

## **BRIAN C. MURRAY**

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Research Professor, Sanford School of Public Policy  
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### **Education**

Ph.D., Resource Economics and Policy, Duke University, Durham, North Carolina, 1992  
M.S., Resource Economics and Policy, Duke University, Durham, North Carolina, 1987  
B.S., Economics and Finance (cum laude), University of Delaware, Newark, Delaware, 1983

### **Summary of Professional Experience**

Dr. Murray is Director of the Duke University Energy Initiative, Research Professor at the Nicholas School of the Environment, and an Affiliate in the Nicholas Institute for Environmental Policy Solutions at Duke University. In 2015 he was Fulbright Visiting Research Chair in Environment and Economy at University of Ottawa's Institute of the Environment. He is widely recognized for his work on the economics of climate change policy, including the design of cap-and-trade policy elements to address cost containment and inclusion of offsets from traditionally uncapped sectors such as forestry, agriculture, and coastal ecosystems. Members of the United States Congress, state legislators and regulators have sought the counsel of Dr. Murray and colleagues in developing climate change legislative proposals and regulatory options. Their development of the cost containment reserve mechanism is now in use in several greenhouse cap-and-trade programs in North America. Dr. Murray has been invited as a co-author of several national and international assessments of natural resources, especially related to climate change. Of particular note, he serves on a National Academy of Sciences panel on greenhouse gases and the tax code, where he led the panel's efforts on biofuel subsidies. He was a convening lead author of the Intergovernmental Panel on Climate Change's Special Report on Land Use, Land Use Change, and Forestry. He has convened several forums of economic modeling experts to examine and communicate the results of their climate, energy and land use policy efforts to the public and private sectors. His research has examined the economic effects of traditional command-based regulatory strategies for pollution control and more market-oriented approaches such as cap-and-trade programs and emission taxes. He has been a consultant to a wide range of clientele in the public and private sector, including numerous federal government agencies, members of Congress and their staff, state regulatory agencies, CEOs and senior staff from Fortune 500 companies, trade groups, nongovernmental organizations, and other academic institutions. His work has been published in books, edited volumes, and professional journals, including *Science*, *Nature Climate Change*, *The American Economic Review*, *The Review of Economics and Statistics*, *American Journal of Agricultural Economics*, *Journal of*

*Environmental Economics and Management, Land Economics, Review of Environmental Economics and Policy, Environmental and Resource Economics, Ecological Economics, PLOS One, Ecological Applications, Climatic Change, Mitigation and Adaptation Strategies for Global Change, Energy Journal, Energy Policy, and Forest Science.* Murray is an invited regular contributor to *Forbes*. Prior to returning to Duke in 2006, Dr. Murray was Director of the Center for Regulatory Economics and Policy Research at RTI International, a university-affiliated not-for-profit research institution.

## **Professional Experience**

2018-	Duke University Energy Initiative <u>Director</u>
2019-	Sanford School of Public Policy, Duke University <u>Research Professor</u> (Full rank)
2017-	<u>Faculty Associate</u> of the Duke Initiative for Science & Society
2016-17	Duke University Energy Initiative <u>Interim Director</u>
2006-17	Nicholas Institute for Environmental Policy Solutions, Duke University <u>Director for Economic Analysis</u>
2015	University of Ottawa, Institute of the Environment, <u>Fulbright Visiting Research Chair in Environment and Economy</u>
2007 -	Duke University, Nicholas School of the Environment <u>Research Professor</u> (Full rank)
1992 to 2006	RTI International, Center for Regulatory Economics and Policy Research, Research Triangle Park, NC <u>Senior Economist and Director</u> (after 2004)
1999 to 2006	North Carolina State University, College of Forest Resources, <u>Adjunct Assistant Professor</u>
1994 to 2002	Duke University, Nicholas School of the Environment, Durham, NC <u>Adjunct Associate Professor</u>
1986 to 1992	U.S. Department of Agriculture, Forest Service <u>Research Economist</u>
1983 to 1985	Arthur Andersen and Company <u>Management Information Systems Consultant</u>

## **Program Development**

Since January, 2016, Dr. Murray has been Director of the Duke University Energy Initiative, a university-wide interdisciplinary collaboration focused on advancing an accessible, affordable, reliable, and clean energy system. The Initiative reaches across business, engineering, environment, law, policy, and the arts and sciences to educate tomorrow's energy innovators, develop new solutions through research, and improve energy decisions by engaging business and government leaders. Dr. Murray oversees all strategic aspects of the Initiative's education, research and engagement portfolios and has primary responsibility for the Initiative's fundraising efforts.

Dr. Murray came to Duke's Nicholas Institute for Environmental Policy Solutions in March of 2006 as Director for Economic Analysis, shortly after the Institute's launch. His responsibilities involved overseeing the Institute's economics portfolio and staff of economists and working with the Institute director, other senior directors, faculty, and staff to identify opportunities for the application of sound economic principles and advanced analysis to develop solutions to our most important environmental policy problems. He has initiated a number of key initiatives at the Institute that have directly influenced the development of policies at federal, state and international levels, especially in the areas of climate change policy. He was responsible for ensuring the quality of the Institute's economics work, its applicability to the problems being addressed and, and communicating to policy makers in the public, private and NGO sectors and to the media.

Prior to his appointments at Duke, Dr. Murray was Director of RTI's Center for Regulatory Economics and Policy Research (REPR), a group of 35 research professionals whose mission is to improve the human condition through public policy informed by rigorous analysis integrating economics and related disciplines. The Center's work spanned the policy domains of the environment, natural resources, agriculture, public health, food safety, energy, and technology. The Center's sponsors included US EPA, USDA, DOE, FDA, Centers for Disease Control and Prevention (CDC), DHS, National Park Service, The World Bank, Conservation International, and the United Nations.

## **Honors and Awards (selected)**

Fulbright Research Chair in Environment and Economy, University of Ottawa, 2015  
National Academy of Sciences select committee on greenhouse gases and the tax code, 2011-12  
Intergovernmental Panel on Climate Change  
Distinguished Publication Award, 2004, RTI International  
Frequently Published Author Award, 2004, RTI International  
Career Author Award, 2003, RTI International  
American Agricultural Economics Association Outstanding Dissertation Award nominee, 1993  
Dorothy Hoener Scholarship, Oregon State University, 1988  
Graduate Student of the Year, Duke University School of Forestry & Environmental Studies, 1987  
Omicron Delta Epsilon, National Economics Honor Society, 1983

## **Professional Associations**

Board of Advisors, Colorado Energy and Water Institute (2019-)  
Board of Trustees, The Nature Conservancy of North Carolina (2018-)  
Board Member, Center for Climate, Energy, Environment and Economics (CE<sup>3</sup>), University of North Carolina – Chapel Hill (2016-)  
Fulbright Scholars Program  
Editorial Board, *Greenhouse Gas Measurement and Management*, 2009-12  
Board of Directors, Triangle Census Research Data Center, 2001-2007  
Intergovernmental Panel on Climate Change, 1999-2000 (invited)  
National Climate Assessment Team, 1999-2001 (invited)  
American Economics Association  
Association of Environmental and Resource Economists

## **Teaching**

Transformation of the U.S. Electric Power Sector (2018)  
Economic Instruments for Environmental Protection (2018)  
Special Topics in Environmental Policy: Clean Power Plan (2016)  
Coastal Conservation Economics (online offering, 2015)  
Economics of Environmental Management (2011-)  
Environmental Management in a Changing World: Coping with Sea Level Rise (Duke program in Venice) (2014-)  
Bass Connections

- Coal and America (2019-20)
- Coal in America (2018-19)
- Feasibility Study for a Campus Digester – (2015-16)
- Options for Regulating Greenhouse Gases from Oil Refineries - (2013-14)

Ecosystem Service Markets in Practice (2008)  
Collaborative Research on REDD (2010, joint with NC State and UNC-Chapel Hill)  
Case Studies in Resource Management (1993-94)

## **Other University Service (selected)**

Nicholas Institute Strategic Advisory Council (2019-)  
Science and Society Faculty Governance Committee (2017-)  
Duke University Library Council (2017-)  
Steering Group, Energy Access Project at Duke (2017-)  
Co-director, 2017 Winter Forum on Global Energy Access  
Chair, Duke Environmental and Energy Economics Working Group (2006-)  
Director, Duke Environmental Economics Doctoral Scholars Program (2013-)  
Duke University Energy Initiative – Nicholas Institute task force (2015)  
Faculty working group, Environmental Management and Policy Program, Duke-Kunshan U (2014)  
Duke University Energy Initiative, Faculty Advisory Committee (2012-)  
Core faculty, University Program in Environmental Policy (2011-)

#### Search committees

- Faculty in Energy Policy, Sanford School of Public Policy and the Duke University Energy Initiative (2016-17)
- Director, Climate and Energy Program, Nicholas Institute
- Dean, Nicholas School of the Environment (2013-14)
- Director, Oceans and Coastal Policy, Nicholas Institute (2014)
- Faculty in Energy Policy (2013-14), Sanford School and Duke U Energy Initiative
- Faculty in Energy and Environmental Policy (2010-11), Sanford/Nicholas Institute
- Director, Strategy and Planning, Nicholas Institute (2012)

Duke Forest Advisory Committee (2011-14)

Faculty advisor, Duke Environmental Markets Student Group (2010-13)

Faculty advisor, Duke student delegation, UN Framework Convention on Climate Change (2009-2012)

(Inaugural) Winter Forum co-organizer (2009-10)

#### Publications

Google Scholar H-index: 41; I-10 index: 74, Citations: 8,550

#### Journal Articles (71)

71. Vegh, T and B.C. Murray. Forthcoming. "Incentivizing the Reduction of Pollution at U.S. Dairies: Addressing Additionality When Multiple Environmental Credit Payments Are Combined." *Journal of Agriculture, Food Systems, and Community Development*.
70. Zeff, H., D. Kaczan, G. W. Characklis, M. Jeuland, B. Murray. 2019. "The potential implications of groundwater trading and reformed water rights in the Diamond Valley, Nevada." *Journal of Water Resources Planning and Management* 145(6): 05019009.
69. Murray, B.C., J. Bistline, J. Creason, E. Wright, A. Kanudia, and F. de la Chesnaye. 2018 "The EMF 32 Study on Technology and Climate Policy Strategies for Greenhouse Gas Reductions in the U.S. Electric Power Sector: An Overview". *Energy Economics* 73 (2018) 286–289.
68. Creason, J.R.; J.E. Bistline ; E. Hodson; B. Murray , C.G. Rossmann.. 2018. "Effects of Technology Assumptions on US Power Sector Capacity, Generation and Emissions Projections: Results from the EMF 32 Model Intercomparison Project." *Energy Economics* (2018) 290–306.
67. Bistline, J. E., E. Hodson, C.G. Rossman, J. Creason, B. Murray, A. Barron. 2018. "Electric Sector Policy, Technological Change, and U.S. Emissions Reductions Goals: Results from the EMF 32 Model Intercomparison Project". *Energy Economics* (2018) 307-325.
66. Konschnik, K and B.C. Murray. 2018. "FERC's resilience order may suggest reliability tweaks, rather than novel solutions." (Invited) *Utility Dive* (Feb 2, 2018).

- <https://www.utilitydive.com/news/fercs-resilience-order-may-suggest-reliability-tweaks-rather-than-novel-s/515944/>
65. Galik, C.S., B.C. Murray, and M.C. Parish. 2017. "Near-Term Pathways for Achieving Forest and Agricultural Greenhouse Gas Mitigation in the U.S." *Climate* 5(3), 69  
doi:[10.3390/cli5030069](https://doi.org/10.3390/cli5030069).
  64. Aldy, J.E., M Hafstead, G.E. Metcalf, B.C. Murray, W.A Pizer, C. Reichert, and R.C. Williams III. 2017. "Increasing Emissions Certainty under a Carbon Tax." *Harvard Environmental Law Review* Vol. 41: 1-13.
  63. Murray, B.C., W.A Pizer, C. Reichert. 2017. "Increasing Emissions Certainty under a Carbon Tax." *Harvard Environmental Law Review* Vol. 41: 14-27.
  62. Monast, J; B.C. Murray, and J.B. Wiener. 2017. "On Morals, Markets and Climate Change: Exploring Pope Francis' Challenge." *Law and Contemporary Problems* Vol 80 (1): 135-162.
  61. Ross, M.T and B.C. Murray. 2016. "What is the Fuel of the Future? Prospects under the Clean Power Plan." *Energy Economics* 60 (Nov, 2016): 451-459.
  60. Murray, B.C. 2016. "Ecosystem Services in Practice." *Canadian Public Policy* Vol. 42, No. S1: S24–S31, November 2016. doi:10.3138/cpp.2015-022
  59. Galik, C.S., B.C. Murray, S. Mitchell, P. Cottle. 2016. "Alternative Approaches for Addressing Non-permanence in Carbon Projects: An Application to Afforestation and Reforestation under the Clean Development Mechanism." *Mitigation and Adaptation Strategies for Global Change* Vol 21 (1):101–118  
<http://link.springer.com/article/10.1007/s11027-014-9573-4>
  58. Murray, B.C., C.S. Galik, and T. Vegh. 2015. "Biogas in the United States: Estimating Future Production and Learning from International Experiences." *Mitigation and Adaptation Strategies for Global Change*, first online: 06 September 2015. DOI: 10.1007/s11027-015-9683-7
  57. Miteva, D.A., B.C Murray, and S.K. Pattanayak. 2015. "Do protected areas reduce blue carbon emissions? A quasi-experimental evaluation of mangroves in Indonesia." *Ecological Economics* 119: 127-135.
  56. Murray, B.C. and P.T. Maniloff. 2015. "Why Have Greenhouse Emissions in RGGI States Declined? An Econometric Attribution to Economic, Energy Market, and Policy Factors" *Energy Economics* 51 (2015): 581-589
  55. Murray, B. and N. Rivers. 2015. "British Columbia's Revenue-neutral Carbon Tax: A review of the Latest "Grand Experiment" in Environmental Policy." *Energy Policy* 86 (2015) 674–683.
  54. McCarl, B.A. and B.C. Murray. 2015. "Theme Overview: Revisiting the Evidence and Potential Solutions on Climate Change." *Choices Choices* 2nd Quarter 2015 • 30(2).

53. Murray, B.C. 2015. "Why Have Carbon Markets Not Delivered Agricultural Emission Reductions in the United States?" *Choices* 2nd Quarter 2015 • 30(2).
52. Murray, B., W. Pizer and M. Ross. 2015. "Regulating Existing Power Plants under the U.S. Clean Air Act: Present and Future Consequences of Key Design Choices." *Energy Policy* 83: 87-98.
51. Pizer, W., M.J. Adler, J. Aldy, D. Anthoff, M. Cropper, K. Gillingham, M. Greenstone, B. Murray, R. Newell, W. Pizer, R. Richels, A. Rowell, S. Waldhoff, and J. Wiener. 2014. "Using and improving the social cost of carbon." *Science* . Vol. 346 no. 6214 pp. 1189-1190 (5 Dec, 2014)
50. Murray, B.C. and J.M. Monast. 2014. "Greenhouse Gas Controls and the States." *EM Magazine*, June, 2014. Invited feature article (reviewed).
49. Murray, B.C., M. Cropper, F de la Chesnaye, and J.M. Reilly. 2014. "How Effective are U.S. Renewable Energy Subsidies in Cutting Greenhouse Gases?" *The American Economic Review: Papers and Proceedings* 2014 104(5): 569–574
48. Pendleton, L.H., A.E Sutton-Grier, D.R. Gordon, B.C. Murray, B.E. Victor, R.B. Griffis, J.A.V Lechuga, C. Giri. 2013. "Considering "Coastal Carbon" in Existing U.S. Federal Statutes and Policies." *Coastal Management* 41(5): 439-456.
47. Mosnier, A.; P. Havlík; H. Valin; J. Baker; B. Murray; S. Feng; M. Obersteiner; B.A. McCarl; S. K. Rose; U. A. Schneider. 2013. "Alternative U.S. Biofuel Mandates and Global GHG emissions: The Role of Land Use Change, Crop Management and Yield Growth." *Energy Policy*.
46. Baker, J.S., B.C. Murray, B.A. McCarl, S. Feng, R. and R. Johansson. 2012. "Implications of Alternative Agricultural Productivity Growth Assumptions on Land Management. Greenhouse Gas Emissions, and Mitigation Potential." *American Journal of Agricultural Economics*. doi: 10.1093/ajae/aas114 First published online: December 16, 2012.
45. Galik, C.S., B.C. Murray, D.E. Mercer. 2012. "Where is the carbon? Carbon sequestration potential from private forestland in the U.S. South." *Journal of Forestry*. DOI: <http://dx.doi.org/10.5849/jof.12-055>. Appeared or available online: November 22, 2012
44. Murray, B.C. "Mangroves Hidden Value." 2012. *Nature Climate Change* 2, 773–774 doi:10.1038/nclimate1729 Published online 26 October 2012
43. Pendleton L, Donato DC, Murray BC, Crooks S, Jenkins WA, et al. 2012. Estimating Global "Blue Carbon" Emissions from Conversion and Degradation of Vegetated Coastal Ecosystems. *PLoS ONE* 7(9): e43542. doi:10.1371/journal.pone.0043542
42. McKinley, D.C., M. G. Ryan, R.A. Birdsey, C.P. Giardina, M. E. Harmon, L.S. Heath, R.A. Houghton, R.B. Jackson, J.F. Morrison, B.C. Murray, D.E. Pataki, K. E. Skog. 2011. "A synthesis of current knowledge on forests and carbon storage in the United States." *Ecological Applications*: 21(6), 2011, pp. 1902–1924.

41. Murray, B.C. and J.S. Baker. 2011. "An Output-based Intensity Approach for Crediting Greenhouse Gas Mitigation in Agriculture: Explanation and Policy Implications." *Greenhouse Gas Measurement and Management*. Vol. 1: 27-36.
40. Lopomo, G., L.M. Marx, D. McAdams, B. Murray. 2011. "Carbon Allowance Auction Design." *Review of Environmental Economics and Policy* 5(1): 25-43.
39. Murray, B.C.. 2010. "Pricing Carbon and Other Options for Addressing the Economic Challenges of U.S. Climate Legislation." Invited article for *Aspen Institute Congressional Program Series* Vol. 25(2): 21-30.
38. Ryan, M.G., M. E. Harmon, R. A. Birdsey, C.P. Giardina, L. S. Heath, R.A. Houghton, R. B. Jackson, D. C. McKinley, J.F. Morrison, B. C. Murray, D.E. Pataki, K. E. Skog. 2010. "A Synthesis of the Science on Forests and Carbon for U.S. Forests." *Issues in Ecology*. Issue 13, Spring 2010, pp. 1-16.
37. Baker, J.S., B.A. McCarl, B. C. Murray, S.K. Rose, R. J. Alig, D.Adams, G. Latta, R. Beach, A. Daigneault. 2010. "Net-Farm Income and Land Use under a U.S. Greenhouse Gas Cap-and-Trade." *Policy Issues*, P17 (April).
36. Jenkins, W.A., B.C. Murray, R.A. Kramer, and S.P. Faulkner. 2010. "Valuing Ecosystem Services from Wetlands Restoration in the Lower Mississippi Alluvial Valley." *Ecological Economics* 69 (5): 1051–1061.
35. Murray, B.C. and L.P. Olander. 2009. "REDD, White, and Blue." Invited article for *Carbon Finance*, vol. 6, issue 9.
34. Murray, B.C. 2009. "The Economics of Climate Change Prevention: Benefits, Costs and Policy Options." Invited article for *Aspen Institute Congressional Program Series* Vol. 24(2): 43-50.
33. Murray, B.C. 2009. "Economics and the Climate Change Mitigation Portfolio" *Journal of Land, Resources, and Environmental Law* 29(1):39-52
32. Murray, B.C., and H. Hosterman. 2009. "Climate Change, Cap-and-Trade and the Outlook for U.S. Policy." *North Carolina Journal of International Law and Commercial Regulation*.34(3):699-720
31. Piñeiro, G, E.G. Jobbágy, J. Baker, B.C. Murray, and R.B. Jackson. 2009. "Set-Asides Can Be Better Climate Investment than Corn-Ethanol" *Ecological Applications* 19(2): 277-282
30. Murray, B.C, R.G. Newell, and W.A. Pizer. 2009. "Balancing Cost and Emissions Certainty:An Allowance Reserve for Cap-and-Trade." *Review of Environmental Economics and Policy* 3(1): 84-103
29. Murray, B.C. "Offsets Improve Flexibility." Invited article ("Another View"), *Environmental Forum*, November/December 2008, P.39
28. Olander, L.P., H.K. Gibbs, M. Steininger, J. J. Swenson, and B.C. Murray. 2008. "Reference Scenarios for Deforestation and Forest Degradation in Support of REDD: A Review of Data and Methods." *Environmental Research Letters* 3(2008).



27. Depro, B, B. Murray, R. Alig, A. Shanks. 2008. "Public Land, Timber Harvests, and Climate Mitigation: Quantifying Carbon Sequestration Potential on U.S. Public Timberlands." *Forest Ecology and Management* 255:1122-1134.
26. Kim, M, B.A. McCarl, and B.C. Murray. 2008. "Permanence Discounting for Land-Based Carbon Sequestration." *Ecological Economics*. 64:763-769.
25. Murray, B.C., B.L. Sohngen, and M.T. Ross. 2007. "Economic Consequences of Consideration of Permanence, Leakage and Additionality for Soil Carbon Sequestration Projects." *Climatic Change* 80:127-143.
24. Pattanayak, Subhrendu; Katherine Dickinson; Catherine Corey; Brian Murray; Erin Sills; and Randall Kramer. 2006. "Deforestation, Malaria and Poverty: A Call for Transdisciplinary Research to Support the Design of Cross-Sectoral Policies." *Sustainability: Science, Practice, & Policy* 2(2):1-12
23. DeAngelo, B.J., F. de la Chesnaye, R.H. Beach, A. Sommer, and B.C. Murray. 2006 "Methane and Nitrous Oxide Mitigation in Agriculture." *The Energy Journal*. Special issue (eds: de la Chesnaye, F and J. Weyant) pp: 89-108.
22. Jackson, R.B., E.G. Jobbágy, R. Avissar, S. Baidya Roy, D. Barrett, C.W. Cook, K.A. Farley, D.C. le Maitre, B.A. McCarl, and B.C. Murray. 2005. "Trading Water for Carbon with Biological Carbon Sequestration." *Science* 310: 1944-1947.
21. Beach, R.H., S.K. Pattanayak, R.C. Abt, B.C. Murray, and J.C. Yang. 2005. "Empirical Studies of Non-Industrial Private Forest Management: A Review and Synthesis." *Forest Policy and Economics* 7(3):261-281.
20. Pattanayak, S.K. B.A. McCarl, A.J. Sommer, B.C. Murray, T. Bondelid, D. Gillig, and B. DeAngelo. 2005. "Water Quality Co-effects of Greenhouse Gas Mitigation in U.S. Agriculture." *Climatic Change* 71(3):341-372.
19. Murray, B.C., W.N. Thurman, and A. Keeler. 2005. "Tax Interaction Effects, Environmental Regulation, and 'Rule of Thumb' Adjustments to Social Cost." *Environmental and Resource Economics* 30(1):73-92.
18. Murray, B.C. 2004. "Overview of Agricultural and Forestry GHG Offsets on the U.S. Landscape." *Choices* Fall:13-18.
17. Pattanayak, S.K., R.C. Abt, A.J. Sommer, F. Cubbage, B.C. Murray, J.C. Yang, D. Wear, and S. Ahn. 2004. "Forest Forecasts: Does Individual Heterogeneity Matter for Market and Landscape Outcomes?" *Forest Policy and Economics* 6:243-260.
16. Wear, D.N. and B.C. Murray. 2004. "Federal Timber Restrictions, Interregional Spillovers, and the Impact on U.S. Softwood Markets." *Journal of Environmental Economics and Management* 47(2):307-330.
15. Murray, B.C., B.A. McCarl, and H. Lee. 2004. "Estimating Leakage from Forest Carbon Sequestration Programs." *Land Economics* 80(1):109-124.

14. Pattanayak, S.K., B.C. Murray, and R.C. Abt. 2002. "How Joint is Joint Forest Production? An Econometric Analysis of Timber Supply Conditional on Endogenous Amenity Values." *Forest Science* 48(3):479-491.
13. Muth, M.K., S.A. Karns, D.W. Anderson, and B.C. Murray. 2002. "Economic Effects of Post-Harvest Treatment Requirements for Oysters." *Agricultural and Resource Economics Review* 31(2):171-186.
12. Abt, R.C., and B.C. Murray. 2001. "Southeastern U.S. Timber Market Response to Climate Change Impacts on Forestry and Agriculture." *World Resource Review* 13(2):171-186.
11. Murray, B.C., R.C. Abt, D.N. Wear, P.J. Parks, and I.W. Hardie. 2001. "Land Allocation in the Southeastern U.S. in Response to Climate Change Impacts on Forestry and Agriculture." *World Resources Review* 13(2):239-251.
10. Murray, B.C., and R.C. Abt. 2001. "Estimating Price Compensation Requirements for Eco-certified Forestry." *Ecological Economics* 36(1):149-163.
9. Murray, B.C., S.P. Prisley, R.A. Birdsey, and R.N. Sampson. 2000. "Carbon Sinks Provisions in the Kyoto Protocol: Potential Relevance for U.S. Forests." *Journal of Forestry* 98(9): 6-11.
8. Murray, B.C. 2000. "Carbon Values, Reforestation, and 'Perverse' Incentives Under the Kyoto Protocol: An Empirical Analysis." *Mitigation and Adaptation Strategies for Global Change* 5(3):271-295.
7. McNulty, Steven G., Jennifer A. Moore, Louis Iverson, Anantha Prasad, Robert Abt, Bryan Smith, Ge Sun, Michael Gavazzi, John Bartlett, Brian Murray, Robert Mickler, and John D. Aber. 2000. "Development and Application of Linked Regional Scale Growth, Biogeography, and Economic Models for Southeastern United States Pine Forests." *World Resources Review* 12(2):298-320.
6. Anderson, D.A., B.C. Murray, J.L. Teague, and R.C. Lindrooth. 1998. "Exit from the Meatpacking Industry: A Microdata Analysis." *American Journal of Agricultural Economics* 80(1):96-106.
5. Murray, B.C., and D.N. Wear. 1998. "Federal Timber Restrictions and Interregional Arbitrage in U.S. Lumber." *Land Economics*. 74(1):76-91.
4. Murray, B.C. 1995. "Measuring Oligopsony Power with Shadow Prices: U.S. Markets for Pulpwood and Sawlogs." *The Review of Economics and Statistics* 77(3):486-498.
3. Murray, B.C. 1995. "Oligopsony, Vertical Integration, and Output Substitution: Welfare Effects in U.S. Pulpwood Markets." *Land Economics* 71(2):193-206.
2. Parks, P.J., and B.C. Murray. 1994. "Land Attributes and Land Use Change: Nonindustrial Forest Use in the Pacific Northwest." *Forest Science* 40(3):558-575.
1. Abt, R.C., J. Brunet, B.C. Murray, and D.G. Roberts. 1994. "Productivity Growth and Price Trends in the North American Sawmilling Industry: An Interregional Comparison." *Canadian Journal of Forest Research* 24:139-148.

### Edited Volumes, Books and Monographs (peer-reviewed) (35)

35. Vegh, T., L. Pendleton, B. Murray, T. Troxler, K. Zhang, E. Castañeda-Moya, G. Guannel, and A. Sutton-Grier. 2018. "Ecosystem Services and Economic Valuation: co-benefits of coastal wetlands" Chapter 18 in: L. Windham-Myers, S. Crooks, and T. Troxler (eds.). *A Blue Carbon Primer: The State of Coastal Wetland Carbon Science, Policy, and Practice*. CRC Press, Boca Raton, FL.
34. Murray, B.C., M.L. Cropper, F. C. de la Chesnaye and J.M. Reilly. 2017, 'How Effective are US Renewable Energy Subsidies in Cutting Greenhouse Gases?' in *The Economics of Renewable Energy* (ed, R Fouquet), Edgar Elgar. Curated from article with same name and author list in the *American Economic Review: Papers and Proceedings*.
33. Murray, B.C. 2016. "Forests, Finance, and the Paris Agreement" in Stavins, R.N. and R.C. Stowe, eds. "The Paris Agreement and Beyond: International Climate Change Policy Post-2020." Paper, [Harvard Project on Climate Agreements, Belfer Center for Science and International Affairs, Harvard Kennedy School](https://www.hks.harvard.edu/publications/papers-and-articles/forests-finance-and-the-paris-agreement), October 2016.
32. Streck, C., B. Murray, A. Aquino, L. Durschinger, M. Estrada, C. Parker, and A. Zeleke. 2015. "Financing Land Use Mitigation: A Practical Guide for Decision-Makers." Prepared with support from cooperative agreement # S-LMAQM-13-CA-1128 with U.S. Department of State. <http://www.winrock.org/document/financing-land-use-mitigation-a-practical-guide-for-decision-makers/>
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30. Pendleton, L, B. Murray, D. Gordon, D. Cooley and T. Vegh. 2014. "Harnessing the Financial Value of Coastal 'Blue' Carbon." Chapter 17, in *Valuing Ecosystem Services: Methodological Issues and Case Studies*. Edward Elgar.
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