Ecosystems and Human Well-Being: Policy Responses**. Millennium Ecosystem Assessment, editors. Island Press. 2005.
- “Enforcement, Payments, and Development Projects near Protected Areas: How the Market Setting Determines What Works Where.” Jeffrey Muller and Heidi J. Albers. *Resource and Energy Economics* 26 (2004) 185-204. Special Issue on Biodiversity.

- “Could State-Level Variation in the Number of Land Trusts Make Economic Sense?” Heidi J. Albers and Amy W. Ando. *Land Economics* **79**:3:311-327. August, 2003.
- “How Markets Alter the Effectiveness of Enforcement, Payments, and Agricultural Projects Near Protected Areas.” Heidi J. Albers and Jeffrey Muller. *ASEAN Biodiversity*. **2**:2. April-June, 2002.
- “The Impact of Markets and Policy on Spatial Patterns of Non-Timber Forest Product Extraction.” Elizabeth J.Z. Robinson, Jeffrey C. Williams, and Heidi J. Albers. *Land Economics*. **78**:2:260-271. May, 2002.
- “Irreversible Ecosystem Change, Species Competition, and Shifting Cultivation.” Heidi J. Albers and Michael J. Goldbach. *Resource and Energy Economics* **22** (2000) 261-280.
- “Forests Under Economic Reform in China.” Scott D. Rozelle, Heidi J. Albers, and Li Guo. *China Information*. **13**:1:106-130, 1998.
- “China’s Forests Under Economic Reform: Timber Supplies, Environmental Protection, and Rural Resource Access.” Heidi J. Albers, Scott D. Rozelle, and Li Guo. *Contemporary Economic Policy*. **26**:22-33. January, 1998.
- “A Comparison of the Enforcement of Access Restrictions Between Xishuangbanna Nature Reserve (China) and Khao Yai National Park (Thailand).” Heidi J. Albers and Elisabeth Grinspoon. *Environmental Conservation*. **24**:4:351-362, 1997.
- “Economic Management of Tropical Forests: Reply.” *Journal of Environmental Economics and Management*. **33**: 214-219, 1997.
- “Valuation of Tropical Forests: Implications of Uncertainty and Irreversibility.” Heidi J. Albers, Anthony C. Fisher, and W. Michael Hanemann. *Environmental and Resource Economics*. **8**: 39-61, 1996.
- “Modeling Ecological Constraints on Tropical Forest Management: Spatial Interdependence, Irreversibility and Uncertainty.” *Journal of Environmental Economics and Management*. **30**, 73-94, 1996.
- “The Benefits of Reducing Exposure to Waste Disposal Sites: A Hedonic Housing Value Approach,” Mark Thayer, Heidi Albers, and Morteza Rahmatian, *Journal of Real Estate Research*. **7**:3, 265-282, 1992.

#### **OTHER ARTICLES (non-peer reviewed), CHAPTERS, REPORTS, and PUBLICATIONS**

- “Spatial Economics for Forest Conservation,” HJ Albers and EJZ Robinson. Chapter in *Handbook of Natural Resource Economics*. Forthcoming.

- “Extending Local Forest Management to Include REDD+: Section Context and Overview.” H. J. Albers. 2014. chapter in Forest Tenure Reform in Asia and Africa: Local Control for Improved Livelihoods, Forest Management, and Carbon Sequestration. (Bluffstone and Robinson, Eds), Routledge.
- “REDD and forest tenure reform in Tanzania.” Robinson, Elizabeth J Z; Albers, H Jo; Meshack, Charles; and Lokina, Razack B. 2014. chapter in Forest Tenure Reform in Asia and Africa: Local Control for Improved Livelihoods, Forest Management, and Carbon Sequestration. (Bluffstone and Robinson, Eds), Routledge.
- Spatial Management of Renewable Natural Resources. H.J. Albers. In: Shogren, J.F., (ed.) Encyclopedia of Energy, Natural Resource, and Environmental Economics, Vol. 2, pp. 119-123 Amsterdam: Elsevier. 2013
- Reducing Emissions from Deforestation and Forest Degradation. HJ Albers and EJZ Robinson. In: Shogren, J.F., (ed.) Encyclopedia of Energy, Natural Resource, and Environmental Economics, Vol. 2, pp. 78-85 Amsterdam: Elsevier. 2013.
- “Implementing REDD through Community-Based Forest Management: Lessons from Tanzania.” Elizabeth J Z Robinson, Heidi J Albers, Charles Meshack, and Razack Lokina. Environment for Development Discussion Paper Series. RFF/EfD 13-06. March 2013.
- “Success factors for pairing conservation with enhanced forest and fish-based livelihoods.” Elizabeth J. Z. Robinson, Heidi J. Albers, Razack Lokina, and Stephen Kirama. EfD Policy Brief -19. 2012.
- “Challenges in Patrolling to Maximize Pristine Forest Area.” M.P. Johnson, F. Fang, R. Yang, M. Tambe, H.J. Albers. AAAI Spring Symposium on Game Theory for Security, Sustainability and Health, 2012.
- “Designing Patrol Strategies to Maximize Pristine Forest Area.” Matthew P. Johnson, Fei Fang, Milind Tambe, H.J. Albers. International In AAMAS 2012 Workshop on Optimisation in Multi-Agent Systems (OptMAS), June 2012.
- “Insiders, Outsiders, and the Role of Local Enforcement in Forest Management: An Example from Tanzania.” EJZ Robinson, HJ Albers, R Lokina, and G Ngeleza. Environment for Development Discussion Paper Series. RFF/EfD DP 12-07. June 2012.
- “The Role of Incentives for Sustainable Implementation of Marine Protected Areas.” Elizabeth JZ Robinson, HJ Albers, and Stephen L. Kirama. Environment for Development Discussion Paper Series. EfD DP 12-03. February 2012.
- “Managing Marine Protected Areas through Incentives to Local People: The Case of Mnazi Bay Ruvuma Estuary Marine Park.” HJ Albers, Elizabeth JZ Robinson, and

Stephen Kirama. Environment for Development Policy Brief Series.17. January 2012.

“Improving forest management in Tanzania: Understanding spatial patterns of access rights, investments, and enforcement.” Elizabeth JZ Robinson, HJ Albers, and Razack B. Lokina. Environment for Development Policy Brief Series. January 2012.

“Abstract: The spatial allocation of suppression resources to improve the effectiveness of initial attack on wildland fires.” Yohan Lee, H.J. Albers, J.S. Fried, R.G. Haight. *The International Forestry Review*. August 2010. (IUFRO)

Final Project Report: Economics of Forest Fragmentation: Public and Private Actions, Road Networks, and Open Space for Joint Venture Agreement No. PNW 06-JV-11261975-308 between OSU and USFS PNW Research Station (Ralph Alig).

Final Project Report: Ecological and Economic Aspects of Tamarisk Invasion in the Columbia River Basin. H.J. Albers and K. Hall. For joint venture agreement PNW 06-JV -11261975- 312 between the PNW Research Station of the US Forest Service (Richard Haynes) and OSU.

Tamarisk in the Columbia River Basin -Data Synthesis Document. Kim Hall and H. Jo Albers. 2010.

A review of the Spatial Invasive Species Economics Literature. Kim M Hall and H Jo Albers. 2010.

“Introduction to spatial natural resource and environmental economics.” Heidi J. Albers, Amy Ando, and Jason F. Shogren. *Resource and Energy Economics*. 32(2):93-97. 2010.

“Economics of Habitat Fragmentation and Fragmentation Policy: A Literature Review.” H.J. Albers and M. Bu. SSRN. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1432155](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1432155).

"Optimal Enforcement and Practical Issues of Resource Protection in Developing Countries", Elizabeth J. Z. Robinson, Ajay Kumar Mahapatra, and Heidi J. Albers, EfD Discussion Paper 09-08, a joint publication of Environment for the Development Initiative and Resources for the Future ([www.rff.org](http://www.rff.org)), Washington DC. March 2009.

“Economic Analysis for the Impact of *Phytophthora ramorum* on Oregon Forest Industries.” HJ Albers and KM Hall. Report for Oregon Department of Forestry. February 2009.

“Spatial Management of Invasive Species: Pathways and Policy Options.” Sanchirico, J.N., H.J. Albers, C. Fischer, and C. Coleman. RFF Discussion Paper 08-18. 2008.

- “Invasive Species Management in a Spatially Heterogeneous World: Spatial vs. Uniform Policies.” H.J. Albers, C. Fischer, and J.N. Sanchirico. RFF Discussion Paper 08-19. 2008.
- “The Economic and Ecologic Impacts of the Non-native, Invasive Forest Disease, Sudden Oak Death, caused by *Phytophthora ramorum*, in Oregon.” H.J. Albers, B. Collins, K. Guillozet, D. Haim, K. Hall, D. Martin, D. Norlander, E. Peterson, D. Shaw, and M. Thompson. NCEAS White Paper. [www.nceas.org](http://www.nceas.org). 2008.
- “Abstract: Protecting Salmonid Species with Riparian Buffer Zones: An Economic Optimization Approach” in Conference Program of “Riparian Management in Headwater Catchments: Translating Science into Management.” University of British Columbia, Vancouver, Canada. February 2007.
- “Effects of Spatial Externality on Efficient Spatial Allocation of Forest Fuel Management.” Masashi Konoshima, Claire A. Montgomery, Heidi J. Albers, and Jeffrey L. Arthur. 2007. Chapter in *Forest Resource Management and Mathematical Modeling*. FORMATH Vol. 7. Nophea Sasaki and Atsushi Yoshimoto, editors. Published by Nophea Sasaki. Chapter represents slight reworking or near-reprinting of *Land Economics* 84(3):449-468 listed above.
- “Land Cover in a Managed Forest Ecosystem: Mexican Shade Coffee.” Allen Blackman, Heidi Albers, Beatriz Avalos, and Lisa Crooks. RFF Discussion Paper 07-30. May, 2007.
- “Equilibrium Patterns of Land Conservation: Crowding In/Out, Agglomeration, and Policy.” Heidi J. Albers, Amy W. Ando, and Michael Batz. SSRN: <http://ssrn.com/abstract=910983>.
- “A Spatial-Econometric Analysis of Attraction and Repulsion of Private Conservation by Public” Heidi J. Albers, Amy W. Ando, and Xiaoxuan Chen. SSRN: <http://ssrn.com/abstract=909559>.
- “Spatial and Temporal Modeling of Community Non-Timber Forest Extraction” Elizabeth J Z Robinson, Heidi J Albers, and Jeffrey C Williams. Centre for the Study of African Economies Working Paper Series 2006-03, University of Oxford. 2006.
- “Sustainable Coffee Certification as a Forest Conservation Policy in Mexico: Prospects, Constraints, and Policy” Beatriz Ávalos-Sartorio, Allen Blackman, and Heidi J. Albers. Resources for the Future Issue Brief Series RFF IB 06-01. May 2006.
- “Certificación de Café Sostenible en México: Prospectos, Restricciones y Políticas Públicas” Beatriz Avalos Sartorio, Allen Blackman, and Heidi J. Albers. Instituto Nacional de Ecología (Ministry of Environment, Mexico) pamphlet on certification. January, 2006.



“The Impact of Markets and Policy on Spatial Patterns of Non-Timber Forest Product Extraction” Originally published in *Land Economics* (above). Elizabeth J.Z. Robinson, Jeffrey C. Williams, and Heidi J. Albers. Reprinted in **Spatial Aspects of Environmental Policy**. Jacqueline Geoghegan and Wayne Gray (editors). International Library of Environmental Economics and Policy. Aldershot, UK, Ashgate. 2005.

“Discussant Comments” in Proceedings of Session 1: Trends in Housing, Land Use, and Land Cover Change of U.S. Environmental Protection Agency’s Socioeconomic Causes and Consequences of Future Environmental Changes Workshop. EPA Region 9 Office, San Francisco, CA. November, 2005. <http://yosemite.epa.gov/ee/epa/erm.nsf/vwRepNumLookup/EE-0492?OpenDocument>

“Deforestation and Shade Coffee in Oaxaca, Mexico: Key Research Findings” Allen Blackman, Heidi Albers, Beatriz Avalos Sartorio, and Lisa Crooks. August, 2005. RFF Discussion Paper 05-39.

“Made in the Shade: Can Shade Coffee Help Stem Deforestation in Latin America?” Allen Blackman, Heidi Albers, Beatriz Avalos Sartorio, and Lisa Crooks. *Resources*. Spring 2005. Issue Number 157. pp.23-26.

“Shade Grown Coffee: Simulation and Policy Analysis for Coastal Oaxaca” Michael Batz, Heidi J. Albers, Beatriz Avalos, and Allen Blackman. 2005. RFF Discussion Paper 05-61.

“Analyzing the Impact of Excluding Rural People from Protected Forests: Spatial Resource Degradation and Rural Welfare.” Elizabeth J.Z. Robinson, Heidi J. Albers, and Jeffrey C. Williams. February, 2005. Oxford Centre for the Study of African Economies Working Paper Series. WPS/2005-3.

“Spatial Analysis of Private Land Conservation Decisions.” Heidi J. Albers and Amy Ando. December, 2004. Proceedings of EPA conference “Valuation of Ecological Benefits: Improving the Science behind Policy Decisions. Session V. Conservation and Urban Growth: Finding the Balance.” pp 47-80.  
[yosemite.epa.gov/ee/epa/ermfile.nsf/vwAN/EE-0489-08.pdf/\\$File/EE-0489-08.pdf](http://yosemite.epa.gov/ee/epa/ermfile.nsf/vwAN/EE-0489-08.pdf/$File/EE-0489-08.pdf)

“The Economics of Terrestrial Biodiversity Conservation in Developing Nations.” Heidi J. Albers and Paul Ferraro. October, 2004. Initiative for Policy Dialogue, Environmental Economics Working Papers Series. Columbia University.  
<http://www0.gsb.columbia.edu/ipd/programs/item.cfm?prid=17&iyid=13&itid=453>

“Land Trusts in the United States: Analyzing Abundance.” Heidi J. Albers, Amy W. Ando, and Daniel Kaffine. *Resources*. Spring 2004. Issue Number 153. pp. 9-13.

“Land Cover in a Managed Forest Ecosystem: Mexican Shade Coffee” Allen Blackman, Heidi J. Albers, Beatriz Avalos Sartorio, and Lisa Crooks. RFF Discussion Paper 03-60-REV. November, 2003.

“Modeling Ecological Constraints on Tropical Forest Management: Spatial Interdependence, Irreversibility and Uncertainty.” Originally published in *JEEM* (above). Reprinted in **The Economics of Land Use** (eds. Peter J. Parks and Ian W. Hardie) in the International Library of Environmental Economics and Policy Series (series eds. Tom Tietenberg and Kathy Segerson). September, 2003. Ashgate Publishing Group. Hampshire, U.K.

“A Spatial-Intertemporal Model for Tropical Forest Management Applied to Khao Yai National Park, Thailand.” RFF Discussion Paper 01-35. 2001.

“State-Level Variation in Land Trust Abundance: Could it Make Economic Sense?” with Amy Ando. RFF Discussion Paper 01-36. 2001.

“Valuation and Management of Tropical Forests: A Theoretical and Empirical Analysis.” Giannini Foundation of Agricultural Economics Working Paper No. 681, UC Berkeley. July, 1993.

“Nonrenewable Stocks: An Economic Perspective of Geology,” Heidi J. Albers and Robert O. Mendelsohn. December 1986.

#### PAPERS IN REVIEW

“Inducing Cooperation with Marine Protected Area Gear Restrictions: Location, Enforcement, and Livelihood Projects in Mnazi Bay Ruvuma Estuary Marine Park, Tanzania” HJ Albers, G Busby, EJZ Robinson, S Kirama. Submitted 2013.

“Fires and Outbreaks and Pests, Oh My! Spatially-correlated Risk in Reserve Site Selection.” Gwenlyn M. Busby, Heidi J. Albers, Bertrand Hamaide, Amy W. Ando, and Stephen Polasky. Submitted 2014.

“Maintenance Costs, Price Uncertainty, and Abandonment in Shade-Grown Coffee Production: Coastal Oaxaca, Mexico.” Heidi J. Albers, Beatriz Ávalos-Sartorio, Michael Batz, and Allen Blackman. Revisions, 2013.

#### CURRENT PROJECTS

“Wildlife Corridors and Communities in the East and West Usambara Mountains, Tanzania: Toward Integrating Social and Biological Information in Conservation Policy and Priorities.” EfD Initiative. With Razack Lokina, Elizabeth J.Z. Robinson, Michael Goldbach, and Innocensia John. November 2014-December 2015.

- “Sea Turtle Conservation in Costa Rica and Nicaragua: Individual Incentives in Reactions to Policy.” EfD Initiative. With Roger Madrigal and Elizabeth J.Z. Robinson. November 2014-December 2015.
- “Coastal Conservation: Comparing Marine Protected Areas and Small-Scale Fisher Behavior in Costa Rica, Tanzania, and South Africa.” EfD Initiative. With EfD Centers in Costa Rica (Roger Madrigal and Francisco Alpizar), Tanzania (Stephen Kirama and Razack Lokina) and South Africa (Jane Turpie). 2012-2014.
- “Valuation of Biodiversity’s Impact on Ecosystem Services.” SESYNC Working Group. 2013-2014.
- “Spatial Modeling of Invasive Species Management” in collaboration with computer scientists, ecologists, and students on NSF-Funded project. Developing solution methods for complex spatial management of ecological systems.
- “Forests, People, and Fire” with many collaborators including social scientists, ecologists, fire modelers, and foresters on NSF-funded project. Integrating forest models, social science data, behavioral decision models, and fire models for analysis in an Agent Based Model, Envision.
- “Economic Underpinnings of Spatial Management in Developing Country Forests” with Elizabeth J. Z. Robinson (EfD-T).
- “Spatially-correlated Risks and Reserve Site Selection” with Gwen Busby and Bertrand Hamaide.

## OSU COURSES

- AEc 653/FOR 599/AREc 653. Spatial Economics of Natural Resources. (Co-taught in 2006, 2008, 2010, and sole-taught 2011, 2012, 2013, 2014)
- FES 641. Sustainable Development and Resource Economics. (2014)
- AREc 640. Sustainable Development. (taught portion, with Antle in 2013)
- AE 523. Statistics and Optimization for Economics. (Co-taught with Reimer. 2010)
- FOR 332. Risk and Decision-Making for Natural Resource Management. (2006, 2008)
- FOR 330. Forest Economics I. (2007, 2008, 2009)
- FOR 599/FS 599. Ecological and Economic Impact of Non-native Forest Pests and Pathogens. NCEAS-sponsored course. (Co-taught with Shaw. 2008)

## **OTHER COURSES**

Co-coordinator for STEM Academy course in OSU College Forest (2013).

Environmental Economics for Non-economists. (masters level) American University.

International Forest Economics. (masters level) Co-taught with Simpson and Sedjo.  
University of California – Santa Barbara.

Advanced Topics in International Natural Resource Economics. (graduate level) Stanford University.

Renewable Resource Economics in Developing Countries. (graduate level) Stanford University.

Natural Resources in Developing Countries: Policy Analysis. (masters level). Stanford University.

Tropical Deforestation: Economics and Policy. (undergraduate level, “writing across the curriculum” course for economics majors) Stanford University.

Environmental Economics. (undergraduate level) University of California – Santa Cruz.

Natural Resource Economics. (undergraduate level) University of California – Santa Cruz.

## **ADDITIONAL EMPLOYMENT EXPERIENCE**

Faculty Affiliate, Rural Studies Program, Oregon State University (2006-2014).

Special Government Employee with NCEE of USEPA on benefits from ecosystems and ecosystem services (9/2004-9/2010).

Visiting Professor, School of International Service, American University (Fall, 2003).

Lecturer. “Biodiversity and Conservation Management.” Executive Environmental Program “Strategic Management of Environmental Policy” through Goldman School of Public Policy at UC-Berkeley for Mexico’s State Ministers of the Environment. Mexico City. August, 2002.

Visiting Lecturer. Bren School of Environment. University of California, Santa Barbara. Winter, 2000. Co-taught course on international forest management.

Visiting Scholar, Department of Agricultural and Resource Economics. University of California at Berkeley. Fall, 1996.

Lecturer, University of California at Santa Cruz (Fall, 1991). Natural Resource Economics, Environmental Economics.

Lecturer, School of Public Policy Summer Program, University of California, Berkeley (1991). Module entitled “Deforestation as a Public Policy Issue.”

Graduate Student Researcher, Department of Agricultural and Resource Economics, UC – Berkeley (1989-1992). Projects in tropical deforestation (including economic modeling and valuation), environmental policy, and forest policy.

Graduate Student Instructor, University of California, Berkeley (1988-1991). Introductory Economics, Intermediate Microeconomics, Natural Resource Economics

Research Intern in Resource Economics, Ford Foundation in New Delhi, India (summer, 1988).

Environmental Economist, Economic Analysis Branch, U.S. Environmental Protection Agency. Summer 1987. Intern, summer 1986.

## **GRANTS AND HONORS**

Fulbright Scholar. Sub-Saharan Africa Regional Program. (4 months in Tanzania). 2013-2014.

Dean’s Award for International Programs. Oregon State University College of Forestry. 2013.

Principal Investigator. “Wildlife Corridors and Communities in the East and West Usambara Mountains: Toward Integrating Social and Biological Information in Conservation Policy and Priorities” with Innocensia John, EJZ Robinson, and Razack Lokina. Environment for Development Initiative – Tanzania. 2014-2015. (Approx. \$45000)

Investigator. “Sea Turtle Conservation in Costa Rica and Nicaragua: Individual Incentives in Reactions to Policy” with Roger Madrigal and EJZ Robinson. Environment for Development Initiative – Central America. 2014-2015. (Approx. \$37,000)

Investigator. NSF CyberSEES: Type 2: Computing and Visualizing Optimal Policies for Ecosystem Management. 9/13 to 8/16. (PI T. Dietterich, \$1,200,000; portion to Albers: approximately \$100,000)

Program Leader and Principal Investigator. “Marine Protected Areas and Small-Scale Fishing Behavior: a Comparative Analysis between South Africa, Tanzania and Costa Rica.” With Francisco Alpizar, Jane Turpie, Stephen Kirama, Liz Robinson, and Roger Madrigal. Environment for Development Initiative. (approximately \$120,000 over 2012-2014)

Investigator. “Coupled Natural and Human Systems in Fire-Prone Landscapes: Interactions, Dynamics, and Adaptation.” NSF Coupled Natural and Human Systems Program. 2010-2013. (Portion to Albers: approximately \$50,000)

Investigator. “Incentives to Cooperate with Marine Protected Areas As a Function of Location: Mnazi Bay Ruvuma Estuary Marine Park Case Study.” with EJZ Robinson and Razack Lokina. Environment for Development Initiative. Tanzania. 2010. (Approximately \$25,000)

Principal Investigator. “Protecting Peri-urban Forests and Livelihoods: Spatial Enforcement Issues and Incentives for Community-Based Initiatives.” with EJZ Robinson and Razack Lokina. Environment for Development Initiative. Tanzania. 2010. (Approximately \$25,000).

Benton County Wildlife Steward of the Year 2010.

"Economics of Habitat Fragmentation and Fragmentation Policy: A Literature Review" H.J. Albers and M. Bu, listed on SSRN's Top Ten download list for ERPN: Public Policies (Social) (Topic). October, 2009.

“A Spatial-Econometric Analysis of Attraction and Repulsion of Private Conservation by Public Reserves.” Heidi J. Albers, Amy W. Ando, and Xiaoxuan Chen. Listed in ScienceDirect TOP25 Hottest Articles July - September 2008 and *JEEM*'s Top 10 most-downloaded articles in 2008.

Investigator. “Computational Sustainability: Computational Methods for a Sustainable Environment, Economy, and Society.” NSF Expeditions in Computing Program. 2006-2011. (Portion to OSU: \$1,058,321. Portion to Albers: \$246,525.)

Mealey-Boise Foundation. Graduate Student Support (\$35,000 in '09, '10, and '11). Marvin and Eva Noble Program Funds. College of Forestry. Graduate student support. 2010-2011. (\$15,000).

Boone and Crockett Club Funds. College of Forestry. Spotted owl uncertainty project. Graduate student support. 2010-2011. (\$10,000).

SUFONAMA Fellowship Recipient. European Union Erasmus Mundus Scholar in Sustainable Forest and Nature Management 2008-2009. (unable to accept)

Oregon Department of Forestry. “Economic Analysis of Phytophthora *ramorum* on Forest Industries.” H.J. Albers. 2008-2009. (\$10,000.)

“Land Cover in a Managed Forest Ecosystem: Mexican Shade Coffee” listed on SSRN's Top Ten download list for UERS: Quality of Life & Environmental Comparisons

(Topic) and UERS: Quality of Life & Environmental Comparisons (Topic). May, 2008.

USDA Forest Service, North Central Research Station JVA. “Models to Improve the Effectiveness of Wildland Suppression.” 2007-2009. (\$45,000)

Zayed Prize to authors of the Millennium Ecosystem Assessment. 2006.

USDA Forest Service PNW Research Station JVA. PNW 06-JV-11261975-312. “Ecological and Economic Aspects of Tamarisk Invasion in the Columbia River Basin.” 2006-2009 (\$25,791).

USDA Forest Service PNW Research Station JVA. PNW 06-JV-11261975-308. “Forest Fragmentation: Comparison of Trends in Western Oregon & Washington and Investigating Measures of Road Network Characteristics to Improve Land Conservation Analyses.” 2006-2009 (\$30,000) Extended in 2008 (\$15,000).

“Equilibrium Patterns of Land Conservation: Crowding In/Out, Agglomeration, and Policy” Listed on SSRN’s “Top Ten Downloaded Property Rights Papers” July-September, 2006. (later published in *REE*).

“A Spatial-Econometric Analysis of Attraction and Repulsion of Private Conservation by Public” Listed on SSRN’s “Top Ten Downloaded Property Papers” July-September, 2006. (later published in *JEEM*).

USDA/ERS PREISM grant for “Spatial Management of Invasive Alien Species: An Application to Cheatgrass in the Great Basin” with Jim Sanchirico, Carolyn Fisher, and Paul Doescher. 2004-2006. (\$380,000)

NSF grant for “Private Land Conservation Decisions: The Role of Information and Public Land” with Amy W. Ando (2003-2006). (\$320,000)

Tinker Foundation grant for “Oaxaca’s Shade-grown Coffee and the Protection of Biodiversity” with Allen Blackman and Beatriz Avalos (2003). (\$50,000)

World Bank grant for “Rural Natural Resource Wealth and Rural Livelihoods in India” with Urvashi Narain and Shreekant Gupta (2001-2002). (\$75,000)

CEC grant for “Oaxaca’s Shade-grown Coffee and the Protection of Biodiversity” with Allen Blackman and Beatriz Avalos (2000). (\$15,000)

Ford Foundation/Institute of International Studies Grant for Curriculum Development in Natural Resources (1995). (\$6500)

MacArthur Foundation grant for “Southwestern China’s Changing Forest Composition and Biodiversity” with Scott D. Rozelle (1994-1998). (\$220,000)

Stanford University Institute of International Studies/Hewlett Foundation Travel Grant (1993). (\$5000)

Stanford Institute for Research on Women and Gender Research Trainee Stipend Recipient (1993). (\$5000)

Dissertation funded by grants from Mellon, UC-Berkeley's Center for Southeast Asian Studies, and NSF.

James L. Goodwin Scholarship Holder, 1985-1987.

Duke University: Magna Cum Laude, Dean's List, Class Honors, Geology Honor Society.

## **PROFESSIONAL and SERVICE ACTIVITIES**

Co-Editor. 2009 to present. *Environmental and Resource Economics*.

CSWEP Liaison for University of Wyoming's Department of Economics and Finance. 2014-present.

Associate Editor (for Forests and Land Conservation). 2006-2012. *Agricultural Economics*.

Editorial Board Member. 1996 to present. *Contemporary Economic Policy*.

Oregon State University activities: Forestry Executive Committee (FEC) At-Large Member (2013-2014). Fulbright Experience Panel Moderator for OSU International Programs (2014). COF International Programs Manager Position Search Committee (2013). COF International Programs Advisory Council (2012-2014). FES Departmental Planning Document Committee (2013). FES School Scoping Committee (2012). AREc Department Faculty Search Committee (2012). College of Forestry Promotion and Tenure Committee (2010-2013). FES Department Faculty Promotion and Tenure Case Committee (2010-2011). Applied Economics (AEc) Advisory Council (2009-2010). Undergraduate Environmental Science Faculty Advisory Committee (2008-2009). FES Communications and Integration Committee (2008-2009). Applied Economics Director Search Committee (2008). College of Forestry Advisory Council (2006-2008). College of Forestry Committee on Academic Freedom and Responsibility (2006). Post-UGFE Transition Committee (2006-2007). UGFE Scholarship Selection Committee (2006). Forest Resources Department Search Committee for post-doc position in fire (2006). Forest Resources Department Promotion and Tenure Committee (2005-2006). Forest Resources Department Advisory Committee (2005-present). College of Forestry Building Community Committee (2005-2006). FR review of core economics courses (2005). Search and Screen Committee for Silviculture position (2005).



Reviewer: *Journal of Economic Literature*. *Environmental and Resource Economics*. *Journal of Environmental Economics and Management*. *American Journal of Agricultural Economics*. *International Regional Science Review*. *Resource and Energy Economics*. *Environmental Conservation*. *Contemporary Economic Policy*. *Conservation Biology*. *Forest Science Review*. *Marine Resource Economics*. *Environmental Management*. *Land Economics*. *Forest Policy and Economics*. *Agricultural and Resource Economics Review*. *Ecology and Society*. *Environment and Development Economics*. *Biodiversity and Conservation*. *Journal of Forest Economics*. *Agricultural Economics*. NSF SES-Economics Proposals. USDA PREISM Grant Proposals. *Landscape Ecology*. *Proceedings of the National Academy of Sciences (PNAS)*, *NSF Collaborative Research Proposal*.

World Congress of Environment and Resource Economists Programme Committee. 2014.

Multiple Guest Lectures on Marine and Fishery Economics at University of Dar es Salaam in graduate resource economics course. 2013.

Co-coordinator (with Ryan Brown). Summer STEM short course for High School students through STEM Academy. “Restoration Ecology and Forestry in the College Forest.” 2013.

Guest Lecture in FS 520: Posing Research Questions. OSU, Fall, 2011.

Guest Lecture in AREc 552: Marine Economics. OSU, Fall, 2011.

Guest Lectures (2) in AREc 640: Sustainable Development. OSU, Spring, 2011.

AERE Summer Workshop Paper Selection Committee. 2011.

Co-organizer. Wyoming Workshop on Spatial Natural Resource and Environmental Economics. Centennial, Wyoming. 2008.

Participant. NCEAS Distributed Graduate Seminar Workshop on Economic and Ecological Impact of Invasive Pests and Pathogens. February, 2008.

Guest Lecturer. “Economics and Natural Resources” for NR201: Managing Natural Resources for the Future. OSU, Winter, 2008, 2009, 2010, 2012. (reprised for on-line course offering in summer, 2008)

Guest Lecturer. “Shade-Grown Coffee” for FOR course “International Forestry.” OSU, Winter, 2007, 2008.

Guest Lecturer/Instructor. “Decisions with Risk” IMDS program for training USFS employees. 2007 and 2008.

Invited Participant in OECD Workshop on Distributive Issues Related to Biodiversity. Oaxaca, Mexico. 26-27 April 2006.

Oregon 4-H Wildlife Steward 2005-2014. Completed Training (24 hours) 12/05 (Master Science Educators Program). Hoover Habitat Team Member for Hoover Elementary School. Science and nature education activities including habitat awareness tours, mapping, fish trap monitoring, butterfly garden establishment and maintenance, and invasive species identification and removal.

Coordinating Lead Author. Biodiversity chapter. Response Options Working Group of the Millennium Ecosystem Assessment. 2002-2005.

Guest Lecture on Forests, Fire, and Biodiversity. Junjie Wu's undergraduate natural resource economics course. OSU, 2005.

NSF Proposal Review Panel for Biocomplexity Research Centers. 2003.

Environmental Education Volunteer for Kindergarten at Stoddert Elementary School. 2003-2004.

American Association for the Advancement of Science Roger Revelle Fellowship in Global Stewardship Ad Hoc Selection Committee. Winter, 2003. Winter, 2001.

Environmental Education Volunteer and International Education Coordinator and Volunteer for Pre-K at Stoddert Elementary Public School. 2002-2003.

Participant. The World Bank's Participatory Conservation e-discussion. Winter, 2002.

AERE Paper Selection Committee. 1999-2001.

Session Coordinator. WEA meetings, 2001.

Participant. RFF-Beijer Workshop "Biodiversity and Land Use." October 2000.

Session Chair. Natural Resource Management Session. AERE session at AAEEA meetings, January 2000.

Session Coordinator. WEA meetings, 1999. 2001.

Joseph L. Fisher Dissertation Fellowship Selection Committee. 1999.

RFF Summer Internship Selection Committee. 1999.

Session Coordinator. Western Economics Association Meetings Session "Natural Resources and Population in Developing Countries." June 1997.

Visiting Scholar. Department of Agricultural and Resource Economics at University of California at Berkeley. Fall, 1996.

Guest Lecturer. Professor John Barton's International Environmental Law Class. Stanford Law School. Spring 1993.

Participant. Asia Foundation Discussion Group on U.S. - Asia Environmental Partnership. Spring, 1993.

Guest Lecturer. Professor Larry Goulder's undergraduate Environmental Economics course. Stanford Department of Economics. 1993, 1994.

## **ADVISING**

(at Oregon State University)

Advisor: Kim Hall (Masters, AREc and FR – completed 2009; PhD in Applied Economics); Meidan Bu (PhD., Applied Economics completed 2013); Yohan Lee (PhD., FR – completed 12/2012)

Co-advisor: Anna Maher (Ph.D., Environmental Studies); Gwen Busby (PhD., FR, completed 7/2008)

Committee Member : Masashi Konoshima (FR, PhD., completed 6/2006); Katy Loynes (Geog., completed 8/2008); Lauren Bell (FR, M.S., completed 8/2012); Chris Cusack (Applied Economics, PhD); Justin Hospital (Environmental Sciences, Ph.D.)

Graduate Representative: Jiayin Lai (AREc); Donald E. Lyons (Fisheries and Wildlife); Abel Brumo (Fisheries and Wildlife); Linsey Arnold (Fish and Wildlife)

(at Stanford University)

Principal Advisor (Dissertation): Beatriz Avalos Sartorio (Universidad del Mar, Mexico) and Jeffrey Muller (The World Bank)

Second Advisor (Dissertation): Manuela Ferro (The World Bank), David Widawsky (U.S. E.P.A.), Humberto Valencia (National University of Mexico), Elizabeth Robinson (University of Reading), Michael Goldbach

Undergraduate Honors Thesis Advisor: Lisa Goldman

## **SELECTED PRESENTATIONS**

“MPAs in Low/Mid-Income Countries: A Spatial Bio-economic Model with Lessons from Costa Rica and Tanzania.” University of Wyoming's Agricultural and Applied Economics Department Seminar Series. December 2014.

“Coastal Conservation Collaborative: Results.” Environment for Development Annual Meeting. Dar es Salaam, Tanzania. 2014.

Discussant. “Does Collective Action Sequester Carbon?” by Randy Bluffstone. Environment for Development Annual Meeting. Dar es Salaam, Tanzania. 2014.

“Wildlife Corridors and Communities in the East and West Usambara Mountains, Tanzania: A Proposal to Integrate Social and Biological Information in Conservation Policy and Priorities.” Environment for Development Annual Meeting. Dar es Salaam, Tanzania. 2014.

“Interdisciplinary Projects in Africa: A Few Comments.” Resilience and Development in the Anthropocene Workshop. Sida-sponsored. Dar es Salaam, Tanzania. 2014.

“Landscape Conservation Economics.” University of Wyoming Haub School and Department of Economics and Finance Seminar. November, 2013.

Keynote Address. “Modeling in EfD Research: Models with No Data, Data Analysis with No Models, Bringing it All Together.” Environment for Development Annual Meeting. Cape Town, South Africa. 2013.

“Coastal Collaborative Project.” Environment for Development Annual Meeting. Cape Town, South Africa. 2013.

“Spatial Dynamic Management of Invasive Species in a River Network: Stochastic Species Dispersal and Native-Invasive Species Competition.” University of Connecticut, Department of Agricultural and Resource Economics. January 2013.

“Economics of Invasive Species in a River Network: Stochastic Species Dispersal and Native-Invasive Species Competition.” Portland State University. Department of Economics Seminar Series. October 2012.

“Using locations of patrols and livelihood projects to manage forest degradation: A spatial game theoretic approach with two and three sets of actors.” Game Theory and Human Behavior Seminar Series. University of Southern California. Los Angeles, CA. September 2012.

“(Bio)Economic Models Based on Field Observations: Methods and Examples” EfD Seminar Series. CATIE. Turrialba, Costa Rica. August 2012.

“Spatial-Dynamic Management of Invasive Species in a River Network.” University of California at Davis, Department of Agricultural and Resource Economics Seminar Series. May 2012.

“Managing Species Invasion in a River Network: A Spatial Bioeconomic Model.” Fifth Berkeley Bioeconomy Conference: Renewable Resources. Sessions Honoring Tony Fisher. UC-Berkeley. March, 2012.

“Putting people into the management of Marine Protected Areas, with examples from Tanzania: Opportunities for an EfD Thematic Program on MPAs.” EfD Annual Meeting. Arusha, Tanzania. October, 2011.

“Why is it so hard to achieve poverty alleviation and forest protection? Spatial integration of enforcement, projects, and access rights with local NTFP extractors and outsider charcoal extractors in Tanzania.” AERE Summer Meetings. Seattle. June, 2011.

“The Bees and the Trees: Enforcement and Poverty Alleviation Projects in Tanzania’s Forests.” Environment for Development Initiative Annual Meeting. Ethiopia. October, 2010.

Discussant for project proposal “The role of coastal communities on the management of marine turtles in Central America: The case of Ostional Wildlife Refuge” at Environment for Development Initiative Annual Meeting. Ethiopia. October, 2010.

“Spatial Non-Timber Forest Product Extraction and Enforcement: Policy, REDD, and Econometrics.” Scale, location and spatial interactions in the economic analysis of multi-functional natural resources: Lessons for forestry Workshop. INRA – Laboratoire D’Economie Forestiere. Nancy, France. September, 2010.

“The Bees and the Trees: Using enforcement and income projects to protect forests and rural livelihoods through spatial joint production.” World Congress of Environmental and Resource Economists. Montreal, Canada. June, 2010.

“Parks, Buffers and REDD Instruments in an Ecological-socioeconomic Setting.” Sustainability Science for Food, Forests, and Floods: Integrating Climate Adaptation and Pro-Poor Resource Management Workshop. East-West Center, University of Hawaii, Honolulu. May, 2010.

“Optimal Spatial Invasive Species Management: Economics and Computer Programming.” presentation for Computational Sustainability NSF Site visit. Cornell University. May, 2010.

“How Big Should Parks Be?” Forest Ecosystems and Society Departmental Seminar. OSU. September, 2009.

“How Big Should Parks Be? Landscape Values, Human Behavior, Markets, Manager Objectives, and Ecology.” The Economics of Land-Use Change: Advancing the Frontiers. Workshop. Washington, DC. June, 2009.

“Spatial Extraction and Enforcement in Poor Country Parks.” Oregon Resource and Environmental Economics Workshop. Willamette University. Salem, OR. 2009.

“Spatial Modeling of Extraction and Enforcement in Developing Country Protected Areas.” Yale School of Forestry and Environmental Studies. New Haven, CT. 2009.

“Spatial Modeling of Extraction and Enforcement in Developing Country Protected Areas.” Wyoming Workshop on Spatial Natural Resource and Environmental Economics. Centennial, Wyoming. 2008.

“Riparian Buffer Zones for Salmonid Conservation: Tradeoffs Across Space in a Watershed.” Washington Water Quality Program All-Staff Conference, Vancouver, WA. 2007.

Discussant and Moderator in AERE session “Resource Management in Developing Countries” at national AAEA, WAEA, CAES Joint Annual Meeting, Portland, Oregon. 2007.

“Protecting Salmonid Species with Riparian Buffer Zones: An Economic Optimization Approach.” Conference: Riparian Management in Headwater Catchments: Translating Science into Management. Vancouver, BC, Canada. February 2007.

“Fuel on the Fire? Managing Forests to Reduce Risk.” University of Illinois, Department of Agricultural and Consumer Economics Seminar Series. Urbana/Champagne, IL. February 2007.

“Forest Cover and Shade Grown Coffee: Coastal Oaxaca, Mexico.” International Forestry Seminar Series. College of Forestry, Oregon State University. February, 2007.

“Protecting Salmonid Species with Riparian Buffer Zones: An Economic Optimization Approach.” Oregon Ad Hoc Workshop in Environmental and Resource Economics. Salem, Oregon. November, 2006.

“Parks, Buffer Zones, and Costly Enforcement.” Protected Areas and Parks session at the Third World Congress of Environmental and Resource Economists. Kyoto, Japan. July 2006.

“Maintenance Costs, Price Uncertainty, and Abandonment in Shade-Grown Coffee Production: Coastal Oaxaca, Mexico.” Biodiversity Case Studies session at the Third World Congress of Environmental and Resource Economists. Kyoto, Japan. July 2006.

“Protected Areas and Local People: Capturing Benefits and Creating Incentives.” OECD Workshop on Distributive Issues Related to Biodiversity, Mexico. 26-27 April 2006.

“Equilibrium Patterns of Land Conservation: Crowding In/Out, Agglomeration, and Policy.” AERE session “Economics of Renewable Resource Management” at ASSA national meetings. Boston. January, 2006.

Discussant in session “Trends in Housing, Land Use, and Land Cover Change” of U.S. Environmental Protection Agency’s Socioeconomic Causes and Consequences of Future Environmental Changes Workshop. EPA Region 9 Office, San Francisco, CA. November, 2005.

“Spatial Analysis of Private Land Trust Behavior.” 14<sup>th</sup> Annual Meeting of the European Association of Environmental and Resource Economists. Bremen, Germany. June, 2005.

Discussant in session “Renewable Resources 1” at 14<sup>th</sup> Annual Meeting of the European Association of Environmental and Resource Economists. Bremen, Germany. June, 2005.

“Spatial and Temporal Land Management under the Threat of Invasive Species: Cheatgrass in the Great Basin.” Oregon Ad Hoc Workshop in Environmental and Resource Economics. Salem, Oregon. April, 2005.

“Spatial Aspects of Land Conservation: Interactions of Public and Private Actors” in OSU Department of Agricultural Economics Seminar Series, February 2005.

“The Number of Private Land Trusts: Specialization, Coordination, and Government Crowding Out/In” with Amy Ando at Resources for the Future Wednesday Seminar Series. November, 2003.

“Land Trusts in the U.S.: Analyzing Abundance and Behavior” with Amy Ando at DOGEE in Johns Hopkins University. November 2003.

“Agricultural Policy’s Impact on Invasive Species and Forest Recovery” at Oregon State University, College of Forestry. October 2003.

“Agricultural Policy’s Impact on Invasive Species” at University of Illinois, Department of Agricultural and Consumer Economics. October 2003.

“The Role of Markets in Determining the Effectiveness of Conservation Policy” at NCEE of US EPA in Washington, D.C. February 2003.

“Markets and Policy near Protected Areas: What Works Where?” at DRMI of the Naval Postgraduate School in Monterey, CA. January 2003.

“Extraction from Government Forests: Spatial and Temporal Considerations” at the World Congress of Environmental and Resource Economists in Monterey, CA. June 2002.

“Enforcement, Payments, and ICDPs in Protected Areas: What Works Where?” at the World Congress of Environmental and Resource Economists in Monterey, CA. June 2002.

Panel Discussant on Tropical Forest Policy at the World Congress of Environmental and Resource Economists in Monterey, CA. June 2002.

Discussant in “Topics in Forest and Land Management” AERE session at ASSA meetings in Atlanta. January 2002.

“Conservation Policy and Rural People’s Incentives.” RFF-Beijer Workshop “Biodiversity and Land Use.” October 2000.

“The Impact of Markets and Policy on Spatial Patterns of Non-Timber Forest Product Extraction.” RFF Wednesday Seminar Series. May 2000.

Discussant in land use session at SEA Meetings. November 1998.

“Spatial Extraction and Enforcement in Developing Country Protected Areas.” World Congress of Environmental and Resource Economists. Venice, Italy. June 1998.

“Comments on Forests: Sustainability, Optimal Use, and Measurement Issues” as symposium participant. World Congress of Environmental and Resource Economists. Venice, Italy. June 1998.

“Policy Implications of Forest Recovery in Models of Shifting Cultivation.” Resources for the Future. February 1998.

“Policy Implications of Forest Recovery in Models of Shifting Cultivation.” Rutgers University -State University of New Jersey. February 1998.

“Incorporating Ecological Characteristics of Shifting Cultivation into Economic Analysis.” School of the Environment, Dartmouth University. February 1998.

“Forest Recovery Dynamics and Shifting Cultivation.” Department of Economics, University of Colorado at Boulder. September 1997.

“Forest Recovery Dynamics and Shifting Cultivation.” Department of Economics, University of New Mexico. September 1997.

Discussant in session “Natural Resources and Population in Developing Countries.” Western Economics Association Meetings. June 1997.

“Policy Implications of Forest Recovery Dynamics in Shifting Cultivation.” East-West Center, University of Hawaii. May 1997.

“Spatial Extraction from Protected Areas in Developing Countries.” Department of Economics, University of Hawaii. May 1997.



- “Policy Implications of Forest Recovery Dynamics in Shifting Cultivation.” Nicholas School of the Environment, Duke University. March 1997.
- “Interdisciplinary Approach to Analyzing Policy Concerning Shifting Cultivation.” Department of Geography, University of New Hampshire. March 1997.
- “Spatial and Dynamic Implications of Forest Recovery in Protected Area Management, Shifting Cultivation, and Rural Resource Policy: A Research Agenda.” Department of Agricultural and Resource Economics, University of California at Davis. February 1997.
- “Economics and Policy Implications of Forest Recovery in Long-Fallow Systems.” Department of Agricultural and Resource Economics. University of California at Berkeley. January 1997.
- “Economic Modeling of the Ecological Base in Shifting Cultivation Systems.” School of the Environment, University of California at Santa Cruz. Fall, 1996.
- “Spatial Land Use in Developing Countries.” Western Economics Association Meetings. July 1996.
- “China’s Economic Reform of the Rural Forest Sector.” Occasional California Workshop on Environmental and Resource Economics and Policy. May 1996.
- “Rural People and Economic Reform of the Forest Sector.” Beijing University of Forestry Conference on Development and the Environment. 1995.
- “Shifting Cultivation and Forest Recovery Dynamics.” Occasional California Workshop on Environmental and Resource Economics and Policy. Fall, 1994.
- Discussant. Western Economics Association Meetings Session “Markets and the Environment in Africa and Asia.” July 1994.
- “Integrating Ecological, Economic, and Social Aspects of Managing Khao Yai National Park.” Conservation Biology Seminar Series. Stanford University. Spring, 1994.
- “Spatial Issues in the Management of Protected Areas: Case Study of Khao Yai National Park.” AERE Workshop “Integrating the Environment and the Economy: Sustainable Development and Economic/Ecological Modeling,” Boulder, Colorado. May 1994.
- “People and Parks: Economic Management of Khao Yai National Park, Thailand.” Stanford University Institute of International Studies Environmental Policy Forum. Fall, 1993.
- “Spatial Relationships, Irreversibility, and Uncertainty in Tropical Forest Management.” Occasional California Workshop on Environmental and Resource Economics and Policy. Spring, 1993.

“Observations on Rural Resource Management and Policy in Asia.” Asia Foundation Discussion Group on U.S. - Asia Environmental Partnership. Spring, 1993.

“Modeling Spatial Relationships, Irreversibility, and Uncertainty in Tropical Forest Management.” FRI, Stanford University. Winter, 1992.

“Nonrenewable Stocks: An Economic Perspective of Geology” AERE Session of the ASSA meetings, December 1986.