

Academic Program Review:

August 2016

Title: Masters of Science in Economics

Specialization: Graduate program

Department and College: Department of Economics and Finance, College of Business

Department Chair: Edward B. Barbier, ebarbier@uwyo.edu, 307-766-2358

Part I – Program Review

1. Program Demand

- a. Number of graduates over the past five-year period: 14 (AY2010-11 to AY 2014-2015)¹
- b. Enrollment in program over past five-year period: 48 (AY2010-11 to AY 2014-2015)²

N.B. The enrollment number includes students who qualified in their 2nd year for the PhD in Economics and chose this degree option over obtaining a MS in Economics.

2. Program Quality

- a. Program accreditation
 - i. Program is accredited through the college accreditation with the Association to Advance Collegiate Schools of Business (AACSB).
 - ii. Most recent accreditation date: October 2010
 - iii. Next review of college accreditation: September 2016.
 - iv. List of recommendations from past visit: Complete and document program assessment plan and outcomes. This was part of a general requirement for the entire college. Visit date: Fall, 2015.
- b. Faculty Credentials
 - i. List of faculty
 1. David Aadland, PhD, Economics, Associate Professor
 2. Heidi J. Albers, PhD, Economics, Knobloch Wyoming Excellence Chair in Conservation Economics and Finance
 3. Edward B. Barbier, PhD Economics, John S. Bugas Professor of Economics
 4. Timothy Considine, PhD Economics, School of Energy Resources Professor of Energy Economics

¹ From “Degrees – dup Master” Excel Spreadsheet, Academic Affairs, 6/21/2016.

² From “2016 MS Program Assessment Data”, Excel Spreadsheet, Department of Economics & Finance, 7/20/2016

5. David C. Finnoff, PhD Economics, Director of Undergraduate Studies, Associate Professor
6. Benjamin Gilbert, PhD Economics, Assistant Professor
7. Robert W. Godby, PhD Economics, Director for Energy Economics & Public Policies Center; Associate Professor
8. Thorsten Janus, PhD Economics, Associate Professor
9. Charles F. Mason, PhD Economics, H.A. "Dave" True, Jr. Professor of Petroleum and Natural Gas Economics
10. Owen R. Phillips, PhD Economics, Associate Dean, Professor
11. Jason Shogren, PhD Economics, Stroock Professor of Natural Resource Conservation and Management
12. Alexandre Skiba, PhD Economics, Associate Professor
13. Frederic P. Sterbenz, PhD, Economics, Professor
14. Klaas T. van't Veld, Director of Graduate Studies, Associate Professor

ii. Gender, ethnicity breakdown

Name	Gender	Ethnicity
David Aadland	Male	Caucasian
Heidi J. Albers	Female	Caucasian
Edward B. Barbier	Male	Caucasian
Timothy Considine	Male	Caucasian
David C. Finnoff	Male	Caucasian
Benjamin Gilbert	Male	Caucasian
Robert W. Godby	Male	Caucasian
Thorsten Janus	Male	Caucasian
Charles F. Mason	Male	Caucasian
Owen R. Phillips	Male	Caucasian
Jason Shogren	Male	Caucasian
Alexandre Skiba	Male	Caucasian
Frederic P. Sterbenz	Male	Caucasian
Klaas T. van't Veld	Male	Caucasian

iii. Grants awarded

Since 2012 (through 2015) external research grants to the Department of Economics and Finance have totaled over \$1.2 million, and in 2015 they totaled \$443,635. In 2016 grants are anticipated to total \$505,015.

Faculty member/Grant	Award	Year
Barbier New Orleans Coastal	\$28,000	FY12
Finnoff Forest Service	\$96,000	FY12
Finnoff Wildlife Trust	\$25,000	FY12
Tschirhart U of Maryland	\$50,000	FY12
Godby Wy Legis Svcs	\$12,000	FY12
Godby Prevailing Wage	\$38,351	FY12
Godby Prevailing Wage	\$48,486	FY13

Pike EcoHealth Alliance	\$7,000	FY13
Considine Dept of Commerce	\$65,000	FY13
Considine Dept of Commerce	\$66,150	FY14
Considine State of Wyoming	\$52,000	FY14
Godby Prevailing Wage	\$49,492	FY14
Godby WIA Impacts of Coal	\$71,250	FY14
Godby School Facilities	\$50,000	FY14
Barbier DGI/ELDI	\$100,000	FY14
Finnoff ASU	\$148,800	FY15
Godby DOE	\$126,000	FY15
Shogren Weber State	\$30,000	FY15
Considine Koch Markets	\$51,000	FY15
Considine Tolling Fees	\$35,000	FY15
Godby Prevailing Wage	\$52,835	FY15
Finnoff Great Lakes	\$95,000	FY16
Godby Prevailing Wage	\$53,000	FY16
Godby/MBA Tetra Tech	\$10,000	FY16
Shogren CBEAR John Hopkins	\$19,500	FY16
Godby Prevailing Wage	\$52,715	FY16
Godby DOE	\$126,000	FY16
Finnoff ASU	\$148,800	FY16
Total (2012-2016)	\$1,558,579	

iv. Grants applied for

Data are not available.

v. Publications/presentations by academic personnel (2010-2015)

Summary: All Program Faculty (2010-2015)

Papers: 277

Presentations: 193

David Aadland:

Papers

Refereed Journal Articles

1. Aadland, David and Sherrill Shaffer. 2015. "Time Compression and Saving Rates." *Journal of Neuroscience, Psychology and Economics*, 8(4), 217-240.
2. Aadland, David, Charles Sims and David Finnoff. 2015. "Spatial Dynamics of Optimal Management in Bioeconomic Systems." *Computational Economics*, 45(4), 545-577.
3. Aadland, David and Fred Sterbenz. 2015. "The Economics of Emergency Meetings." *Economic Inquiry*, 53(2), 1019-1037.

4. Sims, Charles, David Aadland, James Powell, Ben Crabb and David Finnoff. 2014 “Complementarity in the Provision of Ecosystem Services Reduces the Cost of Mitigating Climate-Amplified Natural Disturbance Events.” *Proceedings of the National Academy of Sciences*, 111(47), 16718-16723.
5. Aadland, David, David Finnoff and Kevin X.D. Huang. 2013. “Syphilis Cycles.” *The B.E. Journal of Economic Policy & Analysis (Topics)*, 14(1), 297-348.
6. Sims, Charles, David Aadland, David Finnoff, and James Powell. 2013. “How Ecosystem Service Provision Can Increase Forest Mortality from Insect Outbreaks.” *Land Economics*, 89(1), 154-176.
7. Aadland, David, Bistra Anatchkova, Burke Grandjean, Jason Shogren, Benjamin Simon and Patricia Taylor, 2012. “Valuing Access to U.S. Public Lands: A Pricing Experiment to Inform Federal Policy.” *Social Science Quarterly*, 93(1), 248-269.
8. Wever, Sean and David Aadland. 2012. “Herd Behavior and Underdogs in the NFL.” *Applied Economics Letters*, 19(1), 93-97.
9. Aadland, David and Van Kolpin. 2011. “Equity Basis Selection in Allocation Environments: An Empirical Analysis.” *Journal of Agricultural and Resource Economics*, 36(2), 229-241.
10. James, Alex and David Aadland. 2011. “The Curse of Natural Resources: An Empirical Investigation of U.S. Counties.” *Resource and Energy Economics*, 33(2), 440-453.
11. Gong, Min and David Aadland. 2011. “Interview Effects in an Environmental Telephone Valuation Survey.” *Environmental and Resource Economics*, 49(1), 47-64.
12. Sims, Charles, David Aadland and David Finnoff. 2010. “A Dynamic Bioeconomic Analysis of Mountain Pine Beetle Epidemics.” *Journal of Economic Dynamics and Control*, 34, 2407-2419.
13. Caplan, Arthur, David Aadland and Anthony Marcharia. 2010. “Estimating Hypothetical Bias in Economically Emergent Africa: A Generic Public Good Experiment,” *Agricultural and Resource Economics Review*, 39(2), 344-358.

Presentations

Optimal Wildlife Management in the Greater Yellowstone Ecosystem

Association of Environmental and Resource Economics Summer Meetings, 2015

Pathways 2014 Conference, October 2014

The Economics of Emergency Meetings

Eastern Economic Association Annual Meetings, 2013

Time Compression

Midwest Economic Annual Meetings, 2012

Eastern Economic Association Annual Meetings, 2011

South Dakota State University, 2011

Mountain Pine Beetle Epidemics

Association of Environmental and Resource Economics Meetings, 2012.

Western Economics Association Meetings, 2010.

Heidi J. Albers:

Papers

Refereed Journal Articles

1. Majid Alkaee Taleghan, Thomas G. Dietterich, Mark Crowley, Kim Hall, HJ Albers. 2015. "PAC Optimal MDP Planning with Application to Invasive Species Management." *Journal of Machine Learning Research*. 16:3877-3903. 2015.
2. EJZ Robinson, HJ Albers, G Ngeleza, and R Lokina. 2014. "Insiders, outsiders, and the role of local enforcement in forest management: An example from Tanzania." *Ecological Economics* 107:242-248.
3. Bertrand Hamaide, Heidi J. Albers, and Gwenlyn M. Busby. 2014. "Backup coverage models in nature reserve site selection with spatial spread risk heterogeneity." *Socio-Economic Planning Sciences*. 48(2): 158-167.
4. Elizabeth J Z Robinson, Heidi J Albers, and Stephen L. Kirama. 2014. "The role of incentives for sustainable implementation of Marine Protected Areas: An example from Tanzania." *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).
5. Elizabeth J Z Robinson, Heidi J Albers, Charles Meshack, and Razack Lokina. 2013. "Implementing REDD through Community-Based Forest Management: Lessons from Tanzania." *Natural Resources Forum* 37(3): 141-152.
6. EJZ Robinson, HJ Albers, and Gwen Busby. 2013. "The Impact of Buffer Zone Size and Management on Illegal Extraction, Park Protection, and Enforcement." *Ecological Economics*. Volume 92, Pages 96–103, August 2013.
7. HJ Albers and EJZ Robinson. 2013. "A Review of the Spatial Economics of Non-timber Forest Product Extraction: Implications for Policy." *Ecological Economics* 92:87-95.
8. Jens Abildtrup, Heidi Albers, Anne Stenger-Letheux, and Mette Termansen. 2013. "Scale, location, and spatial interactions in the analysis of natural resources: lessons for forest economics." *Ecological Economics* 92:34-36. 2013.
9. Yohan Lee, Jeremy S. Fried, Heidi J. Albers, and Robert G. Haight. 2013. "Deploying Initial Attack Resources for Wildfire Suppression: Spatial Coordination, Budget Constraints, and Capacity Constraints." *Canadian Journal of Forest Research* 43(1): 56-65.
10. M.P. Johnson, F. Fang, R. Yang, M. Tambe, H.J. Albers. 2012. "Patrolling to Maximize Pristine Forest Area." Proceedings of the AAAI Spring Symposium on Game Theory for Security, Sustainability and Health.
11. EJZ Robinson and HJ Albers. 2012. "The Relevance of Samuelson to 21st Century Tropical Forests." *Journal of Natural Resources Policy Research*. 4(3):209-213.

- Republished as chapter 52 in *Classic Papers in Natural Resource Economics Revisited*. Chennai Gopalakrishnan, editor. Routledge. New York. 2016.
12. HJ Albers, AW Ando, M Bu, and MG Wing. 2012. "Road-Network Agglomeration, Road Density, and Protected-Area Fragmentation." *Letters in Spatial and Resource Sciences*. 09 February 2012.
 13. Gwenlyn M. Busby, Heidi J. Albers, and Claire Montgomery. 2012. "Wildfire Risk Management in a Landscape with Fragmented Ownership: Spatial Interactions." *Land Economics* 8(3) 496-517.
 14. Byungdoo Lee, Yohan Lee, Myung Bo Lee, Heidi J. Albers. 2011. "Stochastic Simulation Model of Fire Occurrence in the Republic of Korea." *Journal of Korean Forestry Society*. Vol. 100. No. 1, pp. 70 – 78.
 15. HJ Albers and EJZ Robinson. 2011. "The trees and the bees: Using enforcement and income projects to protect forests and rural livelihoods through spatial joint production." *Agricultural and Resource Economics Review* 40(3):424-438.
 16. H.J. Albers, B. Avalos Sartorio, M. Batz, and A. Blackman. 2011. "Maintenance Costs, Price Uncertainty, and Abandonment in Shade-Grown Coffee Production: Coastal Oaxaca." *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.
 17. Elizabeth J.Z. Robinson, Heidi J. Albers, and Jeffrey C. Williams. 2011. "Sizing Reserves within a Landscape: The Roles of Villagers' Reaction and the Ecological-Socioeconomic Setting." *Land Economics* 87(2):233-249.
 18. Masashi Konoshima, Heidi J. Albers, Claire A. Montgomery, and Jeffrey L. Arthur. 2010. "Optimal Spatial Patterns of Fuel Management and Timber Harvest with Risk." *Canadian Journal of Forest Research*. 40:95-108. 2010.
 19. J. N. Sanchirico, H.J. Albers, C. Fischer, and C. Coleman. 2010. "Spatial Management of Invasive Species: Pathways and Policy Options." *Environmental and Resource Economics* 45(4): 517-535.
 20. Gwenlyn Busby and Heidi J. Albers. 2010. "Wildfire Risk Management on a Landscape with Public and Private Ownership: Who Pays for Protection?" *Environmental Management* 45:296-310.
 21. H.J. Albers. 2010. "Spatial Modeling of Extraction and Enforcement in Developing Country Protected Areas." *Resource and Energy Economics*. 32(2):165-179. 2010.
 22. Heidi J. Albers, Carolyn Fisher, and Jim Sanchirico. 2010. "Invasive Species in a Spatially Heterogeneous World: Spatial vs. Uniform Policies." *Resource and Energy Economics*. 32:483-499.
 23. Elizabeth J Z Robinson, Ajay Mahapatra Kumar, and Heidi J Albers. 2010. "Optimal Enforcement and Practical Issues of Resource Protection in Poor Countries." *Journal of Natural Resources Policy Research*. 2(1):25- 38. Special issue on natural resources and poverty.

Refereed Chapters in Books

24. HJ Albers and EJZ Robinson. 2015. "Spatial Economics of Forest Conservation," 2015. Chapter 11. pp. 305-329. Handbook of Natural Resource Economics. R. Halvorsen and DF Layton, editors. Cheltenham, UK: Edward Elgar Publishing.
25. H. J. Albers. 2014. "Extending Local Forest Management to Include REDD+: Section Context and Overview." chapter in Forest Tenure Reform in Asia and Africa: Local Control for Improved Livelihoods, Forest Management, and Carbon Sequestration. (Bluffstone and Robinson, Eds), Routledge.
26. Robinson, Elizabeth J Z; Albers, H Jo; Meshack, Charles; and Lokina, Razack B. 2014. "REDD and forest tenure reform in Tanzania." chapter in Forest Tenure Reform in Asia and Africa: Local Control for Improved Livelihoods, Forest Management, and Carbon Sequestration. (Bluffstone and Robinson, Eds), Routledge.
27. H.J. Albers. 2013. Spatial Management of Renewable Natural Resources. In: Shogren, J.F., (ed.) Encyclopedia of Energy, Natural Resource, and Environmental Economics, Vol. 2, pp. 119-123 Amsterdam: Elsevier.
28. HJ Albers and EJZ Robinson. 2013. Reducing Emissions from Deforestation and Forest Degradation. In: Shogren, J.F., (ed.) Encyclopedia of Energy, Natural Resource, and Environmental Economics, Vol. 2, pp. 78-85 Amsterdam: Elsevier.

Presentations

"Elephant-People Interactions: Economics Analysis of Incentives to Promote Conservation and Villagers Well-being." 114th Annual Meeting of the American Anthropological Association in Denver, Colorado. November 2015.

"MPAs in Lower Income Countries: Labor Allocation, Location Decisions, and Incomplete Enforcement." Environment for Development Initiative Annual Meeting. Shanghai, China. November 2015.

Discussant. "Top-down or Bottom up? Preferences for Management of Marine Protection Areas." By Sahan Dissanayake. Environment for Development Initiative Annual Meeting. Shanghai, China. November 2015.

"Implementing REDD: A Spatial Nash Equilibrium Model and Community-Level Payment Sharing In Tanzania." EfD-CA and CATIE Seminar. Turrialba, Costa Rica. June 2015.

"Spatial Extraction Decisions and Enforcement of Access Restrictions in Protected Areas: Modeling Results and Observations." Closing Plenary. EEPSEA Annual Conference. Vietnam. May 2015.

"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 Initiative 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.

Edward B. Barbier:

Papers

Refereed Journal Articles

1. Barbier, E.B. 2015. “Climate change impacts on rural poverty in low-elevation coastal zones.” *Estuarine, Coastal and Shelf Science* 165:A1-A13.
2. Barbier, E.B. 2015. “Overcoming Environmental Degradation and Wealth Inequality in the Asia-Pacific Region.” *The Asia Pacific Journal* 13(4):No.1. Available at http://japanfocus.org/-Edward_B_-Barbier/4397/article.html
3. Dasgupta, P., A. Duraiappah, S. Managi, E.B. Barbier, R. Collins, B. Fraumeni, H. Gundimeda, G. Liu and K.J. Mumford. 2015. “How to measure sustainable progress.” *Science* 350:748.
4. Letourneau. D.K., A.W. Ando, J. Jedlicka, A. Narwani and E.B. Barbier. 2015. “Simple-but-Sound Methods for Estimating the Value of Changes in Biodiversity for Biological Pest Control in Agriculture.” *Ecological Economics* 120:215-225.
5. Barbier, E.B. 2015. “Are There Limits to Green Growth?” *World Economics* 16(3):163-192.
6. Barbier, E.B. and A. Tesfaw. 2015. “Explaining Forest Transitions: The Role of Governance.” *Ecological Economics* 119:252–261
7. Barbier, E.B. 2015. “Hurricane Katrina’s lessons for the world.” *Nature* 524:285-287
8. Mason, C.F., E.B. Barbier and V.I. Umanskaya. 2015. “On the Strategic Use of Border Tax Adjustments as a Second-Best Climate Policy Measure.” *Environment and Development Economics* 20(4):539-560.
9. Barbier, E.B. 2015. “Policies to Promote Green Economy Innovation in East Asia and North America.” *STI Policy Review* 6(1):54-69.
10. Barbier, E.B. 2015. "Valuing the Storm Protection Service of Estuarine and Coastal Ecosystems." *Ecosystem Services* 11:32-38.

11. Kennedy, C.J. and E.B. Barbier. 2015. "Renewable resource harvesting under correlated biological and economic uncertainties: implications for optimal and second-best management." *Environmental and Resource Economics* 60:371-393.
12. Barbier, E.B. 2014. "Account for depreciation of natural capital." *Nature* 515:32-33.
13. Gwatipedza, J. and E.B. Barbier. 2014. "Environmental Regulation of a Global Pollution Externality in a Bilateral Trade Framework: The Case of Global Warming, China and the US." *Economics: The Open-Access, Open-Assessment E-Journal* 8 (2014-30).
<http://dx.doi.org/10.5018/economics-ejournal.ja.2014-30>
14. Barbier, E.B. and A.M. Chaudhry. 2014. "Urban Growth and Water." *Water Resources and Economics* 6:1-17.
15. Barbier, E.B. 2014. "A global strategy for protecting vulnerable coastal populations." *Science* 345:1250-1251.
16. Barbier, E.B. 2014. "Climate change mitigation policies and poverty." *WIREs Climate Change* 5:483-491 doi: 10.1002/wcc.281.
17. Barbier, E.B. and K.D. Lee. 2014. "Economics of the Marine Seascape." *International Review of Environmental and Resource Economics*. 7:35-65.
18. Barbier, E.B. 2014. "The challenges of environment and development economics." *Environment and Development Economics* 19:287-290.
19. Barbier, E.B. 2014. "Structural change, marginal land and economic development in Latin America and the Caribbean" *Latin American Economic Review* 23(3):1-29, DOI 10.1007/s40503-014-0003-5.
20. Barbier, E.B. and B. Enchelmeyer. 2014. "Valuing the Storm Surge Protection Service of US Gulf Coast Wetlands." *Journal of Environmental Economics and Policy*. 3(2):167-185.
21. Barbier, E.B., D. Moreno-Mateos, A.D. Rogers, J. Aronson, L. Pendleton, R. Danovaro, L. Henry, T. Morato, J. Ardron and C.L. Van Dover. 2014. "Protect the deep sea." *Nature* 505:475-477.
22. Van Dover, C.L., J. Aronson, L. Pendleton, S. Smith, S. Arnaud-Haond, D. Moreno-Mateos, E. Barbier, D. Billet, K. Bowers, R. Danovaro, A. Edwards, S. Kellert, T. Morato, E. Pollard, A. Rogers and R. Warner. 2014. "Ecological Restoration in the Deep Sea: Desiderata." *Marine Policy* 44:98-106.
23. Koch, A., A. McBratney, M. Adams, D. Field, R. Hill, J. Crawford, B. Minasny, R. Lal, L. Abbott, A. O'Donnell, D. Angers, J. Baldock, E.B. Barbier, D. Binkley, W. Parton, D.H. Wall, M. Bird, J. Bouma, C. Chenu, C. Butler Flora, K. Goulding, S. Grunwald, J. Hempel, J. Jastrow, J. Lehmann, K. Lorenz, C.L. Morgan, C.W. Rice, D. Whitehead, I. Young and M. Zimmermann. 2013. "Soil Security: Solving the Global Soil Crisis." *Global Policy* 4(4):434-441.
24. Kennedy, C.J. and E.B. Barbier. 2013. "Renewable Resource Management with Environmental Prediction: The Importance of Structural Specification." *Canadian Journal of Economics* 46(3):1110-1122.
25. Barbier, E.B. 2013. "Valuing Ecosystem Services for Coastal Wetland Protection and Restoration: Progress and Challenges." *Resources* 2:213-230.

26. Barbier, E.B. and A. Tesfaw. 2013. "Tenure Constraints and Carbon Forestry in Africa." *American Journal of Agricultural Economics* 95: 964-975.
27. Chaudhry, A.M. and E.B. Barbier. 2013. "Water and Growth in an Agricultural Economy." *Agricultural Economics* 44:175-189.
28. Barbier, E.B. 2013. "Wealth Accounting, Ecological Capital and Ecosystem Services." *Environment and Development Economics* 18:133-161.
29. Barbier, E.B., I.Y. Georgiou, B. Enchelmeyer and D.J. Reed. 2013. "The value of wetlands in protecting southeast Louisiana from hurricane storm surges." *PLOS ONE* 8(3): e58715. doi:10.1371/journal.pone.0058715
<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0058715>
30. Barbier, E.B., D. Knowler, J. Gwatipedza, S. Reichard and A. Ransom-Hodges. 2013. "Implementing Policies to Control Invasive Plant Species." *BioScience* 63:132-138.
31. Barbier, E.B. 2012. "Economie verte et développement durable: enjeux de politique économique." ("Green economy and sustainable development: policy challenges." *Reflète et perspectives de la vie économique* 2012 4:97-117.
32. Barbier, E.B. 2012. "The Green Economy Post Rio+20." *Science* 338:887-888.
33. Barbier, E.B. 2012. "Land Degradation and the Rural Poor". *World Agriculture* 3(2):23-28.
34. Barbier, E.B. and A. Tesfaw. 2012. "Can REDD+ save the forest? The role of payments and tenure." *Forests* 3:881-895.
35. Barbier, E.B. 2012. "Corruption, Poverty and Tropical Land Use." *Journal of Sustainable Forestry* 31 (4-5):319-339.
36. Barbier, E.B. 2012. "A Spatial Model of Coastal Ecosystem Services." *Ecological Economics* 78:70-79.
37. Barbier, E.B. 2012. "Scarcity, Frontiers and Development." *The Geographical Journal* 178:110-122.
38. Barbier, E.B. 2012. "Can Global Payments for Ecosystem Services Work?" *World Economics* 13:157-172.
39. Barbier, E. B. 2012. "Tax 'societal ills' to save the planet." *Nature* 483:30.
40. Aswani, S, Christie, P., Muthiga, N., Mahon, R., Primavera, J., Cramer, L., Barbier, E.B., Granek, E. Kennedy, C., Wolanski, E. and Hacker, S. 2012. "The Way Forward with Ecosystem-Based Management in Tropical Contexts: Reconciling with Existing Management Systems." *Marine Policy* 36:1-10.
41. Barbier, E.B. 2012. "Progress and Challenges in Valuing Coastal and Marine Ecosystem Services." *Review of Environmental Economics & Policy*. 6(1):1-19.
42. Barbier, E.B. 2011. "Wetlands as natural assets." *Hydrological Sciences Journal* 56(8):1360-1373.
43. Barbier, E.B. 2011. "Coastal Wetland Restoration and the *Deepwater Horizon* Oil Spill." *Vanderbilt Law Review* 64:1821-1849.
44. Bhaduri, A. and E.B. Barbier. 2011. "Water allocation between states in inter-basin water transfer in India." *International Journal of River Basin Management* 9(2):117-127.

45. Bhaduri, A., Manna, U., Barbier, E.B. Liebe, J. 2011. "Climate Change and Cooperation in Transboundary Water Sharing: An Application of Stochastic Stackelberg Differential Games in Volta River Basin" *Natural Resource Modeling* 24(4):409-444.
46. Barbier, E.B. 2011. "Pricing Nature". *Annual Review of Resource Economics* 3:337-353.
47. Barbier, E.B., Gwatipedza, J., Knowler, D. and Reichard, S. 2011. "The North American Horticultural Industry and the Risk of Plant Invasion." *Agricultural Economics* 45:743-759.
48. Barbier, E.B. 2011. "The Policy Challenges for Green Economy and Sustainable Economic Development" *Natural Resources Forum* 35:233-245.
49. Gedan, K.B., Kirwan, M.L., Wolanski, E., Barbier, E.B., and Silliman, B.R. 2011. "The present and future role of coastal wetland vegetation in protecting shorelines: answering recent challenges to the paradigm." *Climatic Change* 106:7-29.
50. Barbier, E.B. 2011. "Transaction costs and the transition to environmentally sustainable development." *Environmental Innovation and Societal Transitions* 1:58-69.
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Books

63. Barbier, E.B. 2015. *Nature and Wealth: Overcoming Environmental Scarcity and Inequality*. Palgrave Macmillan, London, 262 pp.
64. Barbier, E.B. and A. Markandya. 2012. *A New Blueprint for a Green Economy*. Routledge/Taylor & Francis, London, 200 pp.
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66. Barbier, E.B. 2011. *Scarcity and Frontiers: How Economies Have Developed Through Natural Resource Exploitation*. Cambridge University Press, Cambridge and New York, 748 pp.
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68. Barbier, E.B. and J.C. Burgess. 2015. "Sustainable Development: An Economic Perspective." *International Encyclopedia of the Social & Behavioral Sciences*, (Editor-in-Chief James D. Wright) Elsevier, Amsterdam, pp. 823–827.
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75. Barbier, E.B. 2014. "Challenges to Ecosystem Service Valuation and Wealth Accounting". Chapter 7 in United Nations University (UNU)-International Human Dimensions Programme (IHDP) on Global Environmental Change and United Nations Environment Programme (UNEP). 2014. *Inclusive Wealth Report 2014. Measuring progress toward sustainability*. Cambridge University Press, Cambridge, pp. 159-177.

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77. Barbier, E.B. 2014. "Land use and sustainable economic development: Developing World." Chapter 6 in J.M. Duke and J. Wu (eds.). *The Oxford Handbook of Land Economics*. Oxford University Press, Oxford and New York, pp. 139-159.
78. Barbier, E.B. 2014. "The Protective Value of Estuarine and Coastal Ecosystem Services." Chapter 2 in P. Nunes, P. Kumar and T. Dedeurwaerdere (eds.). *Handbook on the Economics of Ecosystem Services and Biodiversity*. Edward Elgar, Cheltenham, UK, pp. 27-39.
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80. Barbier, E.B., H.M. Leslie and F. Micheli. 2014. "Services of Marine Ecosystems: A Quantitative Perspective." Chapter 18 in M.D. Bertness, J.F. Bruno, B.R. Silliman and J.J. Stachowicz (eds.). *Marine Community Ecology and Conservation*. Sinauer Associates, Inc. Sunderland, MA, pp. 403-425.
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85. Barbier, E.B., Knowler, D., Gwatipedza, J. and Reichard, S. 2013. "An Economic Analysis of the Invasive Plant Problem Associated with the Horticulture Industry in North America". Chapter 15 in J. Shibu, H.P. Singh and D.R. Batish (eds.). *Invasive Plant Ecology* CRC Press, Boca Rotan, FL, pp. 259-276.
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87. Barbier, E.B. 2012. "Ecosystem Services and Wealth Accounting". Chapter 8 in United Nations University (UNU)-International Human Dimensions Programme (IHDP) on Global Environmental Change and United Nations Environment Programme (UNEP).

2012. Inclusive Wealth Report 2012. Measuring progress toward sustainability. Cambridge University Press, Cambridge, pp. 165-194.

88. Barbier, E.B. 2010. "A Synthesis of Human Dimensions of Soil and Water Conservation: A Global Perspective" Chapter 21 in T.L. Napier (ed.). Human Dimensions of Soil and Water Conservation: A Global Perspective. Nova Science Publishers.
89. Barbier, E.B. 2010. "Sustainable Resource-Based Development in Asia and the Pacific: Overcoming the Problem of "Dualism within Dualism"". Chapter 3 in R.K. Chung and E. Quah (eds.), Pursuing Green Growth in Asia and the Pacific, Cengage Learning Asia, Singapore, pp. 67-86.

Presentations

Barbier, E.B. "Nature and Wealth: Overcoming Environmental Scarcity and Inequality." Guest Lecture, Discovery Themes, Ohio State University, Columbus, Ohio, USA, November 6, 2015.

Barbier, E.B. "The role of geographic poverty-environment traps" Policy Session: Climate Change and Poverty, The 21st Annual Conference of the European Association of Environmental and Resource Economists, University of Helsinki, Helsinki, Finland, 24-27 June 2015.

Barbier, E.B. "Is the income elasticity of the willingness to pay for pollution control constant?" Paper presented at the 21st Annual Conference of the European Association of Environmental and Resource Economists, University of Helsinki, Helsinki, Finland, 24-27 June 2015.

Barbier, E.B. "The Protective Value of Estuarine and Coastal Ecosystem Services in a Wealth Accounting Framework." Nova School of Business and Economics, University of Lisbon, Lisbon, Portugal, April 24, 2015.

Barbier, E.B. "Valuing the Storm Protection Service of Estuarine and Coastal Wetlands." 13th Annual Patrick Lecture Series, Louisiana State University, Baton Rouge, LA, April 14, 2015.

Barbier, E.B. "Living on the Edge: Protecting and Restoring Coastal Habitats." 13th Annual Patrick Lecture Series, Louisiana State University, Baton Rouge, LA, April 13, 2015.

Barbier, E.B. "Quantifying and Valuing Ecosystem Services for Coastal Management." Invited Address, Royal Swedish Academy of Sciences 275th Anniversary Symposium on Maritime Research, University of Gothenburg, Sweden. February 17-18, 2015.

Barbier, E.B. "Climate Change Impacts on Rural Poverty in Low-Elevation Coastal Zones." Conference on Climate Change and Poverty. The World Bank, Washington, D.C., February 9-10, 2015.

Barbier, E.B. "Knowledge Generation for Green Growth." Keynote Address. 2015 Green Growth Knowledge Platform Knowledge Partners Workshop. Ca' Foscari University of Venice, Italy. January 28, 2015

Barbier, E.B. "Is green growth relevant for poor economies?" Keynote Address. 3rd International Conference on Environment and Natural Resource Management in Developing and Transition Economies. CERDI, University of Auvergne, Clermont-Ferrand, France. October 8-10, 2014.

Barbier, E.B. "Valuing ecosystem services for coastal protection and restoration: progress and challenges." Keynote Address. Gulf Research Program of the National Academies. Opportunity Analysis Workshop on Environmental Monitoring. New Orleans, LA. September 3-4, 2014.

Barbier, E.B. "Quantifying and valuing coastal ecosystem services to assist policy decisions." Symposium on Operationalizing the Concept of Ecosystem Services: Interdisciplinary Research and Synthesis. 99th Ecological Society of America Meeting, Sacramento, CA. August 10-15, 2014.

Barbier, E.B. "The Protective Value of Estuarine and Coastal Ecosystem Services in a Wealth Accounting Framework." Paper presented at the Thematic Session "Valuation Research on Ecosystem Services for Improved National Accounting." World Congress of Environmental and Resource Economists (WCERE), Istanbul, Turkey, June 28-July 2, 2014.

Barbier, E.B. "Explaining Forest Transitions: The Role of Governance." Paper presented at the Thematic Session "The Economic Analysis of the Forest Transition." World Congress of Environmental and Resource Economists (WCERE), Istanbul, Turkey, June 28-July 2, 2014.

Barbier, E.B. "Ecosystem Services and Tools for Wetland Management." Keynote Address, 1st International Symposium on Natural Resource Management. "Understanding Wetlands: A Key Issue in the Transition to a Sustainable Economy." Palma de Mallorca, Spain, June 19-21, 2014.

Barbier, E.B. "Building the Green Economy." Keynote Address, Big Ideas for Sustainable Prosperity: Policy Innovation for Greening Growth. University of Ottawa, Ottawa, Canada, April 28-29, 2014.

Barbier, E.B. "Ecosystem Services and the Poor on Marginal Lands: Tradeoffs and Synergies." Keynote Address, ESPA Annual Science Conference 2013, London, UK, November 20-21, 2013.

Barbier, E.B. "Scarcity and Frontiers: How Economics Have Developed Through Natural Resource Depletion." Faculty Senate Speaker Series, Fall 2013 Award Lecture, University of Wyoming, Casper October 29 and Laramie November 11, 2013.

Barbier, E.B. "Valuing Ecosystem Services for Coastal Wetland Protection and Restoration: Progress and Challenges." Invited Seminar, Marine Science Center, Northeastern University, Nahant, MA, October 24, 2013.

Barbier, E.B. "Structural Change, Marginal Land and Economic Development in Latin America and the Caribbean" Keynote Address, Workshop on Environmental and Development Economics in Latin America, CIDE, Mexico City, Mexico, October 4-5, 2013.

Barbier, E.B. "Biodiversity, Environmental Economics and Economic Policy" Plenary Address, Ecology and Economy for a Sustainable Society, 7th Trondheim Conference on Biodiversity, Trondheim, Norway, 27-31 May 2013.

Barbier, E.B. "Is Green Growth Relevant for Poor Economies?" Plenary Address, Seminar on "Green Growth: Possible and Desirable?" The World Bank, Washington, D.C., 16 May 2013.

Barbier, E.B. "Land Degradation and Rural Poverty: Economic and Social Aspects." Plenary Address, 2nd Scientific Conference, UN Convention to Combat Desertification (UNCCD), Bonn, Germany, 9-12 April 2013.

Barbier, E.B. "Progress and Challenges in Valuing Ecosystem Services for Coastal Wetland Protection and Restoration." Plenary Address, Challenges of Natural Resource Economics and Policy, 4th National Forum on Socioeconomic Research in Coastal Systems, New Orleans, LA, 24-26 March 2013.

Barbier, E.B. "A Spatial Model of Coastal Ecosystem Services." Seminar, National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, January 11, 2013.

Barbier, E.B. "Structural Change, Dualism and Economic Development", Keynote Speech, Environment for Development Sixth Annual Meeting, Arenal, Costa Rica, October 25-29, 2012.

Barbier, E.B. "Land Degradation and the Rural Poor". Keynote Address, 2012 Research Symposium on Soil Security, University of Sydney, Sydney, Australia, July 16-17, 2012.

Barbier, E.B. "The Dualistic Frontier Economy in Developing Countries." Paper presented at the 19th Annual Conference of the European Association of Environmental and Resource Economists, Charles University and the University of Economics, Prague, Czech Republic, June 27-30, 2012.

Barbier, E.B. "The Dualistic Frontier Economy in Developing Countries." Paper presented at the Oxford Centre for the Analysis of Resource Rich Economies (OxCarre), University of Oxford, June 20, 2012.

Barbier, E.B. "Environmental Sustainability and Poverty Eradication in Developing Countries." Plenary Presentation, the Dorothy R. and Norman E. McCulloch Center for Global Initiatives, Global Challenges Conference: Development in Crisis, Mount Holyoke College, MA, March 2-3, 2012.

Barbier, E.B. "Natural Capital, Ecological Scarcity and Rural Poverty." Paper presented at the inaugural conference of the World Bank's Green Growth Knowledge Platform (GGKP), "Green Growth: Addressing the Knowledge Gaps," Mexico City, Mexico, January 12-13, 2012.

Barbier, E.B. "Overcoming Tenurial Constraints to Carbon Forestry Projects in Africa." Paper presented at the Association of Environmental and Resource Economists Inaugural Summer Conference, Seattle, WA, June 9-10, 2011.

Barbier, E.B. "Coastal Wetland Restoration and the *Deepwater Horizon* Oil Spill." Paper presented at Rigs, Risk, and Responsibility: Conference on the BP Oil Spill. Vanderbilt University Law School, Nashville, TN, April 1, 2011.

Barbier, E.B. "Linking Green Stimulus, Energy Efficiency and Technological Innovation: The Need of Complementary Policies." Paper prepared for the European Commission DG 1 (External Relations) Project, "Transatlantic Opportunities for Meeting Global Challenges in Energy

Efficiency and Low Carbon Technologies". Presented at the Transatlantic Energy Efficiency Workshop, UC Berkeley School of Law, Berkeley, CA, February 11-12, 2011.

Barbier, E.B. "Ecosystems as Natural Assets." Keynote Address, 11th Annual meeting of the Society for Environmental Economics and Policy Studies, Nagoya, Japan, September 12, 2010.

Barbier, E.B. "A Spatial Model of Ecosystem Services." Paper presented at the 4th World Congress of Environmental and Resource Economists, Université du Québec à Montréal (UQAM), Montreal, Canada, June 28-July 2, 2010.

Timothy Considine:

Papers

Refereed Journal Articles

1. Considine, T.J. and E.J. Manderson (2015) "The cost of solar-centric renewable portfolio standards and reducing coal power generation using Arizona as a case study," *Energy Economics*, 49, 402-419.
2. O. Sapci and T.J. Considine (2014) "The link between environmental attitudes and energy consumption," *Journal of Behavioral and Experimental Economics*, 523, (2014), 29-34.
3. Considine, T.J. and E.J. Manderson (2014) "The role of energy conservation and natural gas prices in the costs of achieving California's renewable energy goals," *Energy Economics*, 44, 291-301.
4. R. Torielli, T.J. Considine, F. Canon, J. R. Voigt (2014) "The environmental performance and cost of innovative technologies for ductile iron foundry production," *International Journal of Metal Casting*, 8, 1, 37-48.
5. Considine, T.J. (2013) "Powder river basin coal: powering America," *Natural Resources*, 4, 8, 514-533.
6. Considine, T.J. and E.J. Manderson (2013) "Energy development in California: a comparison of renewable and conventional paths," *Energies*, 6, 3, 1266-1297.
7. Considine, T.J. and R. Watson, N. Considine, and J. Martin (2013) "Environmental regulation and compliance in Marcellus shale gas drilling," *Environmental Geosciences*, 20, 1, 1-16.
8. Considine, T.J. and D. Larson (2012) "Substitution and technological change under carbon cap and trade," *Energies*, 5,10, 4165-4185.

Refereed Chapters in Books

9. Considine, T.J. and F. Clemente (2010) "Economic value of world coal production," in F. Clemente, ed., *Hard Facts: the global value of coal* World Coal Institute, September.

Presentations

"The effectiveness of home energy audits: A case study of Jackson, Wyoming," School of Energy Resources Seminar Series, October 23, 2015.

“The costs of solar-centric renewable energy portfolio standards,” King Fahd University, Dhahran, Saudi Arabia, February 2014.

“The rise of tight oil: Implications for world oil markets,” Saudi Aramco, Dhahran, Saudi Arabia, February 2014.

“The power of primary fuels in North America,” King Fahd University, Dhahran, Saudi Arabia, February 2014.

Economic perspective on Wyoming oil & natural gas liquids development,” Energy Law Conference, University of Wyoming, November 2013.

“The power of North American oil, natural gas, coal, and uranium,” The Energy Council, Jackson, Wyoming, September 2013.

“The shale revolution: blessing or curse?” University of Wyoming, Saturday University, Gillette, Wyoming, January 2013.

“Environmental and economic impacts of shale energy development,” Total University, Global Energy Challenge: The new promises of technological innovation, Paris, France, October 2012.

“Marcellus and Utica Shale Plays: Status and prospects,” Mark West Corporate Board, Saratoga, Wyoming, July 2012.

“Consumer behavior and energy use: A case study of Jackson Wyoming,” City of Jackson and Jackson Sustainability Initiative, Wyoming, April 2012.

“Balancing economic benefits with environmental impacts of shale gas,” Ohio State University, webinar, February 2012.

“Economic benefits and environmental impacts of shale energy,” Society of Petroleum Engineers, Gillette, Wyoming, January 2012.

“Using fossil fuels to create jobs and restore fiscal solvency,” Global Energy Summit, Colorado Springs, Colorado, April 2011.

“Economic benefits and environmental impacts of shale energy,” Northwest Mining Association, Reno, Nevada, December 2011.

“Powering California: Choices and trade-offs,” University of Southern California, Los Angeles, CA, November 2011.

“Balancing economic benefits with environmental impacts of shale energy development,” Quebec Oil and Gas Association, Montreal, Quebec, October 2011.

“Balancing economic benefits with environmental impacts of shale energy development,” University of Calgary, Calgary, Alberta, September 2011.

“Economic impacts of the Marcellus Shale,” Ohio Chamber of Commerce, Salt Creek, OH, September 2011.

“Economic opportunities of shale energy development,” Manhattan Institute, New York, NY, June 2011.

“PRB coal powering America,” Rocky Mountain Coal Mining Institute, Sheridan, WY, September 2010.

“Natural gas development and employment.” Natural Gas Caucus, U.S. Senate, Washington, DC, September 2010.

“Coal development and leasing policy issues,” Coal Caucus Briefing, U.S. House of Representatives, Washington, DC., July 2010.

“Natural gas development in New York State,” Panel Discussant, Manhattan Institute, New York, NY, February 2010.

David C. Finnoff

Papers

Refereed Journal Articles

1. Horan, Richard, Eli Fenichel, **David Finnoff** and Chris Wolfe. 2015. “Managing Epidemiological Risks through Trade” *Journal of Economic Dynamics and Control*, **53**: 192–207.
2. Berry, Kevin, **David Finnoff**, Richard Horan and Jason F. Shogren. 2015. “Managing the Endogenous Risk of Disease Outbreaks with a Non-Constant Background Hazard Rate,” *Journal of Economic Dynamics and Control*, 51: 166-179.
3. Pike, Jamison, Tiffany Bogich, Sarah Elwood, **David C. Finnoff**, and Peter Daszak. 2014. “Economic optimization of a global strategy to reduce the pandemic threat,” *Proceedings of the National Academy of Sciences*, 111(52): 18519–18523, doi: 10.1073/pnas.1412661112.
4. Sims, Charles, David Aadland, James Powell, **David C. Finnoff**, and Ben Crabb. 2014. “Complementarity in the provision of ecosystem services reduces the cost of mitigating amplified natural disturbance events,” *Proceedings of the National Academy of Sciences*, 111(47): 16718–16723.
5. Perrings, Charles, C.Castillo-Chavez, G.Chowell, P.Daszak, E.P.Fenichel, **D.Finnoff**, R.D. Horan, A. M.Kilpatrick, A.P.Kinzig, N.V.Kuminoff, S.Levin, B.Morin, K.F. Smith, and M.Springborn. 2014. “Merging Economics And Epidemiology To Improve The Prediction And Management Of Infectious Disease,” *EcoHealth*, DOI: 10.1007/s10393-014-0963-6.
6. Aadland, D., C. Sims and **D. Finnoff**. 2014. “Spatial Dynamics of Optimal Management in a Predator-Prey System: An Application to Mountain Pine Beetle Epidemics,” *Computational Economics*, Published online, April 2014, DOI 10.1007/s10614-014-9442-y.
7. Hochard, J. and **D. Finnoff**. 2014. “Gray wolf population projection with intraspecific competition,” *Natural Resource Modeling*, 27(3): 360-375.

8. Oliver, M., C. Mason and **D. Finnoff**. 2014. “Pipeline Congestion and Natural Gas Basis Differentials: Theory and Evidence,” *Journal of Regulatory Economics*, 46:261–291, DOI 10.1007/s11149-014-9256-9.
9. Oliver, M., C. Mason, and **D. Finnoff**. 2014. Natural Gas Expansion and the Cost Of Congestion. *IAEE Energy Forum*, page 31-32, First Quarter 2014.
10. Warziniack, T, **D. Finnoff**, J. F. Shogren, 2013. Public economics of hitchhiking species and tourism-based risk to ecosystem services. *Resource and Energy Economics*, 35: 277–294.
11. Sims, C., **D. Finnoff**, 2013. When is a “wait and see” approach to invasive species justified? *Resource and Energy Economics*, 35: 235–255
12. Aadland, D., **D. Finnoff** and Kevin Huang, 2013. Syphilis Cycles. *The B.E. Journal of Economic Analysis & Policy*. 14(1): 297–348, ISSN (Online) 1935-1682, ISSN (Print) 2194-6108, DOI: 10.1515/bejeap-2012-0060.
13. Sims, C., D. Aadland, **D. Finnoff**, 2013. Mountain-pine beetle outbreaks and shifting social preferences for ecosystem services. *Land Economics*, 89: 154-176.
14. McDermott, S., **D. Finnoff** and J. Shogren, 2013. The Welfare Impacts of an Invasive Species: Endogenous vs. Exogenous Price Models. *Ecological Economics*, 85: 43-49.
15. Sims, C., and **D. Finnoff**, 2012. The role of spatial scale in the timing of uncertain environmental policy. *Journal of Economic Dynamics and Control*, 36: 369-382.
16. Rothlisberger, J.D., **D. Finnoff**, D. M. Lodge and R. M. Cooke, 2012. Ship-borne nonindigenous species diminish Great Lakes ecosystem services. *Ecosystems*, 15: 462-476.
17. Warziniack, T, **D. Finnoff**, J. Bossenbroek, J. F. Shogren, and D. Lodge, 2011. Stepping stones for biological invasion: A bioeconomic model of transferable risk. *Environment and Resource Economics*, 50(4): 605-627.
18. **Finnoff, D.**, M. Gong and J. Tschirhart, 2011. Perspectives on Ecosystem Based Management for Delivering Ecosystem Services with an Example from an Eighteen-Species Marine Model. *International Review of Environmental and Resource Economics*, 6: 79–118.
19. Strong, A., J. Tschirhart, and **Finnoff, D.**, 2011. Is Economic Growth for the Birds? *Ecological Economics*, 70(7): 1375–1380.
20. **Finnoff, D.** and J. Tschirhart, 2011. Inserting Ecological Detail into Economic Analysis: Agricultural Nutrient Loading of an Estuary Fishery. *Sustainability* 2011, 3(10), 1688-1722.
21. **Finnoff D.**, M. A. Lewis and A. B. Potapov, 2010. Control and the Optimal Management of a Spreading Invader. *Resource and Energy Economics*, 32: 534-550.
22. Deacon, R.T, **D. Finnoff**, and J. Tschirhart. 2010. Regulated Incomplete Ownership, Capacity Restrictions and Rent Dissipation. *Resource and Energy Economics*, 33:366-380.
23. Sims, C., D. Aadland, **D. Finnoff**, 2010. A Dynamic Bioeconomic Analysis of Mountain Pine Beetle Epidemics. *Journal of Economic Dynamics and Control*, vol. 34, no. 12, pp. 2407-19.

24. **Finnoff, D.**, C.R. McIntosh, J.F. Shogren, C. Sims, and T. Warziniack, 2010. Invasive Species & Endogenous Risk. *Annual Review of Resource Economics*, vol. 2, no. 1, pp. 77-100.
25. McIntosh, C.R., J.F. Shogren and **D.C. Finnoff**. 2010. Invasive Species and Delaying the Inevitable: Valuation Evidence from a National Survey, *Ecological Economics*, vol. 69, no. 3, pp. 632-40.
26. Rothlisberger J. D., D. M. Lodge, R. M. Cooke and **D. Finnoff**, 2010. “Future of the binational Laurentian Great Lakes fisheries: environmentally and culturally driven declines,” *Frontiers in Ecology and the Environment*, 8:5, 239-244.

Refereed Chapters in Books

27. Bossenbroek, J., A. Croskey, D. Finnoff, L. Iverson, S. McDermott, A. Prasad, C. Sims, D. Sydnor. Evaluating the Economic Costs and Benefits of Slowing the Spread of Emerald Ash Borer in Ohio and Michigan, in Keller, R., Cadotte, M., Sandiford, G. (Eds.), *Invasive Species in a Globalized World*. University of Chicago Press 2014.
28. Finnoff, D, R.D. Horan, S.M. McDermott, C. Sims, J.F. Shogren, 2012. Economic Control of Invasive Species, in press, *Encyclopedia of Biodiversity - 2nd Edition*, edited by Simon Levin.
29. Alexander, A. D. Finnoff and J. F. Shogren. 2011. Global Economics and Infectious Disease Emergence, in press, *Conservation Medicine: Applied Cases Of Ecological Health* edited by A. A. Aguirre, P. Dasak and R.S. Ostfeld, Oxford University Press.

Presentations

“Managing Wildlife Faced with Pathogen Risks Involving Multi-Stable Outcomes,” - 17th BIOECON Conference on Resource Economics, Biodiversity Conservation and Development, Cambridge University, England, September 2015.

“Using Behavioral Ecology for Management of Ecosystem Services,” Association of Environmental and Resource Economists (AERE) annual meeting, San Diego, CA, June 2015.

“Opposing irreversibilities in environmental policy: Avoiding the point of no return or delaying the inevitable,” Association of Environmental and Resource Economists (AERE) annual meeting, San Diego, CA, June 2015.

“Bioeconomics of Invasive Species: Integrating ecology, economics and management,” International Conference on Global Plant Health Risks and Consequences: Linking Science, Economics and Policy (OECD), York, England, October 2014.

Scientific Committee Meeting for *The ecoHEALTH project*, DIVERSITAS Future Earth Meeting, Sevilla, Spain, September 2014.

“Opposing irreversibilities in environmental policy: Avoiding the point of no return or delaying the inevitable” American Fisheries Society Annual Meeting, Quebec, Canada August 2014.

“Managing the Endogenous Risk of Disease Outbreaks with a Non-Constant Background Hazard Rate” MASpread Annual Workshop, Princeton, New Jersey, April 2014.

“Framework for a Coupled Ecological-Economic Model of the Chesapeake Bay Watershed” (with John Tschirhart) Chesapeake Bay Sustainable Fisheries Goal Implementation Team, Solomons, Maryland, December 2013.

“Framework for a Coupled Ecological-Economic Model of the Chesapeake Bay Watershed” (with John Tschirhart) invited talk at NOAA Headquarters, Silver Spring, Maryland, December 2013.

“Managing the Endogenous Risk of Disease Outbreaks with a Non-Constant Background Hazard Rate” Association of Environmental and Resource Economists (AERE) annual meeting, Banff Canada, June 2013.

Discussant, BESTNet Workshop - Modeling Species Dispersal & Ecosystem Services, Princeton, April 2013.

“The Dynamics of Economic Epidemiology Equilibria” Association of Environmental and Resource Economists (AERE) annual meeting, Asheville NC, June 2012.

“Inserting a SEJ into a CGE” Second meeting of Ecological Forecasting Group from the University of Notre Dame, Chicago, October 2011.

“Evaluating the risk of EIDs emerging from global trade” EcoHealth Alliance, New York, March 2011.

“Modeling economic impacts of climate change and ocean acidification to fisheries” USEPA Climate Damages Workshop, January 2011.

“Great Lakes Ecosystem Services” seminar at University of Notre Dame, October 2010.

“The Dynamics of Optimally Delaying and Controlling a Spreading Invader” invited seminar, Colorado State University, September 2010.

“Spatial scale and the implementation and timing of uncertain environmental policy” World Congress of Environmental and Resource Economists, Montreal, June 2010.

“Evaluating the risk of EIDs emerging from global trade” invited seminar, Brown University, May 2010.

Benjamin Gilbert:

Papers

Refereed Journal Articles

1. Gilbert, B. & Graff Zivin, J. (2014) Dynamic salience with intermittent billing: evidence from smart electricity meters. *Journal of Economic Behavior & Organization* 107 (A): 176-190.
2. Gilbert, B. & Yeo, B.H. (2014) Technological change and managerial ability: evidence from a Malaysian artisanal fishery. *Land Economics* 90 (2): 352-371.
3. Fissel, B., Gilbert, B., & LaRiviere, J. (2013). Technology adoption and diffusion with uncertainty in a commons. *Economics Letters* 120 (2): 297-301.

Presentations

Oct. 2015: Colorado State University invited seminar

- “*Overlapping Environmental and Financial Regulations: The Role of Corporate Governance*”
Resources for the Future, coauthor Jacob LaRiviere invited seminar
“*Incentives and Additionality in Energy Efficiency Subsidies*”
- Sept. 2015: Energy Policy Research Conference in Denver, CO
“*Social Image in the Residential Solar Market: Evidence from a Discrete Choice Experiment*”
“*Overlapping Environmental and Financial Regulations: The Role of Corporate Governance*”
- July 2015: InterSolar North America (industry conference), invited panelist
“*Social Image in the Solar Home Market*”
- June 2015: UC San Diego Environmental Economics Group seminar
“*Social Image in the Residential Solar Market: Evidence from a Discrete Choice Experiment*”
AERE Summer Conference in San Diego, CA
“*Incentives and Additionality in Energy Efficiency Subsidies*”
- Jan. 2015: ASSA Annual Meeting, Boston, MA
“*Overlapping Environmental and Financial Regulations: the Role of Corporate Governance*”
- Sept 2014: CU Boulder Environmental and Resource Economics Workshop
“*Pigouvian Taxes with Time-Varying Saliency*”
- May 2014: Front Range Energy Camp, CU Boulder
“*Corporate Governance and Emissions*”
- Jan. 2014: ASSA Annual Meeting, Philadelphia, PA
“*Pigouvian Taxes with Intermittent Billing and Habits*”
- July 2013: University of Tennessee Workshop on Causal Identification in Environmental and Energy Economics
“*Dynamic Saliency and Intermittent Price Signals*”
- June 2013: WEAI Annual Conference in Seattle, WA
“*Organizational Apology and Compensation Demanded for Public Goods Damage*”
“*Evidence of Habit Formation in Residential Electricity Consumption*”
- May 2013: North American Association of Fisheries Economists Forum, St. Pete Beach, FL
“*Organizational Apology and Compensation Demanded for Public Goods Damage*”
“*Perceived Occupational Mobility Among Artisanal Fishers*”
“*Conspicuous Consumption of Charismatic Species*”
Front Range Energy Camp, CU Boulder
“*The Four Horsemen of Household Electricity Demand: Insalient Prices, Habit Formation, Durable Goods, and Pollution*”
- Nov. 2012: Colorado School of Mines, invited seminar
“*Dynamic Saliency and Intermittent Price Signals*”
- June 2012: AERE Summer Conference in Asheville, NC and WEAI Annual Conference in San Francisco, CA
“*Consumer Behavior with Intermittent Cost Signals: Evidence from Smart Meters*”
- Sept 2010: CU Boulder Environmental and Resource Economics Workshop
“*What can existing smart meter data reveal about energy efficiency opportunities?*”
- July 2010: Biennial Conference, International Institute for Fisheries Economics and Trade (IIFET), Montpellier, France, July 2010
“*Economic Efficiency and Sector Allocations in the New England Groundfish Fishery*”
“*Measuring Technological Change in Artisanal Fisheries: Evidence from Malaysia*”

Robert W. Godby:

Papers

Refereed Journal Articles

1. "Potential Impacts on Wyoming Coal Production of EPA GHG Proposals," with Roger Coupal, David Taylor and Tim Considine, Electricity Journal, Vol. 28:5, June 2015, pp. 68-79.
2. "Estimating the Value of Additional Wind and Transmission Capacity in the Rocky Mountain West," with Torell, Greg, and Coupal, Roger, Resource and Energy Economics, Vol. 36, No. 1 January 2014, pp. 22-48.

Books

3. The European Financial Crisis: Debt, Growth and Economic Policy, Business Expert Press, New York NY, ISBN-13: 978-1-60649-706-7, first published December 15, 2013.

Presentations

"Impact of Potential Greenhouse Gas Regulations on Wyoming," Invited presentation at Building a Better Future for Coal Workers and Their Communities workshop, Brookings Institution, Washington DC, November 13th, 2015.

Invited participant: "Electric Power in the US and Canada: Opportunities for Transboundary Regulatory and Planning Harmonization," sponsored by the DOE's Office of Energy Policy and Systems Analysis, organized by Resources for the Future and hosted by the Center for Advanced Energy Studies' Energy Policy Institute at Boise State University, October 20, 2015, Boise ID.

"A Comparison of Clean Power Plan forecasts for Wyoming Coal: What impact do modeling choices make? Estimated Impacts on Wyoming Coal Production, Employment and State Revenues of the Clean Power Plan using EIA Simulation Data," (with Coupal, R.) Presented at the Energy Policy Research Conference, Denver CO, Sept 10-11, 2015.

Session chair: CEBERG McEEL2 (Experiments presented in honour of Andy Muller), Canadian Economics Association Annual Meeting, Ryerson University, Toronto Ontario, May 30, 2015.

The Intermountain Energy Corridor – Resources, Opportunities and Challenges, presented at the Intermountain Energy Summit, August 19-20, 2014, Idaho Falls, ID

"Estimating the Value of Additional Wind and Transmission Capacity in the Rocky Mountain West," (with Coupal, R., Torell, G.) presented by R. Godby at 20th Annual Conference of the European Association of Environmental and Resource Economists (EAERE), Toulouse, France, on June 26-29, 2013.

"Estimating the Value of Additional Wind and Transmission Capacity in the Rocky Mountain West," (with Coupal, R., Torell, G) presented by R. Godby at Power Generation and the Environment: Choices and Economic Tradeoffs, Teton Village, WY, October 2, 2012.

"Contemplating the Crisis: Causes, Concerns and Possible Solutions," presented to Economics faculty, Pforzheim University, Pforzheim Germany, July 9, 2012.

"Economic Impacts of Wind Energy in a Transmission Grid With Mixed Fuel Sources," (with Coupal, R., Torell, G. and Green, J.) presented by Torell, Godby, Coupal, Pacific Northwest Regional Economics conference, Seattle, WA May 18th, 2012.

Invited speaker: “National Debt Crises Around the Globe – 1875-2010: Lessons Learned, Lessons Ignored.” Presented at the 2010 Wyoming Business Alliance/Wyoming Heritage Foundation Wyoming Forum, National Debt Forum - The Consequences of No Action, Cheyenne, Wyoming December 7th, 2010

Invited Macroeconomics Advisor: National Town Meeting: Our Budget, Our Economy, organized by Americaspeaks.org, June 26th, 2010, expert advisor for Casper WY site as part of a 13-site National Meeting.

Invited Workshop presentation: Center for Interuniversity Research and Analysis of Organizations (CIRANO), Market Power, Instrument Design and Emission Trading: Lessons learned from the Lab, Montreal PQ, May 26th, 2010.

Thorsten Janus

Papers

Refereed Journal Articles

1. Janus, T. and D. Riera-Crichton 2015, “Economic Shocks, Civil War and Ethnicity,” *Journal of Development Economics* 115, 32-44
2. Janus, T. and D. Riera-Crichton 2015, “The Output Effect of Gross Foreign Investment Reversals,” *Oxford Economic Papers* 67, 2, 356-79
3. Janus, T. and D. Riera-Crichton 2015, “Real Exchange Rate Volatility, Economic Growth and the Euro,” *Journal of Economic Integration* 30, 1, 148-171
4. Janus, T., Y. Jinjarak and M. Uruyos 2013, “Sovereign Default Risk, Over-confident Investors and Diverse Beliefs: Theory and Evidence from a New Dataset on Outstanding Credit Default Swaps,” *Journal of Financial Stability* 9, 3, 330-36
5. Janus, T. and D. Riera-Crichton 2013, “International gross capital flows: New Uses of Balance of Payments Data and Application to Financial Crises,” *Journal of Policy Modeling* 35, 1, 16-28
6. Janus, T. 2013, “The Political Economy of Fertility,” *Public Choice* 155, 3-4, 493-505
7. Janus, T. 2012, “Odious Debt in an Imperfect World,” *Review of Development Economics* 16, 2, 305-17
8. Janus, T. 2012, “Natural Resource Extraction and Civil Conflict,” *Journal of Development Economics* 97, 1, 24-31

Presentations

“Fiscal Policy and Social Unrest in a Soft Autocracy.” Annual Meeting of the Midwest Political Science Association. Palmerhouse Hilton, Chicago, April 3-6. 2014.

“Economic Shocks, Civil War and Ethnicity,” presented at the American Economic Association Annual Meetings, January 3-5, 2014

“Economic Shocks, Civil War and Ethnicity,” presented at the LAC-DEV Conference, University of Massachusetts-Amherst, November 4-5, 2013

“Does Ethnic Minority Rule Cause Civil War?,” presented at Bates College, March 14, 2012

“The Output Effects of Foreign Investment Reversals,” presented at the Southern Economic Association Annual Meeting, Washington, DC, November 19-21, 2011

“Natural Resource Extraction and Civil Conflict,” presented at the World Congress of Environmental and Resource Economists, Université du Québec à Montréal, Montréal, Canada, June 28-July 2, 2010

“Outsourcing Democracy,” presented at the Annual Meeting of the Midwest Political Science Association, Palmerhouse Hilton, Chicago, April 22-25, 2010

Charles F. Mason

Papers

Refereed Journal Articles

1. Mason, Charles F., “Concentration Trends in the Gulf of Mexico Oil and Gas Industry,” *Energy Journal* 2015 v. 36.
2. Mason, Charles F., Lucija A. Muehlenbachs, and Sheila M. Olmstead, “The Economics of Shale Gas Development,” *Annual Review of Resource Economics* 2015, v. 7, pp. 269-289.
3. Mason, Charles F., Victoria Umanskaya and Edward Barbier, “On the Strategic Use of Border Tax Adjustments as a Second-Best Climate Policy Measure,” *Environment and Development Economics* 2015, v. 20, pp. 539-560.
4. Mason, Charles F. and Neil Wilmot, “Jumps in Natural Gas Prices: Implications for Infrastructure,” *Energy Economics* 2014, v. 46, pp. S69-S79.
5. Oliver, Matthew E., Charles F. Mason and David Finnoff, “Pipeline Congestion and Natural Gas Basis Differentials: Theory and Evidence,” *Journal of Regulatory Economics* 2014, v. 46 261-291.
6. Mason, Charles F., “The Organization of the Oil Industry, Past and Present,” *Foundations and Trends in Microeconomics* 2014, v. 10, pp. 1 – 83.
7. Atkinson, Scott E. and Charles F. Mason, “Power Generation and Environment: Choices and Economic Trade-offs,” *Resource and Energy Economics* 2014, v. 36, 1-5.
8. Mason, Charles F., “Uranium and Nuclear Power: The Role of Exploration in Framing Public Policy,” *Resource and Energy Economics* 2014, v. 36, 49-63.
9. Oliver, Matthew E., Charles F. Mason and David Finnoff, “Natural Gas Expansion and the Cost Of Congestion,” *Energy Forum* 2014, pp. 31-32.
10. Van ‘t Veld, Klaas, Charles F. Mason and Andrew Leach, “The Economics of CO2 Sequestration Through Enhanced Oil Recovery,” *Energy Procedia* 2013, v. 37, 6909-6919.
11. Mason, Charles F., “The Economics of Eco-Labeling,” *International Review of Environmental and Resource Economics* 2013, v. 6, 341-372.
12. Mason, Charles F. and Andrew Plantinga, “Contracting for Impure Public Goods: Carbon Offsets and Additionality,” *Journal of Environmental Economics and Management* 2013, v. 66 1-14.
13. Wilmot, Neil and Charles F. Mason, “Jump Processes in the Market for Crude Oil,” *The Energy Journal* 2013, v 34.
14. Mason, Charles F., Erwin Bulte and Richard D. Horan, “Banking on Extinction: Endangered Species and Speculation,” *Oxford Review of Economics and Policy*, 2012, v. 28, 180-192.
15. Mason, Charles F., "On Equilibrium in Resource Markets with Scale Economies and

- Stochastic Prices," *Journal of Environmental Economics and Management*, 2012, v. 64, 288-300.
16. Cook, Benjamin R. and Charles F. Mason, "Enhanced Oil Recovery: Going Beyond Conventional Extraction," *IAEE Energy Forum*, Fall 2012, 21-23.
 17. Leach, Andrew, Charles F. Mason and Klaas van 't Veld, "Economic Co-optimization of Enhanced Oil Recovery and Carbon Sequestration" *Resource and Energy Economics*, 2011, v. 33, 893-912.
 18. Mason, Charles F., "Eco-Labeling and Market Equilibria with Noisy Certification Tests," *Environmental and Resource Economics*, 2011, v. 48, 537-560.
 19. Mason, Charles F., "On Stockpiling Natural Resources," *Resource and Energy Economics*, 2011 v. 33, 398-409.
 20. List, John and Charles F. Mason, "Are CEOs Expected Utility Maximizers?," *Journal of Econometrics* 2011 v. 162, 114-123.

Refereed Chapters in Books

21. Burgess, Joanne, Chis J. Kennedy and Charles F. Mason, "On the Potential for Speculation to Threaten Biodiversity Loss," *Nature in the Balance: The Economics of Biodiversity*, Oxford University Press, 2014.
22. Kroll, Stephan, John List and Charles F. Mason, "International Environmental Problems as Two-Level Games: An Experimental Investigation," *Handbook on Experimental Economics and the Environment*, 2013.
23. Mason, Charles F. "The Battle for Control of Global Crude Oil Markets: OPEC and the Seven Sisters," *Natural Resources: Conservation Strategies, Globalization & Politics and Sustainable Uses*, NOVA Science publications, S. A. Maillet and L. C. Valcourt, eds. 2013, pp. 201-209.
24. Mason, Charles F., "Global Petroleum Markets: Past, Present and Future," *Encyclopedia of Globalization*, Basil Blackwell publishers, 2012.

Presentations (2015 only)

- "Cooperation on Climate Change Mitigation," CESifo Area Conference on Energy and Environmental Economics, Munich Germany, 10/15; EAERE2015 Conference, Helsinki Finland, 6/15.
- "Natural Gas Production Patterns with Hydrological Fracturing: Implications for Pipeline Infrastructure," 2015 Energy Policy Research Conference, Denver, CO 9/15; EAERE2015 Conference, Helsinki Finland, 6/15.
- "Optimal Contracts For Discouraging Deforestation With Risk Averse Agents," CESifo Area Conference on Applied Microeconomics, Munich Germany, 3/15.
- "Crude Behavior: How Lifting the Oil Export Ban Reduces Gasoline Prices in the U.S." Jackson Energy Security Workshop, Jackson Hole WY, 8/15.
- "Price Discontinuities in the market for RINs," Workshop on Thresholds, Tipping Points and Random Events in Dynamic Economic Systems, Knoxville, TN 7/15; 4th International Workshop

on Oil and Commodities Markets, Milan Italy 6/15.

Owen Phillips:

Papers

Refereed Journal Articles

1. Phillips, Owen R., Nagler, Amy M., Huang, Shanshan, Menkhaus, Dale J., and Bastian, Christopher T., September 2014, "Trading Partner Choice and Bargaining Culture in Negotiations," *Journal of Economic Behavior and Organization*, Volume 105, pp. 178-190.
2. Sabasi, Darlington M., Bastian, Christopher T., Menkhaus, Dale J. and Phillips, Owen R., October 2013, "Committed Procurement in Privately Negotiated Markets: Evidence from Laboratory Markets," *American Journal of Agricultural Economics*, Volume 95(5), pp. 1122-1135. (Recipient of Western Agricultural Economic Association Outstanding Published Research Award 2014.)
3. Viscusi, W. Kip, Phillips, Owen R. and Kroll, Stephan, October 2011, "Risky Group Investment Decisions with Real Time Information," *Journal of Risk and Uncertainty*, Volume 42(2), pp. 81-106.
4. Phillips, Owen R., Menkhaus, Dale J. and Thurow, John, February 2011, "The Small Firm in a Quantity Choosing Game: Some Experimental Evidence," *Review of Industrial Organization*, Volume 38(2), pp. 191-207.
5. Phillips, Owen R. and Menkhaus, Dale J., December 2010, "The Culture of Private Negotiations: Price Drift in Bilateral Bargaining," *Journal of Economic Behavior and Organization*, Volume 76(3), pp. 705-715.
6. van't Veld, Klaas T. and Phillips, Owen R., October 2010, "The Economics of Enhanced Oil Recovery: CO2 Demand and Incremental Oil Production in the Powder River Basin," *The Energy Journal*, Volume 31(3), pp. 31-55.
7. Phillips, Owen R., Menkhaus, Dale J., Nagler, Amy M., and Bastian, Christopher T., October 2010, "Experimental Work on Subsidies, Moral Hazard, and Collusion in Agricultural Markets," *Contemporary Economic Policy*, Volume 28(4), pp. 488-501.

Presentations

2012, May 22, "Trading Partner Choice and Bargaining Culture in Private Negotiation," Saratov Economics Institute, Saratov, Russia.

2012, May 18, "Imminent Entry and the Transition to Multimarket Rivalry: Messy Markets in a Laboratory Setting," New Economics School, Moscow, Russia.

2010, May 15, "Real-Time Information and Group Litigation Decisions," American Law and Economics Association Meetings, Princeton, NJ.

Jason Shogren:

Papers

Refereed Journal Articles

1. "An agglomeration payment for cost-effective biodiversity conservation in spatially structured landscapes," *Resources and Energy Economics* (with M. Drechsler, F. Wätzold, and K. Johst) 2010.
2. "Dynamic Endogenous Risk and Non-Expected Utility," *Korean Economic Review* (with R. Ranjan) 2010.
3. "Invasive Species and Endogenous Risk," *Annual Review of Resource Economics* (with D. Finnoff, C. McIntosh, C. Sims, and T. Warziniack) 2010.
4. "Invasive Species and Delaying the Inevitable: Valuation Evidence from a National Survey," *Ecological Economics* (with C. McIntosh and D. Finnoff) 2010.
5. "Experimental Economics & the Environment: Eliciting Values for Controversial Goods," *Agricultural and Resource Economic Review* (with G. Parkhurst and D. Hudson) 2010.
6. "Environmental Economics: How Agricultural Economists Helped Advance the Field," *American Journal of Agricultural Economics* (with C. Kling and K. Segerson) 2010.
7. "Second-Order Ambiguity in Very Low Probability Risks: Food Safety Valuation." *Journal of Agricultural and Resource Economics* (with P. Kivi) 2010.
8. "Two Cheers and a Qualm for Behavioral Environmental Economics," *Environmental and Resource Economics* (with G. Parkhurst and P. Banerjee) 2010.300.
9. "Environmental Citizen Suits with Pigovian Punitive Damages," *Asian Journal of Law and Economics* (with S-H Park) 2010.
10. "The Experimental Mindset within Development Economics: Proper Care and Handling are Everything," *Applied Economic Perspectives and Policy* (with M. Ehmke) 2010.
11. "Do people always pay less than they say? Testbed laboratory experiments with IV and HG values," *Journal of Public Economic Theory* (with N. Jacquemet, R.-V. Joule, S. Luchini) 2011.
12. "Low-probability rationality spillovers," *Economics Letters* (with P. Kivi) 2011.
13. "Introduction to Choice & the Environment: A Special Issue in Honor of Thomas D. Crocker." *Resource and Energy Economics* 33(2):351-354. May 2011. (with E. Barbier and J. Tschirhart).
14. "Joint Determination of Biological Encephalization, Economic Specialization," *Resources and Energy Economics* (with R. Horan and E. Bulte) 2011.
15. "Stepping stones for biological invasion: A bioeconomic model of transferable risk," *Environmental and Resource Economics* (with T. Warziniack, D. Finnoff, J. Bossenbroek, D. Lodge) 2011.
16. "Social psychology and environmental economics: A new look at ex ante corrections of biased preference evaluation," *Environmental and Resource Economics* (with N. Jacquemet, A. James, and S. Luchini) 2011.
17. "Disguised protectionism, global trade rules and alien invasive species," *Environmental and Resource Economics* (with M. Margolis) 2012.
18. "Valuing Access to U.S. Public Lands: A Pricing Experiment to Inform Federal Policy," *Social Science Quarterly* (with D. Aadland, B. Grandjean, et al.) 2012.
19. "Environmental Federalism and Environmental Liability," *Journal of Environmental Economics and Management* (with K. van't Veld) 2012.
20. "Material Interests, Moral Reputation, and Crowding Out Species Protection on Private Land," *Journal of Environmental Economics and Management* (with P. Banerjee) 2012.

21. "On the Origins of the WTP-WTA Divergence in Public Good Evaluation," *Theory and Decision* (with G. Hollard and E. Flachaire) 2012.
22. "Le Comportement d'Enchérisseur dans une Enchère Conséquentialiste au Second Prix," *Revue Française d'Économie* 2012 (with L. Tadevaosyan).
23. "Preference Elicitation under Oath," *Journal of Environmental Economics and Management* 2013 (with N. Jacquemet, R-V Joule, and S. Luchini).
24. "The Welfare Impacts of an Invasive Species: Endogenous vs. Exogenous Price Models," *Ecological Economics* (with S. McDermott and D. Finnoff) 2013.
25. "Behavioral Environmental Economics: Money Pumps & Nudges," *Journal of Agricultural and Resource Economics* 2012.
26. "General Resilience to Cope With Extreme Events," *Sustainability* (with S. Carpenter, K. Arrow, et al.) 2012.
27. "Public Economics of hitchhiking species and tourism-based risk to ecosystem services," *Resources and Energy Economics* 2013 (with T. Warziniack and D. Finnoff).
28. "Review of 'Behavioural Economics & Finance' by M. Baddeley," *Journal of Economic Literature* 2013.
29. "Bidding Behavior given Point and Interval Values in a Second-price Auction," *Journal of Economic Behavior and Organization* (with P. Banerjee) 2013.
30. "On strategic ignorance of environmental harm and social norms," *Revue d'Economie Politique* (with L. Thunström, K. van 't Veld, and J. Nordström) 2014.
31. "Tradable Set-Aside Requirements: Conserving Spatially Dependent Environmental Amenities," *Environmental and Resource Economics* (with G. Parkhurst and T. Crocker) 2014.
32. "Managing the Endogenous Risk of Disease Outbreaks with Non-Constant Background Risk," *Journal of Economic Dynamics and Control* (with K. Berry, D. Finnoff, and R. Horan) 2014.
33. "Social Norms, Regulation, and Environmental Risk," *Economics Letters* (with B. Qin) 2015.
34. "Contests, Common Agency, and Corruption: Why the Green Candidate Seldom Wins," *Strategic Behavior and the Environment* (with M. Oliver) (2015).
35. "Integrating Ecological and Economic Considerations for Pollinator Habitat Policy," *Choices* (with M. Ehmke, C. Jones-Ritten, and T. Panchalingam) 2015.
36. "Can Verifiable Information Cut Through the Noise about Climate Protection? An Experimental Auction Test," *Climatic Change* (with O. Sapci, A. Wood, and J. Green) 2015.
37. "Bioeconomics of Invasive Species: Using Real Options Theory to Integrate Ecology, Economics, and Risk Management," *Food Security* (with C. Sims and D. Finnoff) 2015.
38. "Certainty and Overconfidence in Future Preferences for Food," *Journal of Economic Psychology* (with L. Thunström and J. Nordström) 340 2015.

Books

39. Handbook on Food Demand and Policy, Oxford University Press (edited with J. Lusk and J. Rossen) 2011.
40. Encyclopedia on Resource, Environmental, and Energy Economics, Editor-in-Chief, Elsevier (2013).

Refereed Chapters in Books

41. “Dynamic Endogenous Risk and Social Accounting,” *Handbook of Environmental Accounting*, T. Aronsson and K.G. Lofgren, eds., Edward Elgar Publishers (with R. Ramjan) 2010.
42. “The Effects of Prior Beliefs and Learning on Consumers’ Acceptance of Genetically Modified Foods: Implications for Diet and Behavior,” *Handbook of Behavior, Food and Nutrition*, V. Preedy, R. Watson and C. Martin, eds., Springer, Berlin (with W. Huffman, M. Rousu, and A. Tegene) 2011, Part 5, pp. 725-739.
43. “Who Owns Endangered Species?” *Evolution of Property Rights Related to Land and Natural Resources*, D. Cole and E. Ostrom, eds., Lincoln Institution, Cambridge, MA (with G. Parkhurst) 2011.
44. “Discounting in Bioeconomics,” *Sourcebook in Theoretical Ecology*, A. Hastings and L. Gross, eds., University of California Press (with R. Ranjan) 2012.
45. “Global Economics and Infectious Disease Emergence,” *Conservation Medicine: Applied Cases of Ecological Health*, A. Aguirre, P. Dasak and R. Ostfeld, eds., Oxford University Press (with A. Alexander and D. Finnoff) 2012.
46. “Economic Control of Invasive Species,” *Encyclopedia of Biodiversity*, S. Levin, ed. Elsevier (with D. Finnoff, R. Horan, S. McDermott, and C. Sims) 2012.
47. “Thomas D. Crocker,” *Environmental and Natural Resource Economics: An Encyclopedia*, (T. Haab and J. Whitehead, eds.) 2013.
48. “Climate policy coordination through institutional design: An experimental examination,” *Toward a New Climate Agreement: Conflict, Resolution, and Governance*, T. Cherry, J. Hovi and D. McEvoy, eds., Routledge, London (with M. Oliver, J. Pike, and S. Huang) 2013.
49. “Coasean Bargaining,” *Encyclopedia of Energy, Natural Resources, and Environmental Economics*, Elsevier (with T. Cherry and S. Cotton) 2013.
50. “Revisiting Voter Isolation,” *Replication Experiments-Research in Experimental Economics* (C. Deck, E. Fatas, and T. Rosenblat, eds.), Emerald Group Publishing, UK (with A. James) (2015).
51. “Fear of Failure in Conservation: The problem and potential solutions to aid conservation of extremely small populations,” *Conservation Biology* (with M. Meek, C. Wells et al.) 2015.

Presentations (2015 only)

College seminar, Texas A&M University (Feb 2015)

Keynote, Centre for European Economic Research (ZEW), Mannheim, Germany, Workshop on Behavioral and Environmental Economics (March, 2015)

Department seminar, University of Alaska-Anchorage (March 2015)

Talk for Global Issues Workshop on Climate Change, U of Wyoming Law School (Spring 2015)

Keynote, Canadian Economic Association meetings, Toronto (May 2015)

Keynote, PBL, The Hague, Netherlands (July 2015)

Bioeconomics Workshop, University of Tennessee (July 2015)

Keynote, Asian Association of Environmental and Resource Economics, Taipei, Taiwan (August 2015)

Seminar, Colorado State University (October 2015)

Lectures, Vanderbilt Law School (October 2015)

Seminar, Workshop in honor of J Van Huyck, Southern Methodist University (October 2015)

Climate change economics, Public Lecture, Santiago, Chile (November 2015)

Public lecture, Puerto de Ideas, Valparaiso, Chile (November 2015)

Diplôme Docteur honoris causa, Université d'Aix-Marseille, France (November 2015)

Lecture, Workshop in honor of Jason Shogren, GREQEM, Marseille, France (November 2015)

Alexandre Skiba

Papers

Refereed Journal Articles

1. "How Geography Affects Quality" *Journal of Development Economics*, 115, July 2015, pp.156-180 (with Volodymyr Lugovskyy)
2. "Short Sale Restrictions, Differences of Opinion, and Single-Country Closed-End Fund Discount" *International Review of Financial Analysis*, 29, Sept. 2013, pp. 44-50. (with Lee Sanning and Hilla Skiba)

Refereed Book Chapters

3. "The Effect of Policies on FDI Flows: the Case of Transition Countries," Bob Lucas, T.N. Srinivasan and Lyn Squire eds., *The Impact of Rich Countries' policies on Poverty in Poor Countries*. Edward Elgar, 2010. (with Irina Orlova and Tom Coupè).

Presentations

Indiana University (Fall 2013)

University of Colorado (Spring 2012)

Washburn University (Spring 2012)

Empirical Investigations in International Trade (University of Oregon, 2014, discussant)

Advances in International Trade workshop (Georgia Tech, 2014)

Southern Economic Association conference (Atlanta, 2014)

Financial Management Association Conference (Nashville, 2014)

Midwest International Economics Meetings (The University of Kansas, 2014)

Midwest International Economics Meetings (IUPUI, 2014)

West Coast Trade Workshop at the University of California in Santa Cruz (Spring 2012)

Empirical Investigations in International Trade (Purdue University, Fall 2011)

Southern Economic Association conference (Washington D.C., 2011)

Empirical Investigations in Trade and Investment (Keio University, Tokyo, Japan, 2011, discussant)

Southern Economic Association conference, (Atlanta, 2010)

Frederic P. Sterbenz:

Papers

Refereed Journal Articles

1. David Aadland and Frederic Sterbenz "The Economics of Emergency Meetings" *Economic Inquiry*. vol. 53, no. 2 April 2015 pp. 1019-1037.
2. James Gunderson and Frederic Sterbenz 2010 "The Impact on Interest Rates of Unemployment Announcements and Their Revisions" *The Financial Review* Vol. 45 pp.951-971.

Klaas T. van 't Veld:

Papers

Refereed Journal Articles

1. Li, Y., and Van 't Veld, K. (2015). Green, Greener, Greenest: Eco-label Gradation and Competition, *Journal of Environmental Economics & Management*, **72**: pp.164-176
2. Thunström, L., van 't Veld, K., Shogren, J. F., and Nordström, J. (2014) On Strategic Ignorance of Environmental Harm and Social Norms, *Revue d'Économie Politique*, **124**(2): pp 195-214
3. Van 't Veld, K. and Shogren, J. F. (2012) Environmental Federalism and Environmental Liability, *Journal of Environmental Economics & Management*, **63**(1): pp 105-119
4. Van 't Veld, K. and Kotchen, M. J. (2011) Green Clubs, *Journal of Environmental Economics & Management*, **62**(3): pp 309-322
5. Leach, A., Mason, C. F. and Van 't Veld, K. (2011) Co-optimization of Enhanced Oil Recovery and Carbon Sequestration. *Resource & Energy Economics*, **33**(4): pp 893-912
6. Van 't Veld, K. and Phillips, O. R. (2010) The Economics of Enhanced Oil Recovery: Estimating Incremental Oil Supply and CO₂ Demand in the Powder River Basin. *Energy Journal*, **31**(4): pp 31-55.

Refereed Book Chapters

7. Narain. U, Gupta, S., and Van 't Veld, K. (2013) Income poverty and dependence on common resources in rural India. In *Nature's Wealth: The Economics of Ecosystem Services and Poverty*, P.J.H. van Beukering, E. Papyrakis, J. Bouma and R. Brouwer (Eds.). Cambridge University Press.

Presentations

Overlapping Environmental and Financial Regulations: the Role of Corporate Governance, AERE 4th Annual Summer Conference, San Diego, CA, June 3-5, 2015

Ego-Depletion, Habit Formation, and Attention, Workshop on Consumer Behavior, Self-control, and Intrinsic Motivation, University of Copenhagen, Denmark, December 8, 2014

Economic Co-optimization of Oil Recovery and CO₂ Sequestration, Society of Petroleum Engineers (SPE) Annual Technical Conference and Exhibition, Amsterdam, The Netherlands, October 28, 2014

The Economics of CO₂ Sequestration Through Enhanced Oil Recovery, Energy & Environmental Economics and Policy seminar, Penn State University, State College, Pennsylvania, November 7, 2013

11th International Conference on Greenhouse Gas Technologies (GHGT-11), Kyoto, Japan, November 18-22, 2012.

Eco-label Competition and Gradation, AERE 3rd Annual Summer Conference, Banff, Alberta, Canada, June 6-8, 2013

Give me austerity and fiscal responsibility, but not yet, Saturday University, University of Wyoming, Sheridan, Wyoming, February 9, 2013

Give me austerity and fiscal responsibility, but not yet, Saturday University, University of Wyoming, Jackson, Wyoming, March 3, 2012

Competing Clubs, Department of Economics & Finance, University of Wyoming, Brown Bag Seminar Series, Laramie, Wyoming, April 13, 2012

Give me austerity and fiscal responsibility, but not yet, The Economics of Combining CO₂-EOR with Storage IEA-OPEC CO₂-EOR Kuwait Workshop, Kuwait City, Kuwait, February 7-8, 2012.

vi. National/international awards (2010-2015)

Albers:

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.

Barbier:

Listed on ideas.repec.org among top 5% of economists worldwide (#527) based on research publications as of 2015

2015 Commendation for Best Paper in *Environmental and Resource Economics* (Kennedy, C.J. and E.B. Barbier. 2016. "The economic value of freshwater inputs to an estuarine fishery." *Water Resources and Economics* 13:46-59), Awarded June 25, 2016)

2015 Association of Environmental and Resource Economists (AERE) Fellow (Awarded June 11, 2016)

2015 Recipient of the 13th Annual Patrick Lecture Series Award, Graduate School and Coastal Studies Institute, Louisiana State University, Baton Rouge, Louisiana

2015 STEPI Fellowship, Science and Technology Policy Institute, Seoul, Republic of Korea.

2013-14 Recipient of the University of Wyoming, College of Business Outstanding Senior

Research Award.

2013 Three peer-reviewed journal articles with Professor Barbier as the lead author were selected in an international survey of marine scientists as the top five most influential articles of all time on marine ecosystem services. The articles were first, fourth and fifth respectively on the list. The survey was conducted by the Marine Ecosystem Services Partnership of Duke University, USA. See <http://openchannels.org/literature-library/top-mes>.

2013 Award Recipient, Fall 2013 Faculty Senate Speaker Series, University of Wyoming

2012-2013 Recipient of the University of Wyoming, College of Business Advisory Board (COBAB) Faculty Award in the Department of Economics & Finance.

2010-11 Recipient of the University of Wyoming, College of Business Outstanding Senior Research Award.

Finnoff:

College of Business Outstanding Senior Research Award, University of Wyoming 2011-2012, 2014-2015.

2014, 2015 College of Business Advisory Board (COBAB) Faculty Award. The award recognizes the best all round faculty member for the academic year in teaching, research, and service.

2014 John P. “Jack” Ellbogen Meritorious Classroom Teaching Award.

Outstanding Publication in the journal *Environmental and Resource Economics*: Travis Warziniack, David Finnoff, Jonathan Bossenbroek, Jason F. Shogren and David Lodge (2011) Stepping Stones for Biological Invasion: A Bioeconomic Model of Transferable Risk, *Environmental and Resource Economics*, Volume 50, Number 4, 605-627.

University of Wyoming Outstanding Advisor Award, Mortar Board Honor Society, 2011-2012.

Invited to speak at the College of Business Showcase, October 2011.

College of Business Outstanding Senior Teaching Award, University of Wyoming 2010-2011.

Named a “Top Prof” for the 2010 - 2011 academic year by University of Wyoming Cap and Gown Chapter of Mortar Board.

Gilbert:

2015 UW College of Business Junior Faculty Teaching Award

2015 Tom & Judy Crocker Junior Faculty Research Award

2015 Best Practitioner Paper Award, American Real Estate Society (ARES) conference for “On the relation of local amenities and house price dynamics” with Eli Beracha, Tyler Kjorstad, and Kiplan Womack

2014 (Nominated) UW College of Business Junior Faculty Research Award

2013 (Nominated) UW College of Business Junior Faculty Teaching Award
2010 Clive Granger Research Prize, UCSD Environmental Economics Group

Godby:

Nielson Research Fellowship, School of Energy Resources, November 2015.

University of Wyoming, College of Arts and Science Thumbs-Up Award for contributions to the University, November 2015.

Nominated, Promoting Intellectual Engagement in the First Year (PIE) Award, University of Wyoming, 2015.

National Society of Collegiate Scholars, appointed Distinguished Member, October 2014.

Nominated, Promoting Intellectual Engagement in the First Year (PIE) Award, University of Wyoming, 2014.

Nominated, Outstanding Service Award, - College of Business, University of Wyoming, 2014.

Outstanding Service Award, - College of Business, University of Wyoming, 2011.

Top Professor Award, UW Cap and Gown Chapter of Mortar Board, November 2010

Janus:

University of Wyoming Center for Global Studies Wallop Conversations on Democracy Award, Spring 2016 (project title: “Economic Shocks and Political Transitions”)

Shogren:

Listed on ideas.repec.org among top 5% of economists worldwide (#298) based on research publications as of 2015 Royal Swedish Academy of Sciences, Member, (since 2008)

Université d’Aix-Marseille, France, Diplôme Docteur *honoris causa*, 2015

Association of Environmental and Resource Economists, Fellow, 2014

Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences, Fellow, 2010, Board Member, 2015-

Environmental and Resource Economics (EAERE), Best Paper *ERE* 2011

Environmental and Resource Economics (EAERE), World Congress Best Poster 2014

Skiba:

2015 - Outstanding Junior Teaching Award

2014 – Tom and Judy Crocker Junior Faculty Research Award

2012 - Sparky Turner “Raise the Bar” University of Wyoming College of Business Service Award

2011 - Award for Promoting Intellectual Engagement in the First Year, a university wide student nominated award

van 't Veld:

Promoting Intellectual Engagement (PIE) Teaching Award, University of Wyoming, 2012

Mortar Board Top Prof Award, University of Wyoming, 2010

c. Program reputation

The University of Wyoming's Department of Economics and Finance continues to be ranked among the world's top programs in environmental economics, according to [IDEAS](#), a prestigious worldwide organization that disseminates economics research. IDEAS is a service hosted by the Research Division of the Federal Reserve Bank of St. Louis. In its "Top 10% Institutions and Economists in the Field of Environmental Economics," IDEAS ranked the UW Department of Economics and Finance 11th. The list includes all academic and non-academic research institutions globally. Among universities only, UW is ranked eighth in the world. [Read More](#)

d. Curriculum

A basic course sequence in economic theory ([ECON 5010](#), [ECON 5020](#), and [ECON 5330](#)) is required of all students pursuing a master's degree in economics. Additionally, Game Theory ([ECON 5300](#)) and Applied Econometrics ([ECON 5340](#)) are required. A minimum of 18 hours in economics is required; at least 15 of these must be at the 5000 level. A student then selects the remaining courses to provide the skills necessary for a career plan. A student may elect to take 27 hours of course work and write a thesis (Plan A) or take 30 hours of course work and write a shorter paper based on work done in a course (the Plan B alternative). For a complete list of the program's courses, [click here](#).

Sample Program - MS in Economics

Year 1

ECON 5010 Macroeconomic Analysis I

ECON 5300 Game Theory

ECON 5020 Microeconomic Analysis I

ECON 5340 Applied Econometrics

ECON 5330 Mathematical Economics Econ Field Seminar

Year 2

Econ Field Seminar

Grad Elective

Grad Elective

The exceptionally qualified student can complete the economics master's program in three

semesters. Most students complete all requirements within two years. The master's degree provides a strong background in theory and technical skills for work as an economist in government or industry. For the undecided student, the master's level of study allows the opportunity to determine whether one has the interest and skill to successfully complete the economics doctor of philosophy degree.

At the beginning of the third semester the master's student will select a major professor for direction with the Plan B paper or Plan A master's thesis. A committee, selected by the student and his or her major professor, conducts an oral examination of the paper or thesis and areas studied in the program. A favorable report from the committee completes the master's degree in economics requirements.

e. Distance delivery

This program is not offered online or off-campus.

f. Quality of Assessment Plan/data

The program is reviewed each year by the Graduate Coordinator and Department Chair, based on student assessments, enrolments and graduation rates and other assessment plan criteria. Recommendations for changes in curriculum, courses and assessments are then voted and decided on by Faculty.

The program is accredited through the college accreditation with the Association to Advance Collegiate Schools of Business (AACSB), and we are currently completing and documenting program assessment plan and outcomes for the next review of the College of Business accreditation in September 2016.

3. Mission Centrality

- a. Support for UW's mission, vision and strategic goals: The University of Wyoming offers more than 90 graduate degrees, providing the variety of subjects, the rigor of high quality education, and the depth of research that is associated with a top-tier land grant university. The University of Wyoming is one of the nation's research universities with a growing portfolio of research and scholarly activity in a variety of disciplines. Through steady increases in research infrastructure constituting nationally recognized research facilities and in highly productive faculty members, UW has a strong presence in academic research. The University of Wyoming strengthens communities by training students in professions critical to the state and region. Arguably most critical for Wyoming is professional training in health care, education, business, and law.

The MS in Economics supports this mission, vision and goals in several ways:

Our program has a long-standing reputation in applied microeconomics, particularly in the areas of environmental and natural resource economics,

industrial organization, trade and development economics, and financial economics.

Our program is small by design, allowing students the opportunity to work closely with highly respected faculty. We emphasize that all students develop a solid foundation in quantitative methods and economic theory. This foundation is then built upon as students work with faculty to investigate challenging economic and financial issues that matter locally and around the globe. During the research process, we stress critical thinking and clear communication of the relevant issues.

The MS in Economics is flexible and offers several options. No area of concentration is required for the economics master's degree. This allows the student to select courses in a variety of fields for a broad exposure to contemporary economic problems. One may also limit course selections to one or two fields and acquire a high degree of competence in a limited number of areas.

We pride ourselves on our graduate placement record and dedication to mentoring students as they mature into professional economists, financial analysts, and future business leaders, many of whom work in Wyoming and neighboring states.

- b. Contributions to programs across campus: The graduate programs of the Department of Economics & Finance, which include the MS in Economics, produces among the highest amount of total credit hours across all programs at the University of Wyoming. From AY 2009-10 to AY 2013-14, the graduate programs of the Department of Economics & Finance averaged 960.6 credit hours per academic year.³

In addition, the MS in Economics can be combined with a number of graduate minor options from programs across the university. These options are:

[Applied Economics](#), College of Agriculture and Natural Resources

[American Indian Studies](#), College of Arts and Sciences

[Computational Science](#), Interdisciplinary

[Environment and Natural Resources](#), Haub School of Environment and Natural Resources

[Gender and Women's Studies](#), College of Arts and Sciences

[International Studies](#), College of Arts and Sciences

[Qualitative Research Methods](#), College of Education

[Quantitative Research Methods](#), College of Education

[Queer Studies](#), College of Arts and Sciences

³ From "UW – Program Review: Economics & Finance", Excel Spreadsheet, Office of Institutional Analysis, 7/19/2016.

c. Placement

We pride ourselves on our graduate placement record and dedication to mentoring students as they mature into professional economists, financial analysts, and future business leaders, many of whom work in Wyoming and neighboring states (See <http://www.uwyo.edu/econfin/about-us/alumni/mastersineconomicsalumni.html>). In addition, many of our students who enroll in the foundation year of our MS in Economics (see Section 2.d. above) qualified in their 2nd year for the PhD in Economics and chose this degree option over obtaining a MS in Economics. For these students, placement in the PhD in Economics is the outcome of their enrolment in the foundation year of the MS in Economics. Some of our graduates also undertake PhD programs at other universities.

The following lists the placement of 11 of our 14 graduates from AY2009-10 to AY2014-15:

- [Lindsey Rittmueller](#) (2010) - Bureau of Economic Analysis, Washington, DC
- [Yoshiyuki Igarashi](#) (2013) - Assistant Research Scientist, University of Wyoming
- [Jenny Johnson](#) (2013) - PhD program, Colorado State University, Ft Collins, CO
- [John Strandholm](#) (2013) - PhD program, Washington State University
- Brad Parry (2014) - UL Prospector, Laramie, WY
- [Tyler Kjorstad](#) (2014) - Mathematics Instructor, Laramie County Community College
- [Seth Timpe](#) (2014) - Frontier Airlines, Fort Collins, CO
- [Anna Ohlschwager](#) (2015) - BP, Anchorage, AK
- [Christopher Weingardt](#) (2015) - Keen Independent Research, Cheyenne, WY
- Gabrielle Horvath (2015) - Flathead Electric Cooperative, Kalispell, MT
- Jeremy Boyd (2015) - WCI Communities, Bonita Springs, Florida

- d. Uniqueness of the program: The MS in Economics is not duplicated by any other graduate program offered at the University of Wyoming.

4. **Cost**

- a. Ratio of student credit hours per FTE: $960.6/14 = 68.6$ credit hours/FTE (AY2009-10 to AY2013-14)⁴
- b. Direct instructional expenditures

⁴ Credit hours from "UW – Program Review: Economics & Finance", Excel Spreadsheet, Office of Institutional Analysis, 7/19/2016 and 14 FTE for tenured and tenure-track faculty teaching the Masters in Economics (see 2.b.).

- i. Per student credit hour: $\$2,427,811/960.6 = \$2,527.4^5$
 - ii. Per total degrees awarded: $\$2,427,811/14 = \$173,415.0^6$
 - iii. Non-personnel expenditures per total academic FTE: $\$101,244/14 = \$7,231.4^7$
- c. Course enrollment
- i. Number of classes falling under University minimums: For all graduate programs, including the MS in Economics, offered by the Department of Economics and Finance, the number of group instruction classes falling below university minimums were
 - AY2009-10 8 classes
 - AY2010-11 2 classes
 - AY2011-12 1 class
 - AY2012-13 1 class
 - AY 2013-14 4 classes⁸
 - ii. Lower-division courses falling under University minimums: N/A
- d. Other instructional cost drivers
- i. Section fill rates: N/A, as all courses were taught as single sections.
 - ii. Course completion rates: No data are currently available for AY2010-11 to AY2014-15.
 - iii. Curricular complexity: The MS in Economics is flexible and offers several options. No area of concentration is required for the economics master's degree. This allows the student to select courses in a variety of fields for a broad exposure to contemporary economic problems. One may also limit course selections to one or two fields and acquire a high degree of competence in a limited number of areas. In addition, many of our students who enroll in the foundation year of our MS in Economics (see 2.d. above) have the option of choosing to qualify in their 2nd year for the PhD in Economics
 - iv. Faculty course load: Over AY2009-10 to AY2014-15, the standard course load for tenured and tenure-track faculty is 4 courses per year (2:2 course load). The exception is for endowed professors (2:1 or 1:1, depending on research expectations), Department Chair (one-course reduction) and Undergraduate or Graduate Coordinators (one-course reduction each).

⁵ Credit hours from "UW – Program Review: Economics & Finance", Excel Spreadsheet, Office of Institutional Analysis, 7/19/2016. Instruction unit expenditures are from "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016. *Note this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.*

⁶ Number of graduates from "Degrees – dup Master" Excel Spreadsheet, Academic Affairs, 6/21/2016. Instruction unit expenditures are from "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016. *Note this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.*

⁷ Non-personnel expenditures are from "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016 and 14 FTE for tenured and tenure-track faculty teaching the Masters in Economics (see 2.b.). *Note this cost includes the cost of graduate and undergraduate programs and so is inflated for graduate only.*

⁸ From "University of Wyoming, Economics & Finance, Standard Data Set", Office of Institutional Analysis, 2015.

e. Research expenditures per tenured and tenure-track FTE: $\$941,787/14 = \$67,270.5^9$

f. Comparison to national benchmarks (Delaware data):¹⁰

Total student credit hours, graduate (AY 2013-14): 788

Total tenured and tenure-track faculty FTE (Fall 2013): 12

Total direct expenditures for instruction (AY 2013-14): \$2,427,811

Non-personnel expenditures (AY 2013-14): \$101,244

Research expenditures (AY 2013-14): \$941,787.1

Ratio of student credit hours per tenured and tenured track FTE: $788/12 = 65.6$

Direct expenditure for instruction/per graduate student credit hour: $\$2,427,811/788 = \$3,083$

Direct expenditure for instruction/per degrees awarded: $\$2,427,811/14 = \$173,415$

Research expenditures per tenured and tenured track FTE: $\$941,787.1/12 = \$78,482.3$

Part II – Recommendations

1) Retain Due to Critical Need

The MS in Economics is critical both as a stand-alone graduate degree program as well as essential for the PhD in Economics, which is a major reason why the Department of Economics and Finance continues to be ranked among the world's top programs in environmental economics (See Section I.2.c.). Graduate students who wish to qualify in their 2nd year for the PhD in Economics, must first enroll and take the foundation year of our MS in Economics (see Section I.2.d. above).

In addition, elimination of the MS in Economics would not save costs. Because the MS in Economics and the PhD in Economics share the same foundation year of courses (Year 1, as outline in Section I.2.d. above), these course would still have to be taught as part of the PhD in Economics. Similarly, the graduate elective courses in Year 2 of the MS in Economics are courses offered in the PhD in Economics.

The graduate programs of the Department of Economics & Finance, which include the MS in Economics, produces among the highest amount of total credit hours (ca. 1,000 credit hours per year) across all programs at the University of Wyoming. The MS in Economics is not duplicated

⁹Research expenditures are from "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016 and 14 FTE for tenured and tenure-track faculty teaching the Masters in Economics (see 2.b.).

¹⁰ From "2014 National Study of Instructional Costs and Productivity (Delaware Cost Study) – University of Wyoming: Economics", 7/25/2016.

by any other graduate program offered at the University of Wyoming, while at the same time, students in the program are able to take graduate minor options in 10 different programs across campus (See Section I.3.b. above). In addition, the program has an excellent graduate placement record and has produced professional economists, financial analysts, and future business leaders, many of whom work in Wyoming and neighboring states.

The Department of Economics and Finance is currently completing and documenting program assessment plan and outcomes for the next review of college accreditation, as part of the general requirement for the entire college. In addition, the Department has undertaken a revision of its PhD in Economics program, which should lead to improvements in the foundation year and graduate elective courses, as well as in assessment procedures, which should also improve the performance and graduate rates of students undertaking the MS in Economics.