

CURRICULUM VITAE

Name: W. Michael Hanemann

Title: Professor & Julie A. Wrigley Chair in Sustainability

Address: Department of Economics
Arizona State University
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Tempe AZ 85287-9801

Birthdate and Place: August 26, 1944, Manchester, England

Citizenship: U. S. citizen

Education

Institution	Degree	Year	Field
Oxford University, England	B.A.	1965	Philosophy, Politics, and Economics
London School of Economics	M.Sc.	1967	Development Economics
Harvard University	M.A.	1973	Public Finance and Decision Theory
Harvard University	Ph.D.	1978	Economics

Dissertation title: "A Theoretical and Empirical Study of the Recreation Benefits from Improving Water Quality in the Boston Area," Harvard University, 1978, 532p.

Employment

1967-68: Assistant to the Director, Unit for Economic and Statistical Studies on Higher Education, London School of Economics.

1970-1975: Teaching Fellow, Department of Economics, Harvard University.

1970-1975: Staff Economist/Consultant, Urban Systems Research & Engineering, Inc., Cambridge, Massachusetts.

1976: Lecturer, Department of Economics, Northeastern University, Boston, Massachusetts.

1976-1978: Acting Assistant Professor, Department of Agricultural and Resource Economics, University of California at Berkeley.

1978-1984: Assistant Professor, Department of Agricultural and Resource Economics, University of California at Berkeley.

- 1984-1995: Associate Professor, Department of Agricultural and Resource Economics, University of California at Berkeley.
- 1995-1999: Professor, Department of Agricultural and Resource Economics, University of California at Berkeley.
- 1999 - 2011 Chancellor's Professor, Department of Agricultural and Resource Economics and Goldman School of Public Policy, University of California at Berkeley
- 2010 – 2011 Visiting Professor, Department of Economics, Arizona State University.
- 2011- Professor, Department of Economics, and Wrigley Chair in Sustainability, School of Sustainability, Arizona State University.
Professor of the Graduate School and Chancellor's Professor Emeritus, Department of Agricultural and Resource Economics, University of California at Berkeley.

Other Professional Activities

University Fellow, Resources for the Future (2001-).

Chair, Organizing Committee, Second World Congress of Environmental & Resource Economists (2002)

Chair, Board of Advisors, National Ocean Economics Project, (2002-7)

Member, US Environmental Protection Agency, Environmental Economics Advisory Committee (2000-2006)

Director, California Climate Change Center at UC Berkeley (2003-6)

Member, Steering Committee, California Energy Commission's California Climate Change Center (2006 - 2012)

Member, Advisory Board, Wegener Center for Climate and Global Change, University of Graz, Austria. (2005 - 2011)

Member of the National Academy of Sciences/National Research Council Committee on Prospective Benefits of DOE's Energy Efficiency and Fossil Energy R&D Programs, Phase 2 (2005 - 6); Panel to Review Climate Change Science Program Draft Synthesis and Assessment Product 5.3 (2007); Committee on Potential Energy Savings and Greenhouse Gas Reductions from Transportation (2008-2011); Committee on the Evaluation of the Drakes Bay Oyster Company Special Use Permit DEIS and Peer Review (2012); Committee on Assessment of Technologies and Approaches for Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles, Phase Two (2013 –); Committee on the Analysis of Costs and Benefits of Reforms to the National Flood Insurance Program – Phase 1 (2014 -).

IPCC Fifth Assessment Report, Lead Author and Coordinating Lead Author, Working Group III (2011-2014).

Awards

Elected to US National Academy of Sciences, 2011.

Honorary Ph.D University of Vigo, Spain. January 2015

Fellow, American Association of Agricultural Economics, 2010.

Winner, American Agricultural Economics Association Award for Publication of Enduring Quality, 2009.

Lifetime Award for Outstanding Achievement, European Association of Environmental & Resource Economists, 2008.

Fellow, Association of Environmental & Resource Economists (Inaugural Fellow) 2006.

Honorary Ph.D., Swedish University of Agricultural Sciences, Uppsala, October 2003.

Winner, Association of Environmental and Resource Economists, Publication of Enduring Quality, 1999

Winner, American Agricultural Economics Association Quality of Research Discovery Award, 1990.

Winner, Western Agricultural Economics Association Outstanding Journal Article Award, 1990.

Publications

Refereed Articles

- A-1 Chugh, Lal C., W. Michael Hanemann, and S. Mahapatra. "Impact of Pollution Control Regulations on the Market Risk of Securities in the U. S." *Journal of Economic Studies*, Vol. 5 (May, 1978), pp. 64-70.
- A-2 Hanemann, W. Michael. "Measuring the Worth of Natural Resource Facilities." *Land Economics*, Vol. 56 (October, 1980), pp. 482-490.
- A-3 _____. "Marginal Welfare Measures for Discrete Choice Models." *Economics Letters*, Vol. 13 (1983), pp. 129-136.
- A-4 _____. "Entropy as a Measure of Consensus in the Evaluation of Recreation Site Quality." *Journal of Environmental Management*, Vol. 18 (April, 1984), pp. 241-251.
- A-5 _____. "Discrete/Continuous Models of Consumer Demand." *Econometrica*, Vol. 52 (May, 1984), pp. 541-561.
- A-6 _____. "Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses." *American Journal of Agricultural Economics*, Vol. 66 (August, 1984), pp. 332-341.
- A-7 _____. "Some Issues in Continuous- and Discrete-Response Contingent Valuation Studies." *Northeastern Journal of Agricultural Economics*, Vol. 14 (April, 1985), pp. 5-13.
- A-8 Fisher, A. C., and W. Michael Hanemann. "Environmental Damages and Option Values." *Natural Resources Modeling*, Vol. 1 (Fall, 1986), pp. 111-124.

- A-9 Fisher, Anthony C., and W. Michael Hanemann. "Quasi-Option Value: Some Misconceptions Dispelled." *Journal of Environmental Economics and Management*, Vol. 14 (1987), pp. 183-190.
- A-10 Hanemann, W. Michael. "Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses: Reply." *American Journal of Agricultural Economics*, Vol. 69 (February, 1987), pp. 185-186.
- A-11 Bockstael, Nancy E., W. Michael Hanemann, and Catherine L. Kling. "Estimating the Value of Water Quality Improvements in a Recreational Demand Framework." *Water Resources Research*, Vol. 23 (May, 1987), pp. 951-960. Reprinted in *Environmental Valuation*, ed. by Kenneth G. Willis, Cheltenham, U.K.: Edward Elgar (in press).
- A-12 Bockstael, Nancy E., Ivar E. Strand, and W. Michael Hanemann. "Time and the Recreational Demand Model." *American Journal of Agricultural Economics*, Vol. 69 (May, 1987), pp. 293-302. Reprinted in *Environmental Economics: A Reader*, ed. by Anil Markandya and Julie Richardson, New York: St. Martin's Press, (1992), 171-183.
- A-13 Hanemann, W. Michael. "Information and the Concept of Option Value." *Journal of Environmental Economics and Management*, Vol. 16, No. 1 (January, 1989), pp. 23-37.
- A-14 La France, Jeffrey T., and W. Michael Hanemann. "The Dual Structure of Incomplete Demand Systems." *American Journal of Agricultural Economics*, Vol. 71 (May, 1989), pp. 262-274.
- A-15 Hanemann, W. Michael. "Welfare Evaluations in Contingent Valuation Experiments with Discrete Response Data: Reply." *American Journal of Agricultural Economics*, Vol. 71 (November, 1989), pp. 1057-1061.
- A-16 Carson, Richard T., W. Michael Hanemann, and Dan Steinberg. "A Discrete Choice Contingent Valuation Estimate of the Value of Kenai King Salmon." *Journal of Behavioral Economics*, Vol. 19, Number 1 (1990), pp. 53-68.
- A-17 Fisher, Anthony C., and W. Michael Hanemann. "Information and the Dynamics of Environmental Protection: The Concept of the Critical Period." *Scandinavian Journal of Economics*, Vol. 92, Number 3 (1990), pp. 399-414.
- A-18 Fisher, Anthony C., and W. Michael Hanemann. "Option Value: Theory and Measurement." *European Review of Agricultural Economics*, Vol. 17 No. 2 (1990), pp. 167-180.
- A-19 Hanemann, W. Michael. "Willingness to Pay and Willingness to Accept: How Much Can They Differ?" *American Economic Review*, Vol. 81, Number 3 (1991), pp. 635-647. Reprinted in *The Economics of the Environment*, ed. by W.E. Oates, Cheltenham, U.K.: Edward Elgar, (1994), pp. 471-483.
- A-20 Fisher, Anthony C., W. Michael Hanemann, and Andy Keeler. "Integrating Fishery and Water Resource Management: A Biological Model of a California Salmon Fishery." *Journal of Environmental Economics and Management*, Vol. 20 (1991), pp. 234-261.
- A-21 Hanemann, Michael, John Loomis, and Barbara Kanninen. "Statistical Efficiency of Double-Bounded Dichotomous Choice Contingent Valuation." *American Journal of Agricultural Economics*, Vol. 73 (November, 1991), pp. 1255-1263.

- A-22 Hanemann, Michael, and Edward Morey. "Separability, Partial Demand Systems and Consumer's Surplus Measures." *Journal of Environmental Economics and Management*, Vol. 22, No. 3 (1992), pp. 241-258.
- A-23 Hanemann, W. Michael, Per-Olov Johansson, Bengt Kriström, and Leif Mattson. "Natural Resource Damages for Chernobyl." *Environment & Resource Economics*, Vol. 2 (1992), pp. 523-525.
- A-24 Hanemann, W. Michael, and Ivar E. Strand. "Natural Resource Damage Assessment: Economic Implications for Fisheries Management." *American Journal of Agricultural Economics*, Vol. 75, (December, 1993).
- A-25 Hanemann, W. Michael. "Designing New Water Rates for Los Angeles." *Water Resources Update*, The Universities Council on Water Resources, Issue No. 92, Carbondale, IL, (Summer, 1993).
- A-26 Hanemann, W. Michael. "Incentives for Protecting North American Biodiversity." *The Economics of Biodiversity*, Vol. 1, No. 3 (Summer, 1994), pp. 24-25.
- A-27 Hanemann, W. Michael. "Valuing the Environment Through Contingent Valuation." *Journal of Economic Perspectives*, Vol. 8, No. 4 (Fall, 1994), pp. 19-43.
- A-28 Hanemann, W. Michael. "Improving Environmental Policy: Are Markets the Solution?" *Contemporary Economic Policy*, Vol. 13, (January, 1995), pp. 74-79.
- A-29 Hewitt, Julie A., and W. Michael Hanemann. "A Discrete/Continuous Choice Model of Demand Under Block Rate Pricing." *Land Economics*, Vol. 71, No. 2 (May, 1995), pp. 173-192.
- A-30 Albers, Heidi J., Anthony C. Fisher, and W. Michael Hanemann. "Valuation and Management of Tropical Forests: A Theoretical and Empirical Analysis." *Environment & Resource Economics*, Vol. 8, No. 1 (July, 1996), pp. 39-61.
- A-31 Carson, Richard T., W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith with Michael Conaway, and Kerry Martin. "Temporal Reliability of Estimates from Contingent Valuation." *Land Economics*, Vol. 73, No. 2 (May, 1997), pp. 151-163.
- A-32 Carson, Richard T., W. Michael Hanemann, Raymond J. Kopp, Jon A. Krosnick, Robert C. Mitchell, Stanley Presser, Paul A. Ruud, and V. Kerry Smith with Michael Conaway, and Kerry Martin. "Referendum Design and Contingent Valuation: The NOAA Panel's No-Vote Recommendation." *Review of Economics and Statistics*, Vol. 80, N. 2 (May, 1998), pp. 335-338.
- A-33 Carson, Richard, Nicholas E. Flores and W. Michael Hanemann, "Sequencing and Valuing Public Goods," *Journal of Environmental Economics and Management*, 36 (1998) 314-323.
- A-34 Hanemann, W.H. "Adaptation and its measurement" *Climatic Change*, Vol. 45:3/4, June 2000, pp. 571-581.
- A-35 Krosnick, J.A. et al. "The Impact of 'No Opinion' Response Options on Data Quality: Non-

- Attitude Reduction or an Invitation to Satisfice?" *Public Opinion Quarterly*, Vol. 66, 2002, pp 371-401.
- A-36 Swait, J. et al. "Context Dependence and Aggregation in Disaggregate Choice Analysis" *Marketing Letters*, 13:3 (2002), pp. 195-205.
- A-37 Cooper, J., W.M. Hanemann and G. Signorello, "One-and-One-Half-Bound Dichotomous Choice Contingent Valuation" *Review of Economics and Statistics*. November 2002; 84(4): 742-750.
- A-38 Hanemann, W. Michael. "Willingness to Pay and Willingness to Accept: How Much Can They Differ? Reply" *American Economic Review*. March 2003; 93(1): 464.
- A-39 Kinzig, Ann, et.al. "Managing Uncertainty at the Science-Policy Interface," May 2003. *Ambio*.
- A-40 Carson, R.T., R.C. Mitchell, W.M. Hanemann, R. J. Kopp, S. Presser, P. A. Ruud. "Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez Oil Spill." *Environmental and Resource Economics*, July 2003, Volume 25, Issue 3, pp. 257-286.
- A-41 Katherine Hayhoe et al. "Emissions Pathways, Climate Change, and Impacts on California," *Proceedings of the National Academy of Sciences of the United States of America (PNAS)* August 2004; 101 (34).
- A-42 Schlenker, W., W. M. Hanemann and A. C. Fisher. "Will U.S. Agriculture Really Benefit from Global Warming? Accounting for Irrigation in the Hedonic Approach," *American Economic Review* (March 2005) 395-406.
- A-43 Sethi, G. et al. "Fishery Management Under Multiple Uncertainty," *Journal of Environmental Economics and Management* Vol. 50 No. 2, 2005, pp 300-318.
- A-44 Adamowicz, Wiktor et al. "Decision Strategy and Structure in Households: A 'Groups' Perspective" *Marketing Letters* Vol. 16 No. 3/4, December 2005, pp 387-299.
- A-45 Schlenker, W., W. M. Hanemann, and A. C. Fisher, "The Impact of Global Warming on US Agriculture: An Econometric Analysis of Optimal Growing Conditions," *Review of Economics and Statistics* (February, 2006) 88(1) 113-125.
- A-46 Albiac, J. M. Hanemann, J. Calatrava, and J. Uche. Evaluating Alternatives to the Spanish National Hydrological Plan," *Natural Resources Journal* Summer 2006, Vol. 46, No. 3, 727-757.
- A-47 Schlenker, W., W. M. Hanemann, and A. C. Fisher, "Water Availability, Degree Days, and the Potential Impact of Climate Change on Irrigated Agriculture," *Climatic Change* (2007) 81, 19-38.
- A-48 Olmstead, Sheila M., W. Michael Hanemann and Robert N. Stavins, "Water demand under Alternative Price Structures," *Journal of Environmental Economics and Management* 54 (2007) 181-198.
- A-49 Narain, Urvashi, Michael Hanemann and Anthony Fisher, "The Irreversibility Effect in Environmental Decisionmaking" *Environmental & Resource Economics*, (2007) Vol. 38, 391-405.
- A-50 Purkey, David R., Annette Huber-Lee, David N. Yates, Michael Hanemann and Susan Herrod-Julius, "Integrating a Climate Change Assessment Tool into Stakeholder-driven Water

- Management Decision-making Processes in California” *Water Resources Management* 2007 21: 315-329.
- A-51 Doremus, Holly and Michael Hanemann, “The Challenges of Dynamic Water Management in the American West” *UCLA Journal of Environmental Law and Policy* Vol. 26, No. 1 2008, pp 55-75.
- A-52 Cayan, Daniel, Amy Luers, Guido Franco, Michael Hanemann, Bart Croes, and Edward Vine, “Overview of the California Climate Change Scenarios Project” *Climatic Change* Volume 87, Supplement 1, March 2008, p 1-6.
- A-53 Purkey, D.R., B. Joyce, S. Vicuna, W. M. Hanemann, L. L. Dale, D. Yates and J. A. Dracup, “Robust Analysis of Future Climate Change Impacts on Water for Agriculture and Other Sectors: A Case Study of the Sacramento Valley.” *Climatic Change*. Volume 87, Supplement 1, March 2008, pp 109-122.
- A-54 Vicuna, S., R. Leonardson, W. M. Hanemann, L. L. Dale, “Climate Change Impacts on High Elevation Hydropower Generation in California’s Sierra Nevada: A Case Study in the Upper American River” *Climatic Change* Volume 87, Supplement 1, March 2008, pp 123 – 137.
- A-55 Jorge E. Arana, Carmelo J. Leon and W. Michael Hanemann, “Emotions and Decision Rules in Discrete Choice Experiments for Valuing Health Care Programmes for the Elderly,” *Journal of Health Economics* 2008.
- A-56 Hanemann, Michael “California’s New Greenhouse Gas Laws” *Review of Environmental Economics and Policy* volume 2, issue 1, winter 2008, pp. 114–129.
- A-57 Adamowicz, Wiktor , David Bunch, Trudy Ann Cameron, Benedict G.C. Dellaert, Michael Hanemann, Michael Keane, Jordan Louviere, Robert Meyer, Thomas Steenburgh, Joffre Swait, “Behavioral Frontiers in Choice Modeling” *Marketing Letters* Vol. 19, 2008.
- A-58 Doremus, Holly and W. Michael Hanemann, “Of Babies and Bathwater: Why the Clean Air Act’s Cooperative Federalism Framework is Useful for Addressing Global Warming,” *Arizona Law Review*, 2008, Vol. 50, pp 799-834.
- A-60 Carson, Richard, W. Michael Hanemann and Thomas C. Wegge, “A Nested Logit Model of Recreational Fishing Demand in Alaska” *Marine Resource Economics* (2009) 24(2): 101-129.
- A-61 Hanemann, Michael and Caitlin Dyckman, “The San Francisco Bay-Delta: A Failure of Decision-Making capacity” *Environmental Science and Policy* (2009) 12: 710-725.
- A-62 Hanemann, Michael “The Role of Emission Trading in Domestic Climate Policy,” *The Energy Journal* (2009) Volume 30, Special Issue 2: 73-108.
- A-63 Hanemann, Michael, “Cap-and-Trade: A Sufficient or Necessary Condition for Emission Reduction?” *Oxford Review of Economic Policy* Vol. 26, No. 2 (2010) pp 225-252.
- Shanthi Nataraj and Michael Hanemann, “Does Marginal Price Matter: A Regression Discontinuity Approach to Estimating Water Demand.” *Journal of Environmental Economics and Management*, 2010.
- Michael Hanemann, Xavier Labandeira, María L. Loureiro “Climate Change, Energy and Social Preferences on Policies: Exploratory Evidence for Spain.” *Climate Research*, 48 (2011): 343-348

Guido Franco, Daniel R. Cayan, Susanne Moser, Michael Hanemann and Myoung-Ae Jones, “Second California Assessment: integrated climate change impacts assessment of natural and managed systems. Guest editorial” *Climatic Change* 2011, Volume 109, Supplement 1, Pages 1-19.

Felipe Vásquez Lavín, Larry Dale, Michael Hanemann and Mithra Moezzi, “The impact of price on residential demand for electricity and natural gas.” *Climatic Change* 2011, Volume 109, Supplement 1, Pages 171-189.

Brian A. Joyce, Vishal K. Mehta, David R. Purkey, Larry L. Dale and Michael Hanemann “Modifying agricultural water management to adapt to climate change in California’s Central Valley” *Climatic Change* 2011, Volume 109, Supplement 1, Pages 299-316.

Michael Hanemann, “New Evidence of Public Support for Clean Energy” *Nature Climate Change*, August 2012.

Fisher, Anthony, Michael Hanemann, Michael Roberts, Wolfram Schlenker, “The Economic Impacts of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather: Comment” *American Economic Review* (2012) 102 (7) 3749-3760.

Sylvia Brandt, Felipe Vasquez Lavin and Michael Hanemann “Contingent valuation scenarios for chronic illnesses: The case of childhood asthma” *Value in Health* 15 (2012) 1077-1083.

Koichi Kuriyama, James Hilger, and Michael Hanemann, “A Random parameter model with onsite sampling for recreation site choice: An application to Southern California shore based sportfishing.” *Environmental & Resource Economics* 56 (2013) 481-497.

David Yates, Felipe Vasquez Lavin, David Purkey, Santiago Guerrero, Michael Hanemann and Jack Sieber, “Using economic and other performance measures to evaluate a municipal drought plan.” *Water Policy* 15 (2013) 648-668.

Maria Loureiro, Xavier Labandeira and Michael Hanemann, “Transport and Low-carbon Fuel: A Study of Public Preferences in Spain.” *Energy Economics* 40 (2013), S126-S133.

Tobias Borger, Nicola Beaumont, Linwood Pendleton, Kevin Boyle, Philip Cooper, Stephen Fletcher, Tim Haab, Michael Hanemann, Tara Hooper, Salman Hussain, Rosimeiry Portela, Mavra Sithou, Joanna Stockhill, Tim Taylor, and Melanie Austen, “Incorporating ecosystem services in marine planning: The role of Valuation.” *Marine Policy* 46 (2014), 161-170.

Michael Hanemann, “Property Rights and Sustainable Irrigation – A Developed World Perspective” *Agricultural Water Management* 145 (2014) 5-22

Steve Berry, Ahmed Khwaja, Vineet Kumar, Andres Musalem, Kenneth Wilbur, Greg Alleny, Bharat Anand, Pradeep Chintagunta, Michael Hanemann, Przemek Jeziorski and Angelo Mele “Structural Models of Complementary Choices.” *Marketing Letters* 25 (2014) 245-256.

Michael Hanemann, Susan Stratton Sayre and Larry Dale, “The Downside Risk of Climate Change in California’s Central Valley Agricultural Sector.” *Climatic Change* (2016) 137:15-27.

M. Burke and others (including Hanemann), “Opportunities for advances in climate change economics.” *Science* 15 April, 2016. Vol 352, Issue 6283, pp 292-293.

Jorge A. Huete-Perez and others (including Michael Hanemann), “Critical Uncertainties and Gaps in the Environmental- and Social-Impact Assessment of the Proposed Interoceanic Canal through Nicaragua.” *BioScience* August 2016, Vol. 66, No. 8 pp 632- 645.

Robert J. Johnston and others (including Hanemann), “Contemporary Guidance for Stated Preference Studies.” *Journal of the Association of Environmental and Resource Economists* vol. 4, no. 2, 2017, 319-405.

V. Kerry Smith and others (including Hanemann), “Natural Resource Damages and the Value of Environmental Restoration: the BP Oil Spill.” *Science* 21 April, 2017, 253-254.

_____ “Response to Comment” *Science* 28 July, 2017, 363-4.

Abigail Sullivan, Dave White and Michael Hanemann, “Designing Collaborative Governance: Insights from the Drought Contingency Planning Process for the Lower Colorado River Basin,” *Environmental Science and Policy* 91 (2019), 39-49 (published online in September 2018).

Nonrefereed Research Articles (Research Reports)

- B-1 Hanemann, W. Michael, and C. Binkley. *The Recreation Benefits of Water Quality Improvements: Analysis of Day Trips in an Urban Setting*. EPA-600/5-78-010. Report submitted to the U. S. Environmental Protection Agency by Urban Systems Research and Engineering, Inc. Washington, D. C.: U. S. Environmental Protection Agency, 1978.
- B-2 King, Diana; Hanemann, W. Michael; and Nimmons, John. *The Role of Gas and Electric Utilities in Direct Applications of Geothermal Resources*. Earl Warren Legal Institute, University of California. Berkeley, March, 1980.
- B-3 Hanemann, W. Michael (contributor). *Market Shares Estimation Task Force Report: Projections for Hydrothermal Direct-Heat Systems Market Shares*. U.S. Department of Energy, December, 1980.
- B-4 Hanemann, W. Michael. *Welfare Evaluations with Simulated Hypothetical Market Data: Bishop and Heberlein Revisited*. Department of Agricultural and Resource Economics, University of California. Berkeley, July, 1983.
- B-5 Fairfax, Sally K.; and Hanemann, W. Michael, eds. *Emerging Research Needs and Priorities Concerning Minerals Development on National Forest Lands*. Department of Agricultural and Resource Economics, University of California. Berkeley, March, 1983.
- B-6 Stern, Martin W.; Hanemann, W. Michael; and Eckhouse, Kathy. *A Case Study of Energy and Process Substitution for Frozen Broccoli: Geothermal Energy and the Retortable Pouch*. Department of Agricultural and Resource Economics, University of California. Berkeley, August, 1983.
- B-7 Hanemann, Michael, Ivar Strand, and Thomas Wegge. *Albacore Sportfishing Economic Study*. Prepared for the National Marine Fisheries Service. Sacramento, California: Jones and Stokes Associates, Inc., May, 1986.
- B-8 Hanemann, W. Michael. *Economic Valuation of Changes in the Catch of Sacramento River Chinook Salmon*. Department of Agricultural and Resource Economics, University of California.

Berkeley, October, 1986.

- B-9 Hall, C. H.; Lichtenberg, E. R.; Patton, S. E.; Layton, D. W.; Hanemann, W. M.; and Stuermer, D. H. *Costs of Alternative Treatment Technologies for 1,2-Dibromo-3-Chloropropane (DBCP) in California Groundwater Supplies*. Livermore, California: Lawrence Livermore National Laboratory, May, 1987.
- B-10 Carson, Richard T., W. Michael Hanemann, and Thomas C. Wegge. *Final Report: Juneau Area Economic Study*. Prepared for the Alaska Department of Fish and Game. Jones and Stokes Associates, Sacramento, California, December, 1987.
- B-11 Carson, Richard T., W. Michael Hanemann, and Thomas C. Wegge. *Final Report: Southcentral Alaska Sport Fishing Economic Study*. Prepared for the Alaska Department of Fish and Game. Jones and Stokes Associates, Sacramento, California, December, 198.
- B-12 Hanemann, W. M., and L. Dale. *Reasonable Municipal and Industrial Use in 2010 by SWP Contractors in Southern California and Reasonable Municipal and Industrial Use in 2010 in the Central Coast and San Francisco Bay HSAs*. Consultant's report submitted to the State Water Resources Control Board, Berkeley, 1988.
- B-13 Dale, L.; and Hanemann, W. M. *The Cost of Re-Operating New Don Pedro Reservoir to Increase Spring Flow to the San Joaquin River*. Department of Agricultural and Resource Economics, University of California. Berkeley, June, 1990.
- B-14 Dale, L.; and Hanemann, W. M. *Sizing of A Groundwater Bank*. Department of Agricultural and Resource Economics, University of California. Berkeley, June, 1990.
- B-15 Jones & Stokes Associates, Inc. *Environmental Benefits Study of San Joaquin Valley's Fish and Wildlife Resources*. (JSA 87-150) Sacramento, California. Prepared by J. B. Loomis, W. M. Hanemann, and T. C. Wegge, September, 1990.
- B-16 Carson, Richard T.; Hanemann, W. Michael; Wegge Thomas. *A Nested Logit Model of Recreational Fishing Demand in Alaska*, June, 1989.
- B-17 Jones & Stokes Associates, Inc. *Southeast Alaska Sport Fishing Economic Study* Final Research Report (JSA 88-028) Sacramento, California. December, 1991.
- B-18 Carson, Richard T.; Conaway, Michael B.; Hanemann W. Michael; Kopp, R.J.; Mitchell, R.C.; Presser, S.; Ruud, P.A. *Comments on the Benefit Analysis in the U.S. Environmental Protection Agency's Proposed Navajo Generating Station BART Action Decision Focus*. 1991.
- B-19 MacDougall, Neal, W. Michael Hanemann, and Zilberman, David. *The Economics of Agricultural Drainage* Report submitted to the Central Valley Regional Water Quality Control Board, Standard Agreement No. 0-132-150-0. June, 1992.
- B-20 Hanemann, W. Michael. Comment submitted to the Office of Environmental Affairs, Department of Interior, in response to the Notice of Proposed Rulemaking (58 FR 39328), *Concerning Natural Resource Damage Assessments*. 1993.
- B-21 Hanemann, W. Michael; McCann, Richard. "Economic Impacts on the Northern California Hydropower System" in *Integrated Modeling of Drought and Global Warming, Impacts on Selected California Resources*. National Institute for Global Environmental Change, University

- of California, Davis. pp. 55-68. March, 1993.
- B-22 Dumas, Christopher; and Hanemann, W. Michael. "Simulating Impacts on the Sacramento River Fall Run Chinook Salmon Population" in *Integrated Modeling of Drought and Global Warming, Impacts on Selected California Resources*. National Institute for Global Environmental Change, University of California, Davis. pp. 69-95. March, 1993.
- B-23 Hanemann, W. Michael. "Economic Impact on Ocean Fishing" in *Integrated Modeling of Drought and Global Warming, Impacts on Selected California Resources*. National Institute for Global Environmental Change, University of California, Davis. pp. 107-112. March, 1993.
- B-24 Jones & Stokes Associates. (Chapters 3L and 3N by Hanemann, W. Michael.) "Mono Basin Water Rights of the City of Los Angeles." Environmental Impact Report. California State Water Resources Control Board, Division of Water Rights, Sacramento, California, May, 1993.
- B-25 Dumas, Christopher F., and Hanemann, W. Michael. *Economic Benefits of the United States Environmental Protection Agency's Proposed Bay-Delta Standards*. Report for United States Environmental Protection Agency, Water Management Division, San Francisco, California, November, 1993.
- B-26 Hanemann, W. Michael. *Expert Report Regarding the American Trader Oil Spill*. December 4, 1994.
- B-27 Hanemann, W. Michael. *Review of Triangle Economic Research Report on Economic Loss to Recreational Fishing in the Upper Clark Fork Basin*. State of Montana Natural Resource Damage Program, Helena: Montana, October 1995.
- B-28 Hanemann, W. Michael, Gloria Helfand, Gareth Green, and Francois Larrivee. "Economic Valuation of Changes in the Quality of Life." Department of Agricultural and Resource Economics, Working Paper No. 764, University of California. Berkeley, November, 1995.
- B-29 Hanemann, W. Michael. *The Orange County Beach Survey*. September 16, 1996.
- B-30 Hanemann, W. Michael. *The 1997 Orange County Boating and Surfing Survey*. June 6, 1997..
- B-31 Hanemann, W. Michael. *Final Conclusions Regarding Lost Recreational Damages Resulting from the American Trader Oil Spill*. August 15, 1997.
- B-32 Hanemann, W. Michael. Arsenic Rule Benefits Panel of the US EPA Science Advisory Board, *Arsenic Rule Benefits Analysis: An SAB Review*. EPA-SAB-EC-01-008, Washington DC, August 2001.
- B-33 Reports submitted by the Southern California Beach Study Research Team (Director: Michael Hanemann) to the Consortium of Funders :
- Beach Recruitment Report (August, 2001)
 - Report on Choice Set Familiarity (August, 2001)
 - Report on Beach Trips by Wave (September, 2001)
 - Revised Report on Activities (November, 2001)
 - Report on Panel Participation and Attrition (December, 2001)
 - Beach Expenditures Report (January, 2002)
 - Report on Wave 4 Data Analysis (January 2002)

- Report on Wave 4 Valuation (January, 2002)
 Data Collection Production Report (January 2002)
 Revised Contingent Behavior-Contingent Valuation Report (March, 2002)
 Report on Data Collection, Checking, Cleaning, and Archiving for Phase I of the Southern California Beach Project (March, 2002)
 Report on Valuation Methodology (May, 2002)
- B-34 UST/RCRA BCI Review Panel of the SAB Executive Committee, *Underground Storage Tanks (UST) Cleanup & Resource Conservation & Recovery (RCRA) Subtitle C Program Benefits, Costs and Impacts (BCI) Assessment: An SAB Advisory*. EPA-SAB-EC-ADV-03-001, December 2002.
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- F-17 LaFrance, Jeffrey T., and W. Michael Hanemann. "The Integration of Some Common Demand Systems." Department of Agricultural and Resource Economics, Working Paper No. 320, University of California. Berkeley, July, 1984.
- F-18 Hanemann, W. Michael. "Introducing Site Quality Into Recreation Demand Functions." Department of Agricultural and Resource Economics, Working Paper No. 338, University of California. Berkeley, November, 1984.
- F-19 _____ . "Multiple Site Demand Models. Part I: Some Preliminary Considerations." Department of Agricultural and Resource Economics, Working Paper No. 336, University of California. Berkeley, November, 1984.
- F-20 _____ . "Multiple Site Demand Models. Part II: Review of Existing Models and Development of

- New Models." Department of Agricultural and Resource Economics, Working Paper No. 337, University of California. Berkeley, November, 1984.
- F-21 _____. "Specification of the individual's demand function: the treatment of time." Department of Agricultural and Resource Economics, Working Paper No. 316, University of California, Berkeley, November, 1984.
- F-23 Carson, Richard T., W. Michael Hanemann, and Robert Cameron Mitchell. "The Use of Simulated Political Markets to Value Public Goods." Economics Department, University of California. San Diego, October, 1986.
- F-24 Hanemann, W. Michael. "Institutional Problems of Production Agriculture Related to the Regulatory Process." Department of Agricultural and Resource Economics, University of California. Berkeley, March, 1987.
- F-25 Hanemann, W. Michael. "Three Approaches to Defining 'Existence' or 'Non-Use' Value Under Certainty. Department of Agricultural and Resource Economics, Working Paper No. 691, University of California, Berkeley. July, 1988.
- F-26 Hanemann, W. Michael, David Chapman. "Beyond Contingent Valuation: Deriving Environmental Benefits from Hypothetical Data." Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley, October, 1988.
- F-27 Hanemann, W. Michael, Erik Lichtenberg, and David Zilberman. "Conservation versus Cleanup in Agricultural Drainage Control." Department of Agricultural and Resource Economics, University of Maryland, July, 1989. (Revised Sept., 1989).
- F-28 Keeler, A., Fisher, A., and W. Michael Hanemann. "The San Francisco Bay/Delta Chinook Salmon Fishery: A Review and Analysis of Recent Trends." Department of Agricultural and Resource Economics, Working Paper No. 501, University of California. Berkeley. July, 1989.
- F-29 Hanemann, Michael, Erik Lichtenberg, and David Zilberman. "Conservation versus Cleanup in Agricultural Drainage Control." Department of Agricultural and Resource Economics, University of Maryland, September, 1989.
- F-30 Dale, Larry, and W. Michael Hanemann. "Transactions Costs and the Metering of Urban Water Use in California." Department of Agricultural and Resource Economics, University of California. Berkeley, June, 1990.
- F-31 Loomis, J., J. Hoehn, and W. Michael Hanemann. "Testing the Fallacy of Independent Valuation and Summation in Multi-Part Policies: An Empirical Test of Whether 'Too Many Proposals Pass the Benefit-Cost Test'." Department of Environmental Studies, University of California, Davis, August, 1990.
- F-32 Carson, Richard T., Nicholas E. Flores, and W. Michael Hanemann. "On the Nature of Compensable Value in a Natural Resource Damage Assessment." Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley, January, 1992.
- F-33 Carson, Richard, Flores, N. E., and Hanemann, W. M. "On the Creation and Destruction of Public Goods: The Matter of Sequencing." Department of Economics, University of California, San Diego, April, 1992.

- F-34 Carson, Richard T., M.B. Conaway, W.M. Hanemann, R.J. Kopp, K. Martin, R.C Mitchell, S. Presser, and P.A. Ruud. "Valuing Winter Visibility Improvement in the Grand Canyon, Natural Resource Damage Assessment, Inc.: La Jolla, California. June, 1992.
- F-35 Hanemann, W. Michael, David Chapman, and Barbara Kanninen. "Non-Market Valuation Using Contingent Behavior: Model Specification and Consistency Tests." Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley. January 1993.
- F-36 Hanemann, W. Michael. "Projected M&I Demand in the LADWP Service Area 1990-2010." Department of Agricultural and Resource Economics, Working Paper No. 644, University of California, Berkeley. February, 1993.
- F-37 Hanemann, W. Michael. "Consumer Demand with Multiple Linear Constraints: A Global Analysis." Department of Agricultural and Resource Economics, University of California. Berkeley, March, 1993.
- F-38 Kriström, Bengt, Hans Nyquist, and W. Michael Hanemann. "Dichotomous Choice Contingent Valuation Experiment: A Mixed Distribution Approach." Working Paper, Department of Economics, University of Umea, Sweden. June, 1993.
- F-39 Chapman, David, and W. Michael Hanemann. "Correlated Discrete-Response Contingent Valuation" Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley, July, 1993.
- F-40 Chesnutt, Thomas W., Anil Bamezai, and W. Michael Hanemann. "Revenue Instability Induced by Conservation Rate Structures: An Empirical Investigation of Coping Strategies." Department of Agricultural and Resource Economics, Working Paper No. 695, University of California, Berkeley. November, 1993.
- F-41 Fisher, Anthony C., and W. Michael Hanemann. "What's Wrong with Current Estimates of Climate Change Damages?" Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley. August, 1994.
- F-42 Cooper, Joseph C., and W. Michael Hanemann. "Referendum Contingent Valuation: How Many Bounds Are Enough?" USDA Economic Research Service, Food and Consumer Economics Division, Working Paper. May, 1995.
- F-43 Hanemann, W. Michael and Andrew Keeler. "Economic Analysis in Policy Evaluation, Damage Assessment and Compensation: A Comparison of Approaches." Department of Agricultural and Resource Economics, Working Paper No. 766, University of California, Berkeley. June, 1995.
- F-44 Hanemann, W. Michael. "Notes on Discounting Environmental Outcomes." Department of Agricultural and Resource Economics, Working Paper, University of California. Berkeley, September, 1995.
- F-45 Mohn, C., W. Michael Hanemann, Michael Ward, "Caught in a Corner: Using the Kuhn-Tucker Conditions to Value Montana Sportfishing" June 2000.
- F-46 Busch, Christopher B. and W. Michael Hanemann, "Analyzing the Impact of Beach Closures, Intersite Substitution and Intertemporal Substitution via a Model of Attendance at Five Orange County Beaches" Working Paper No. 965, University of California, Berkeley, July, 2001.

- F-47 Cavanagh, Sheila M., W. Michael Hanemann, and Robert N. Stavins “Muffled Price Signals: Household Water Demand Under Increasing-Block Prices” Fondazione Eni Enrico Mattei Working Paper 40. February, 2002.
- F-48 Schlenker, W., A. Hanemann,, and A.C. Fisher, “The Impact of Global Warming on U.S. Agriculture: An Econometric Analysis,” Department of Agricultural and Resource Economics Working Paper 936, University of California, Berkeley, October 9, 2002.
- F-49 W. Michael Hanemann, “The Central Arizona Project”, Department of Agricultural and Resource Economics Working Paper No. 937, University of California, Berkeley, October 2002.
- F-50 Mohn, Craig, Michael Hanemann, Linwood Pendleton, and David Layton, “Shifting Sands: A Preliminary Exploration of Seasonal Variation in Preferences for Beaches,” Department of Agricultural and Resource Economics Working Paper No. 966, University of California, Berkeley, January 2003.
- F-51 Kuriyama, Koichi, W. Michael Hanemann, and Linwood Pendleton, “Approximation Approaches to Probabilistic Choice Set Models for Large Choice Set Data,” Department of Agricultural and Resource Economics Working Paper No. 967, University of California, Berkeley, May 2003.
- F-52 Schlenker, W., W.M. Hanemann, and A. Fisher, “Will U.S. Agriculture Really Benefit from Global Warming? Accounting for Irrigation in the Hedonic Approach,” Department of Agricultural and Resource Economics Working Paper No. 941, University of California, Berkeley, October 2003.
- F-53 Hoffmann, Sandra A. and W. M. Hanemann, “Torts and the Protection of ‘Legally Recognized Interests,” Department of Agricultural and Resource Economics Working Paper No. 1025, University of California, Berkeley April, 2005.
- F-54 W. M. Hanemann and Celine Nauges, “Heterogeneous Responses to Water Conservation Programs: The Case of Residential Users in Los Angeles,” Department of Agricultural and Resource Economics Working Paper No. 1026, University of California, Berkeley, August 2005.
- F-55 Dale Whittington and W.M. Hanemann, “ The Economic Costs of Benefits of Investments in Municipal Water and Sanitation Infrastructure: A Global Perspective,” Department of Agricultural and Resource Economics Working Paper No. 1027, University of California, Berkeley, February 2006.
- F-56 W.M. Hanemann and Larry Dale, “Economic Damages from Climate Change: An Assessment of Market Impacts,” Department of Agricultural and Resource Economics Working Paper No. 1029, University of California, Berkeley, November 2006.
- F-57 W. M. Hanemann, “How California Came to Pass AB 32, the Global Warming Solutions Act of 2006,” Department of Agricultural and Resource Economics Working Paper No. 1040, University of California, Berkeley, March 2007.
- F-58 W. M. Hanemann, “What is the Economic Cost of Climate Change?” Department of Agricultural and Resource Economics Working Paper No. 1071, University of California, Berkeley, August 2008.
- F-59 James Hilger and W. M. Hanemann, “The Impact of Water Quality on Southern California Beach

Recreation: A Finite Mixture Model Approach,” Department of Agricultural and Resource Economics Working Paper No. 1074, University of California, Berkeley, 2008.

- F-60 Felipe Vasquez Lavin and W.M. Hanemann, “Taste Indicators and Heterogeneous Revealed Preferences for Congestion in Recreation Demand,” Department of Agricultural and Resource Economics Working Paper No. 1075, University of California, Berkeley, 2008.
- F-61 Sylvia J. Brandt, Felipe Vasquez Lavin, and W. M. Hanemann, “Designing contingent valuation scenarios for environmental health: The case of childhood asthma,” Department of Agricultural and Resource Economics Working Paper No. 1076, University of California, Berkeley, 2008.
- F-62 Shanthi Nataraj and W. M. Hanemann, “ Does Marginal Price Matter? A Regression Discontinuity Approach to Estimating Water Demand,” Department of Agricultural and Resource Economics Working Paper No. 1077, University of California, Berkeley, 2008.
- F-63 Felipe Vasquez Lavin and W. M. Hanemann, “Functional Forms in Discrete/Continuous Choice Models with General Corner Solution,” Department of Agricultural and Resource Economics Working Paper No. 1078, University of California, Berkeley, December 2008.
- F-64 Michael Hanemann, Susan Stratton, Nathaniel Bush and Larry Dale, Climate Change Impacts to Urban and Agricultural Sectors in California, California Energy Commission, December 2008.

Hanemann, M., X. Labandeira, J. M. Labeaga and X. Lopez, Energy Demand for Heating: Short Run and Long Run. September, 2013.

Steve Berry, Ahmed Khwaja, Vineet Kumar, Andres Musalem, Ken Wilbur, Greg Allenby, PradeepChintagunta, Michael Hanemann, Przemek Jeziorski and Angelo Mele, "Structural Models of Complementary Choices." October 2013.

Larry Dale, Michael Hanemann and Susan Stratton Sayre, “The Downside Risk of Climate Change” January 2014.

Michael Hanemann, Marc Jeuland, Kristen Downs, and Dale Whittington, Estimating the Global Damages from Climate Change in an Integrated Assessment Model: Problems of Scale and Aggregation. January 2014.

Presentations

“Environmental Valuation: Contingent Valuation and Choice Modeling” Invited lectures for course on The Economics of Natural Resources and the Environment, International Center for Advanced Mediterranean Agronomic Studies, Zaragoza, Spain, February 1-2, 2005.

“Improving Economic Tools for the Analysis of Climate Change” Invited presentation at Symposium for Stephen Schneider’s 60th Birthday, Stanford University, February 10-12, 2005.

“Economic Impact of Climate Change on the California Water System” Invited presentation, Annual Conference of California Municipal Utilities Association, San Diego CA, March 3, 2005.

“In Defense of the Economic Valuation of the Natural Environment” Invited paper, Perspectives on Environmental Values Conference, University of North Carolina, Chapel Hill, March 4-5, 2005.

“Energy Efficiency and Climate Change” Invited presentation, Workshop on Energy and Sustainable Growth in California, Berkeley City Club, April 22, 2005.

“Climate Change in California” Public lecture sponsored by California Interfaith Power and Light Group, Westminster Presbyterian Church, Sacramento CA, April 22, 2005.

“The Evolution of Water Marketing in California: Property Rights versus Economics as Drivers of Market Development” Presented at Western Economics Association, Annual Meeting, San Francisco, April 5, 2005.

“Optimal Growing Conditions for California: A Micro Level Analysis of the Impacts of Climate change” (co-authored with Wolfram Schlenker and Anthony Fisher). Presented at Western Economics Association, Annual Meeting, San Francisco, April 7, 2005.

“Analyzing Heterogeneity in Discrete Choice: A Latent Segmentation Approach” (co-authored with James Hilger) Presented at Western Economics Association, Annual Meeting, San Francisco, April 8, 2005.

“Heterogeneity in Discrete Choice: A Latent Segmentation Approach” (co-author with James Hilger). Paper presented at the American Agricultural Economics Association Annual Meeting, Providence RI, July 25, 2005.

“Determinants of Agricultural Output: Degree Days, Yields and Implications for Climate Change” (co-author with Wolfram Schlenker and Anthony Fisher). Paper presented the American Agricultural Economics Association Annual Meeting, Providence RI, July 26, 2005.

“Climate Change: What We Know” Invited presentation, Informational Hearing, California State Assembly Select Committee on Air and Water Quality, Santa Monica CA, August 11, 2005.

“Economic Impacts of Climate Change” Invited presentation, Plenary Session, International Energy Conversion Engineering Conference, San Francisco, CA, August 15, 2005.

“Climate Change in California” invited lecture, San Francisco Planning and Urban research Association, San Francisco CA, August 18, 2005

“Progress on the Preliminary Science Report to the Governor” California Energy Commission Second Annual Climate Change Research Conference, September 16, 2005.

“The Economic Issues Raised by Climate Change in California” Keynote speech, University of Colorado Environmental and Resource Economics Workshop, Vail CO, September 23, 2005.

“Climate Change and Environmental Policy in California” Invited presentation, First Annual California Environmental Law Conference, UC Berkeley Law School, February 16, 2006.

“Climate Change Impacts on Hydropower: A high Elevation Case Study in the Upper American River” (co-authored with Sebastian Vicuna, Larry Dale, Rebecca Leonardson and John Dracup) Invited paper presented at California Climate Change and Hydropower Conference, UC Davis, February 16, 2006.

Invited panelist, Workshop on Climate Change and the Water Industry organized by Thames Water, San Francisco, February 23, 2006.

Invited participant, Workshop on New Prospects for Climate Change Regulation, Harvard Law School,

Cambridge MA, March 10, 2006.

Invited presentation on economic research on climate policy in California to Sir Nicholas Stern and the staff of the Stern Review on the Climate Change, London England, March 27.

“Sustainability and Climate Change: The Problem of Water” Invited public lecture sponsored by the Royal Economic Society of Gran Canaria, Gran Canaria, Spain March 29, 2006.

“Agriculture & Urban Water Use versus the Environment – and Climate Change” Invited presentation, University and Industry Consortium, Spring Meeting, Oakland CA, May 4, 2006.

“Climate Change and California’s Economy” (co-author with Alex Farrell) Public Briefing, California research Bureau, Sacramento CA, April 7, 2006.

“Climate Change Impacts and Adaptation Policy: A California Case Study” Invited lecture, Executive Environmental Program: Strategic Management of Environmental Policy, Saltillo, Mexico, June 1, 2006.

“The Intertemporal Substitution of Recreation Demand: A Dynamic Kuhn-Tucker Model With a Corner Solution” (co-author Koichi Kuriyama) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 4, 2006.

The Kuhn-Tucker Corner Solution Model with Non-Additive Separable Preferences: An Application to Recreation Demand” (co-author with Koichi Kuriyama) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 5, 2006.

“Utility Consistent Frameworks to Model Corner Solutions With Large Demand Systems” (co-author with Felipe Vasquez) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 5, 2006.

“Finite Mixture Model of Beach Recreation in Southern California” (co-author with James Hilger) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 5, 2006.

“Aggregation Bias in Welfare Calculations with Discrete Choice Models: The Fallacy of the Representative Individual” (co-author with Craig Mohn and Linwood Pendleton) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 5, 2006.

“Climate Change as a Natural Catastrophe” Invited presentation, session on Economics of Catastrophe, Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 5, 2006.

Michael Hanemann and Felipe Vasquez, “Sequence Effects (and a Scope Effect) Revisited” Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto, Japan, July 5, 2006.

“The Economic Costs and Benefits of Investments in Municipal Water and Sanitation Infrastructure: A Global Perspective” (co-author with Dale Whittington) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 6, 2006.

“Heterogeneous Responses to Water Conservation Programs: The Case of Residential Users in Los Angeles” (co-author with Celine Nauges) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 6, 2006.

“Implications of Climate Change for Farmland Value: Preliminary estimates for California” (co-author with Anthony Fisher and Wolfram Schlenker) Paper presented at the Third World Congress of Environmental and Resource Economists, Kyoto Japan, July 6, 2006.

“Economic Damages from Climate Change: An Assessment of Market Impacts” (co-author with Larry dale) Invited paper presented at Global Forum on the Economic Benefits of Climate Change Policies, OECD Paris, July 6-7, 2006.

“Economic Impact of Reducing Greenhouse Gas Emissions in California” Invited Lecture, Public Policy Institute of California, San Francisco CA, July 10, 2006.

“Translating Risks into Social and Economic Impacts” Invited presentation, Workshop on California Levee Risk, Now and in the Future: Identifying Research and Tool Development Needs, Sacramento CA, September 28-29, 2006.

“California’s New Greenhouse Gas Law” Invited lecture, Graduate School of International Policy Studies, Monterey Institute of International Studies, Monterey CA , November 2, 2006.

“Climate Change Policy in California” Public Lecture, Dublin, Ireland November 9, 2006.

“Climate Change and California Water” Invited lecture, School of Geography, Planning and Environmental Policy, University College Dublin, November 10, 2006.

“Nonmarket Valuation and Guidelines in the United States, Invited lecture, Conference of European Forest Externalities Research Group, Catania, Italy, November 17, 2006.

“Integrating Economic and Environmental Aspects of Water Management” Invited paper presented at Conference on Water Management: Technology, Economics and the Environment, Madrid, January 19-20, 2007.

“Contingent Valuation and Choice Modeling” Invited lectures for course on The Economics of Natural Resources and the Environment, International Center for Advanced Mediterranean Agronomic Studies, Zaragoza, Spain, January 22-23, 2007.

“Climate Change: Economics and Policy” Plenary speech, Annual meeting of Spanish Association for Energy Economics, Oviedo Spain, January 25, 2007.

“Innovative Climate Change Mitigation Policy: the Case of California” Invited presentation Wegener Center conference of The Future Climatic Window: Local Impacts of Climate Change, Leibnitz Austria, January 26, 2007.

“Global Climate Change and California” Invited presentation, Assembly Committee on Water, Parks & Wildlife, Sacramento CA, February 20, 2007.

“Why We Should Care About Climate Change” Invited presentation, International Conference on Cap and Trade as a Tool for Climate Change Policy: Design and Implementation, UC Berkeley, February 22-23, 2007.

Discussant, RFF Conference on the Frontiers of Environmental Economics, Washington DC February 27, 2007.

“Adaptation and Climate Change in California” Invited presentation, Frankel Symposium: Coping with

Global Warming, UCLA Law School, March 2, 2007.

“Climate Change and Energy Policy – the View from California” Invited presentation, Alberta-California Energy Conference, UC Berkeley, March 9, 2007.

“Why CO2 Is Different Than SO2: The California Model for GHG Regulation” Invited presentation, UC Berkeley Energy Symposium, UC Berkeley, March 21, 2007.

“Why Good Beach Water Quality Matters – And Is Difficult to Attain” Invited paper presented at IGCC Conference on Beach Water Quality and Tourism in Southeast Asia, Penang, Malaysia, March 27-29, 2007.

“Climate Change Policy Design in California” Invited presentation, Conference on the Future of Environmental Policy in Mexico: Growing Green, Mexico City, April 26, 2007.

“The Concept of Value in Economics” Invited lecture, Conference of European Forest Externalities Research Group, Barcelona, Spain, May 15, 2007.

“The California Climate Change Initiative” Invited presentation, Austrian Paper Industry Annual Forum, Graz, Austria, May 22, 2007.

“The Economics of Climate Change” Invited lecture, Wegener Center for Climate and Global Change, University of Graz, May 22, 2007.

“California’s Approach to Managing Greenhouse Gasses” Invited presentation. Conference on Transatlantic Cooperation for Clean Air: Common Goals, Different Strategies, US Embassy, Vienna, Austria, May 24, 2007.

“The Problem of Water” Invited lecture, 37th St. Gallen Symposium, St. Gallen, Switzerland, June 1, 2007.

“A Different Architecture for Climate Change Policy” Public lecture, Portland State University, Portland OR June 8, 2007.

“Policy Options for Reducing GHG Emissions” Invited presentation, Conference on “The Changing Climate Issue: Reporting Ahead of the Curve” Portland OR, June 9, 2007.

Lecture Course on Non-Market Valuation, University of Valencia Summer School on Business and Economics, Valencia, Spain July 2-6, 2007.

“The Administration and Regulation of Water Supply” Invited presentation, Mexican Institute of Water Technology, International Seminar on the Administration and Regulation of Water Supply and Sanitation, Mexico City, July 26, 2007.

“How Green Tech Will Help the Economy” Testimony presented at Informational hearing of US Senate Committee on Environment and Public Works, Santa Clara CA, August 14, 2007.

“Climate Change Policy: A Different Architecture” Invited lecture, University of the Basque Country Economics Summer School on Climate Change and Sustainable Development, San Sebastian, Spain, September 4, 2007.

“The Challenge of Climate Change for Economics” Invited presentation, International Group of Funding

Agencies for Global Change Research, annual meeting, Vienna, Austria, October 31, 2007.

Invited mentor and discussant, Environmental and Resource Economics Early-Career Researcher Workshop, Bathurst Australia, November 12-13, 2007.

“The Economics of Climate Change” Public Lecture, Australian Department of the Environment and Water Resources, Canberra, Australia, November 14, 2007.

“Nonmarket Valuation: The Challenge of Dealing with Preferences” Invited lecture, Conference in Honor of Mordecai Schechter, Department of Economics, Haifa University, Israel, November 30, 2007.

“The Economics of Climate Change Reconsidered” Public Lecture, Department of Economics, University of Las Palmas, Gran Canaria, Spain, December 3, 2007.

Panel member, Sessions on Good Practice Guidelines for Non-market Valuation, organized by European Forest Externalities Research Group, La Palma Island, Spain, December 4-5, 2007.

“Upstream versus Downstream Regulation” Invited presentation, Workshop on Cap and Trade Design Issues, Stanford University, January 15, 2008.

“Carbon Tax versus Cap and Trade” Invited presentation, California Air Resources Board staff, Sacramento CA February 1, 2008.

“Climate Change Policy in California, the US, and the EU” Invited paper presented at Workshop on California-EU Regulatory Cooperation, UC Berkeley, February 22, 2008.

“Environmental Taxes” Invited presentation, New America Foundation Conference on Tax Reform for California’s New Economy, Sacramento CA, February 27, 2008.

“What Climate Change Means to California” Invited presentation, Conference on "Beyond Kyoto: Addressing the Legal Mechanisms to Mitigate Climate Change” UC Davis Law School, February 29, 2008.

“Climate Change in the North” Invited presentation, Conference on The Consequences of Climate Change in the Canadian North, UC Berkeley, March 7, 2008.

Invited discussant of Stavins, Jaffe & Schatzki “Too Good to be True”, POWER Conference, UC Berkeley, March 21, 2008.

“Economics of Climate Change: Why the Hurry” Invited keynote speech, Ninth Annual Swiss Forum of Climate, Bern, April 1, 2008.

“The Economics of Adaptation” Invited paper, OECD Expert Workshop on Economic Aspects of Adaptation to Climate Change, Paris, April 7-8, 2008.

“Water and Sanitation Challenge Paper (co-author with Dale Whittington, Claudia Sadoff and Marc Jeuland)” Second Copenhagen Consensus, Copenhagen, May 26-30, 2008.

“Environmental Justice and Greenhouse Gas Emission Regulation in California” Invited presentation, California Air Resources Board staff, Sacramento CA, June 11, 2008.

“Addressing the Climate Challenge Through Innovation: The Perspective from Economics” Research

Conference: Innovation in Climate and Energy, sponsored by the Copenhagen Climate Council, Copenhagen, June 19, 2008.

“Impact of Changes in Household Energy and Water Rates, Rate Structures,” (co-author with Larry Dale) Paper presented at 21st Annual Conference, Center for Research in Regulated Industries, Monterey CA, June 20, 2008.

“The Economics of Climate Change Revisited” Paper presented at Annual Meeting of the European Association of Environmental and Resource Economists, Gothenburg, Sweden, June 27, 2008.

“Climate Change Policy” Invited Plenary Address, Annual Meeting of the European Association of Environmental and Resource Economists, Gothenburg, Sweden, June 28, 2008.

“Water Resources Management in the United States” Invited lecture, Goldman School of Public Policy Executive Education Program on Water Resources Management for senior executives of China's Ministry of Water Resources, UC Berkeley, CA July 23, 2008.

“Water Resources Management in California: The Legacy of Dysfunctional Institutions” Invited paper presented at Symposium on Water Economics and Financing, Zaragoza Spain, July 28, 2008.

“How, and When, Does Emission Trading Work?” Invited paper, 3rd Atlantic Workshop on Energy and Environmental Economics, A Toxa, Spain, July 4, 2008.

“Adaptation in Action: New Climate Change and Water Policy in California” Public lecture, hosted by the Economic Society of Australia (NSW), Sydney Australia, August 11, 2008.

“California's Greenhouse Gas Legislation - A Different Paradigm” Invited seminar, Law School, Australian National University, Canberra, Australia, August 12, 2008.

“A New Architecture for Domestic Climate Change Policy: Trading, Tax or Technologies?” Public lecture, Monash University, Melbourne Australia, August 15, 2008. Public lecture, Institute of Policy Studies, School of Government, Victoria University, Wellington New Zealand, August 21, 2008.

“Climate Change Overview: Policy” Invited presentation, 4th Australia & New Zealand Climate Change and Business Conference, Auckland, New Zealand, August 18, 2008.

“Climate Change Adaptation: What Should California Do?” Keynote speech, Fifth Annual California Climate Change Research Conference, Sacramento, September 10, 2008.

“Climate Change and Water Law” Invited paper, Plenary Session: There Will Be Water—Or Will There? American Bar Association, Section of Environment, Energy and Natural Resources, 16th Fall Meeting, Phoenix, AZ September 18, 2008.

“Groundwater NRDA in the Modern Age: Economics” (co-author with David Chapman) Invited presentation, 22nd Annual Conference on Soils, Sediment and Water, Amherst MA, October 22, 2008.

“Managing Risk and Uncertainty from an Economic Standpoint” Invited presentation, California Climate Change and Water Adaptation Summit, Long Beach CA, November 13-14, 2008.

“Economics of Climate Change Reconsidered.” Keynote speech, Economy and Environment Program for Southeast Asia 30th Biannual Workshop, Bali, Indonesia, November 19-20, 2008.

“Workshop on Natural Resources Damage Assessment” Short course co-taught with Wictor Adamowicz, Asian Justices Forum on the Environment, Bali, Indonesia, November 22-23, 2008.

“The Economics of AB32” Invited presentation, Meeting of AB32 Economic and Technology Advancement Advisory Committee, Sacramento CA, December 5, 2008

“A Latent Segmentation Approach to a Kuhn-Tucker Model,” (co-author with Koichi Kuriyama and James Hilger). Paper presented at the Allied Social Science Associations Annual meeting, San Francisco, January 4, 2009.

Invited presentation on California Water Rights Laws, California State Senate Natural Resources and Water Committee, Hearing, Sacramento CA, March 10, 2009.

“Economic Impact of Climate Change on California” (co-author with Guido Franco). Invited presentation, California Climate Action Team Hearing, Sacramento CA, March 11, 2009.

“The Economics of Water” Invited presentation, UCSD Center for Molecular Agriculture, Symposium on Water: Plants, Agriculture, and Climate Change, La Jolla CA March 17, 2009.

“Functional Forms in Discrete/Continuous Choice Models with General Corner Solutions” (coauthor with Felipe Vasquez). Paper presented at the International Choice Modelling Conference, Leeds England, April 1, 2009.

“Climate Change Policy and Public Policy: The California Experience” Keynote speech, Conference on Climate Change and Public Policy, Catholic University of Chile, Santiago, April 23, 2009.

“The Economics of Climate Change and Water.” Invited presentation, Sixth Annual Water Conference, University of Nebraska, Lincoln NE, April 29, 2009.

“Climate Change Policy in California: Balancing Markets versus Regulation” (co-author with Chris Busch). Paper presented at Workshop on Transatlantic Environmental Regulatory Cooperation and Innovation, UCDC Center, Washington DC, April 30, 2009.

Discussant, White paper of Valuing Large Reductions in Individual Mortality Risks, US EPA Workshop on Estimating Benefits of Reducing Hazardous Air Pollutants, Washington DC April 30, 2009.

“Climate Change and Water in California” Invited presentation, Symposium on Climate Change and Water: Challenges and Responses in Australia and California, Woodrow Wilson International center, Washington DC, June 15, 2009.

“The Impact of Price on the Residential Demand for Electricity, Natural Gas and Water” (co-author with Larry Dale and Felipe Vasquez). Paper presented at the International Conference of Energy Efficiency in Domestic Appliances and Lighting, Berlin, Germany June 18, 2009.

Invited panelist, Policy Session on “Green New Deal: A Free Lunch?” Annual Meeting of the European Association of Environmental & Resource Economists, Amsterdam, Holland, June 26, 2009.

“The Downside Risk of Climate Change” (co-author with Larry Dale and Susan Stratton). Paper presented at the Annual Meeting of the European Association of Environmental & Resource Economists, Amsterdam, Holland, June 27, 2009.

Moderator, panel discussion on What To Do Next? Swiss Re Centre for Global Dialogue, Economics of

Climate Adaptation Summit, Ruschlikon, Switzerland, July 10, 2009.

“Economic and Resource Impacts of Climate Change in California.” Invited presentation, California Environmental Dialogue, San Diego, August 20, 2009.

“Four Tales and Some Lessons: The Travails of Water Resource Management in the US” Invited presentation, Hydropower Cost-Benefit Conference, Stockholm, Sweden August 26, 2009.

“The Challenge of Water: Access, Sustainability, Competitiveness.” Invited presentation, Conference on Competitiveness and the Water Sector, Mexico City, September 2-4, 2009

“The Design of Improved Economic Impact and Adaptation Studies.” Invited presentation, Sixth Annual Climate Change Symposium, Sacramento CA, September 10, 2009.

Organizer and participant, Conference on Ambiguity, Uncertainty and Climate Change, UC Berkeley, September 17-18, 2009.

“Water Rights and Water Markets in California” Invited presentation, International Water Resource Economics Consortium Annual Meeting, Berkeley CA November 7, 2009.

Invited participant, Conference on Energy and Water in a Warming World, Johnson Foundation, Wingspread WI, November 18-20, 2009.

Advisory Panel member, Grand Canyon Socioeconomic Monitoring and Research Workshop, December 2–3, 2009 in Phoenix, AZ.

“Economic Aspects of Climate Change Policy in Spain” (co-author with Xavier Labandeira and Maria Loureiro) invited presentation, COP 15 Copenhagen, Denmark, December 17, 2009.

“The Impacts of Climate Change: An Economic Perspective” Invited presentation, International Workshop on Climate Change Policies, Madrid, Spain March 18-19, 2010.

“Changing Uses, Changing Property Rights” Invited presentation, Conference on Water Resource Economics, Arizona State University, Tempe AZ April 19-20, 2010.

“The True Cost of Water” Invited presentation, New York Academy of Science, May 6, 2010.

Invited Participant “Towards a Theory of Scale” Eighth Invitational Choice Symposium, Key Largo, FL May 12-16, 2010.

“Market Mechanisms and Green Technology” Invited Presentation, Panel on Tackling Global Warming – An Opportunity for Europe, Brussels Economic Forum, May 25-26, 2010.

“The Lancaster-Maler Model and Behavioral Economics” Invited keynote speech, Annual Meeting of the Spanish & Portuguese Association of Environmental & Resource Economists, Gran Canaria, Spain June 2-5, 2010.

“Resilient Water Management: The Challenge of Adaptation” Invited presentation US EPA Workshop on Resilient Water Management San Francisco CA June 8, 2010.

Invited Panelist, “Emission Trading in Climate Policy” Fourth World Congress of Environmental & Resource Economists, Montreal Canada, June 30, 2010.

“Public Preferences for Climate Change Policies: Evidence from Spain” (co-author) Invited presentation, Fourth Atlantic Workshop on Energy and Environmental economics, A Toxa, Spain, July 8-9, 2010.

“The Real Cost of Water” Invited presentation, California Public Utility Commission, San Francisco CA July 14, 2010.

“The Economics of Proposition 23” Invited presentation, Forum on Proposition 23, Bay Area Council, Oakland CA, July 22, 2010.

“The Report of the Review Panel on Socioeconomic Research Needed for the Glen Canyon Dam Adaptive Management Program” Invited presentation GCDAMP AMWG Meeting, Phoenix AZ August 24, 2010.

“Non-market Valuation of Climate Change Impacts” Invited presentation, Energy Modeling Forum Climate Change Impacts Workshop, Snowmass CO, July 27-August 4, 2010.

“Energy Efficiency in California” Invited presentation, Atlantic Energy Efficiency Workshop, Brussels, Belgium September 23-24, 2010.

“California Solutions for a Better Climate” Invited presentation, Transatlantic Discussion on Climate Change, Graz, Austria, September 27, 2010.

“US Initiatives on Green Technology” Keynote speech, EnergyInvest Conference, Vienna, Austria, September 28, 2010.

“Energy Efficiency and Climate Change” Public Lecture, University of Economics, Bratislava, Slovakia, September 29, 2010.

“The Climate Challenge: A U.S. Perspective” Public Lecture, Center for Technology and Research, Thessaloniki, Greece, October 1, 2010.

“Dividing the Delta: Paper Law versus Political Reality” (co-author with Caitlin Dyckman) Invited presentation IASC Annual Conference, Tucson AZ October 1, 2010.

“Energy Efficiency and Climate Solutions: A U.S. Perspective” Public Lecture, Hellenic Society for the Protection of Nature, Athens, Greece, October 4, 2010.

Invited participant, BRIE Roundtable on Technology Pathways to a Low-Carbon Future, Berkeley CA, November 17, 2010.

“Nonmarket Impacts” Invited presentation EPA/DOE Climate Damages Workshop, Washington DC November 18-19, 2010.

“Climate Economics” Invited presentation Workshop on Climate Economics after Cap-and-Trade, Pocantico Conference Center, Tarrytown NY January 13-15, 2011.

Invited participant, EPA/DOE Workshop on Climate Change Impacts and Associated Economic Damages, Washington, DC January 27-28, 2011.

“What’s Wrong with Economics – As Conventionally Applied to Water?” Invited keynote address, NSF Workshop on “Integrating Economic and Financial Principles into Environmental Engineering Research

and Education” Arlington, VA January 28, 2011.

Organizer and participant, Transatlantic Energy Efficiency Workshop, UC Berkeley, February 11-12, 2011.

Co-organizer and participant, California Climate Vulnerability Study Workshop, California Energy Commission, Sacramento CA, February 18, 2011.

Organizer and participant, Transatlantic Energy Efficiency Workshop, Paris, France, June 16-17, 2011.

“Monetary Valuation of Climate Impacts” Invited keynote, IPCC Expert Meeting on Economic Analysis, Costing Methods & Ethics, Lima, Peru, June 23-25, 2011.

“The Strange Case of California: Water Rights and Water Markets” (co-author with Damian Bickett). Invited presentation, International Water Resource Economics Consortium Annual Meeting, Banff, Canada June 26-27, 2011.

Participant, IPCC Fifth Assessment Report, First Lead Authors Meeting, Changwon City, South Korea, July 12-15, 2011.

“The Strange Case of California: Water Rights and Water Markets” (co-author with Damian Bickett). Invited lecture, University of South Australia, Adelaide, Australia, August 8, 2011.

“Direct Regulatory Measures: The California Experience” Invited presentation, University of Melbourne Climate Regulation Workshop, Melbourne, Australia, August 11-12, 2011.

Lecturer, Climate Change and Agriculture, Belpasso International Summer School on Environmental and Resource Economics – Extremes: Natural Disasters in Changing Climate. Belpasso, Italy., September 4-10, 2011.

“Re-thinking the Damage Function” Invited presentation, European Commission Joint Research Center, Economics of Climate Change, Energy and Transport Unit, Seville, Spain, September 12, 2011.

“What is Wrong with the Damage Functions, and How to Construct Better ones.” Invited presentation, UCS Workshop on Measuring the Costs of Climate Change to US Public Health, Boston MA September 25, 2011.

“Water Connectivity in the Bay Area.” Invited presentation, Bay Area Climate Vulnerability Workshop, UC Berkeley, September 26, 2011.

Advisory Board Meeting, European Union PESETA Project on Economic Cost of Climate Change to the EU, Ispra, Italy, October 12-13, 2011.

Invited participant, Workshop on Burden and Cost of Childhood Asthma Attributable to Traffic-Related Air Pollution in Los Angeles County. University of Southern California, Los Angeles CA October 17, 2011.

“Economic Consequences of Extreme Events.” Invited presentation, Workshop on Vulnerability and Adaptation to Extreme Events in California, Scripps Institution of Oceanography, La Jolla CA, December 13, 2011.

“Economic Implications of Downscaling Climate Impacts” Presented at ASSA Annual Meeting, Chicago

IL, January 7, 2012.

“The Food, Water, Energy, Climate Nexus” Presented at Session on “Supporting a Decent Standard of Living Within Planetary Boundaries” AAAS Annual Meeting, Vancouver, Canada February 18, 2012.

Panelist & moderator, “The New Delta Plan: Where Do We Go From Here?” UC Berkeley Conference on “Managing the Delta: The Governance Challenges of Adaptive Management”. March 2, 2012.

Participant, IPCC Fifth Assessment Report, Second Lead Authors Meeting, Wellington, New Zealand, March 19-23, 2012.

“Modeling the Economic Cost of AB32” Invited presentation, Workshop on Information Needs for Analysis of the Effectiveness of the Cap-and-Trade Regulation, UC Santa Barbara, April 2, 2012.

Advisory Board Meeting, European Union PESETA Project on Economic Cost of Climate Change to the EU, Seville, Spain, April 12-13, 2012.

Panelist, Panel on “Using Science to Create a More Resilient Energy Sector” California Energy Commission Workshop on Climate Change and the California Energy System, April 30, 2012.

“Behavioral Economics and the Demand for Water” Invited presentation, ASU Conference “Understanding Residential Water Use: New Approaches to Analyzing, Projecting and Managing Demand” Tempe AZ May 11, 2012.

“Issues in the Design and Analysis of Valuation Data” Invited presentation, International Symposium on CVM Guidelines, Korean Development Institute, Seoul, South Korea, May 17, 2012.

“What is Wrong with Climate Change Damage Functions?” Invited lecture, Seoul National University, Seoul, South Korea, May 18, 2012.

“What is Wrong with Climate Change Damage Functions?” Invited presentation, Fifth Atlantic Workshop on Energy and Environmental economics, A Toxa, Spain, June 25-26, 2012.

Co-organizer and instructor, “Water and Climate Change” LACEEP Environmental and Resource Economics Training Course, Turrialba, Costa Rica, July 23-August 3, 2012.

“Valuation of Environmental Services: Opportunities and Challenges.” Public Lecture, Rio de Janeiro, Brasil, August 15, 2012.

“The Value of Water: An Economist’s Perspective.” Invited lecture, European Science Foundation Junior Summit “Water: Unite and Divide” Stresa, Italy, August 28-30, 2012.

Participant, IPCC Fifth Assessment Report, Third Lead Authors Meeting, Vigo, Spain, November 5-9, 2012.

“Property Rights and Sustainable Irrigation – A Developed World Perspective.” Invited keynote, Sustainable Irrigation Conference, University of South Australia, Adelaide, Australia, December 11-13, 2012.

“On the Bias/Efficiency Tradeoff in Contingent Valuation” (Co-author with Sapna Kaul, Kevin Boyle, and Nicolai Kuminoff). Presented at ASSA Annual Meeting, San Diego CA, January 5, 2013.

“Valuation of Ecosystem Services: Challenges and Pitfalls” Invited presentation, Workshop on Marine Ecosystem Economics, Plymouth Marine Laboratory, UK March 12-14, 2013

“Estimating the Global health Damages from Climate Change in an Integrated Assessment Model” (co-authored with Kristen Downs, Marc Jeuland and Dale Whittington). Invited presentation, Workshop on Water and Climate Change in Africa, Duke University, March 22 2013.

“Water as a Commodity in China” Invited presentation, ASU Center for Asian Research, Symposium on Water in Asia: Values and Activism, ASU March 27, 2013.

Organizer and presenter, “Pricing Climate Risk Conference” ASU April 12-13, 2013

Member, Scientific Steering Committee, Moderator, and Presenter, “How do we improve the construction of damage functions?” Impacts World 2013, Potsdam Institute for Climate, Potsdam, Germany, May 28-30. 2013.

Invited Member, Complementary Choices Group, 9th Invitational Choice Symposium, Noordwijk, Holland, June 12-16

“Some comments on macroeconomic costs and benefits” Invited presentation, Workshop on Achieving 2°C climate stabilisation: macroeconomic benefits or costs? , Cambridge Trust for New Thinking in Economics, Cambridge University July 4-5

“Economic concepts used to value water” Invited presentation, Workshop on Valuing Colorado’s Agriculture. Colorado Springs, CO, October 7 2013

“Why Water is a Problem” Invited presentation. Adapting to a Water-Stressed West” AAAS-SWARM Water Forum, ASU November 4, 2013

Science Advisory Board, NSF Engineering Research Center for Re-inventing the Nation’s Urban Water Infrastructure. Board Meeting, Stanford University, January 13-14, 2014.

“Energy Demand and Energy Efficiency” Invited presentation, Conference on Economic Challenges for Energy, Madrid, Spain, January 23, 2014

“What is Wrong with the Conventional Analysis of Climate Change Damages” Invited keynote speech. EEPSEA Conference on Economics of Climate Change in Southeast Asia, Siem Reap, Cambodia, February 27-28, 2014.

“Energy Demand and Energy Efficiency: What are Policy Levers? Or, In Search of the Elusive Residential Energy Demand Function” Invited presentation, Workshop on The Energy Efficiency Gap: Reasons and Implications, ZEW Mannheim, Germany March 12-13, 2014.

Panelist, “Will We Ever Have Clean Water for All?” Zocalo/Occidental College Symposium, Museum of Contemporary Art, Los Angeles CA March 17, 2004.

“IPCC WGIII Fifth Assessment Report: Chapter 3, Social, Economic and Ethical Concepts and Methods.” Invited presentation. US & Mexican National Academies of Science, Workshop on Climate Change Mitigation, Risks and Adaptation, Senate of the Republic of Mexico, Mexico City, April 21, 2014.

Invited participant, Earth League Workshop on a World Under 2-4 Degrees Warming, Santa Fe, NM, April 24-25, 2014.

Co-Organizer and presenter, “Introduction to the Workshop.” Scoping Workshop on Integrating Socio-Economic Factors with Abrupt Change and Extreme Events in Climate Models. US National Academy of Science, Board on Environmental Change and Society, Washington, DC June 6, 2014.

“Highlights from the WGIII AR5” Invited presentation. UNFCCC Climate Change Conference, Bonn, Germany, June 7-8, 2014.

“Insights from Water Governance in the Western US” Invited presentation. Hong Kong Water Governance Symposium, City University of Hong Kong, June 13, 2014.

“Solar Thermal Desalination in California” Invited presentation, Golden State Water Summit, Sacramento CA, June 17, 2014.

“Estimating the Global Health Damages from Climate Change in an Integrated Assessment Model.” Co-authored with Marc Jeuland, Kristen Downs and Dale Whittington. Presented at the World Congress of Environmental and Resource Economists, Istanbul, Turkey, June 30, 2014.

Invited panelist, Policy Session: Developing Contemporary Standards for Stated-Preference Valuation. World Congress of Environmental and Resource Economists, Istanbul, Turkey, July 2, 2014.

Invited panelist, Policy Session: EC Environmental Liability Directive: The use of economic concepts and value evidence in damage assessment and remediation. World Congress of Environmental and Resource Economists, Istanbul, Turkey, July 2, 2014.

“Paying attention to extreme events – and monetizing damages” Invited presentation Workshop on Frontiers of Global Change Science, Aspen Global Change Institute, Aspen, CO August 18-20, 2014.

“How should we approach the damages from climate change?” Invited presentation, Conference on Beyond IPCC – Future Paths for Climate Research. University of Gothenburg, Sweden, October 17-18, 2014.

Co-organizer and presenter, “Rethinking the damage function.” Workshop on Global Climate Risks. European Commission, Joint Research Center, Economics of Climate Change, Energy & Transport Unit, Seville, Spain, December 1-2, 2014.

Discussant, Session on Economic Impacts and Valuation, ASSA Meeting, Boston MA January 4, 2015.

“The Economics of Climate Change” Course organized for EEPSEA and co-taught with Professor Wolfram Schlenker to academic and government economists from Southeast Asia, Hanoi, Vietnam, January 13-16, 2015.

Member, Steering Committee, 2015 Urban Water Demand Roundtable, Arizona State university, February 9-10, 2015.

“Economic issues associated with the use of abandoned and degraded land for perennial bioenergy crops.” Invited presentation, NSF WSC Meeting, Arlington VA, February 11, 2015.

“Economic modeling issues.” Invited presentation, Clean Power Program Workshop, Arizona State

University, February 24, 2015.

“Option Value and Federal Leasing.” Society for Benefit Cost Analysis Annual Meeting, Washington DC, March 20, 2015.

”Climate change and US agriculture” Invited presentation, University of Arizona Workshop on Addressing the Scientific, Technological and Societal Challenges of the Energy, Food and Water Nexus. Biosphere 2, April 16-17, 2015.

“The Affordability of NFIP Premiums.” Invited presentation, Arizona Floodplain Management Association, Carefree AZ, May 8, 2015.

“Pricing Climate” Invited presentation, World Bank/IFC Workshop on Climate Change, Sustainability and Investment, Arizona State University, May 18-19, 2015.

Invited participant, Where We Agree Workshop on California Water, Pacific Institute, Oakland CA, May 22, 2015.

“The need for contemporary stated preference guidelines” Panel Discussion, AERE Annual Meeting, San Diego CA June 4, 2015.

“Water Resources: Pitfalls for the Modeler” Invited keynote, Mathematics of Planet Earth Conference, Washington DC, June 5, 2015.

“Bay Area Drought Impacts – People, Ecosystems & Economy” Invited presentation, Workshop on Bay Area Water in a Changing Climate, Climate Readiness Institute, Berkeley CA June 10, 2015.

“An economic approach to designing water rates in California.” Invited presentation, Municipal Water Ratemaking in California, Law Seminars International, Sacramento CA July 20, 2015.

“Observations on proposed water rights reform in the West.” Invited panelist, UC Berkeley, August 14, 2015.

Invited panel member, Sonoma County Water Agency Sustainable Resources Roundtable, Berkeley CA August 21, 2015.

“Climate Impacts and Adaptation” Invited presentation, California Climate Change Symposium, Sacramento CA, August 24, 2015.

“Non-market values and Glen Canyon Dam” Invited presentation, Glen Canyon Dam Adaptive Management Work Group, Tempe AZ, August 26, 2015.

Invited participant, Where We Agree Workshop on California Water, Pacific Institute, Los Angeles CA, September 11, 2015

“The Minnesota Trial on the Social Cost of Carbon” Invited presentation, EDF New York NY, October 6, 2015.

“Research Frontiers: The Damage Function” Invited presentation, Workshop on Advances in the Economics of Climate Change, Stanford University, October 9, 2015.

“Food, Energy & Water Institutions” Invited presentation, Workshop on Food, Energy & Water

Institutions, Arizona State University, October 13-14, 2015.

“Estimating climate damages: where do we stand?” Invited presentation, Symposium on the Economics of Climate change, College de France, Paris, October 29-30, 2015.

“Valuing large infrastructure projects: an economic perspective” Keynote speech, Nicaragua Academy of Sciences Workshop on Inter-Oceanic Canal, Managua, November 19-20, 2015.

Invited panelist, Food-Energy-Water Nexus Workshop, Hermosillo, Mexico, December 5-6, 2015.

Invited panelist Workshop on Climate Impacts on Agriculture: An Inter-method Comparison Exercise. Stanford University, December 16, 2015.

Discussant, Session on Management of Natural resources; Theory and Applications, ASSA Meeting, San Francisco CA, January 4, 2016.

Invited participant, Workshop on Implications of the Paris Climate Agreement, Arizona State University, April 8-9, 2016.

Invited participant, Future of Air Capture Technology Workshop. Arizona State University, April 27-28, 2016.

Invited participant, Panel on Climate Policy Leadership by California and Germany: Lessons-learned, Future Challenges and Options. Berlin, Germany, May 4, 2016.

Invited presentation, “Non-market Damages from Climate Change.” National Research Council, Committee on Assessing Approaches to Updating the Social Cost of Carbon, Washington D.C., May 5, 2016.

Invited presentation, “The Role of Water in Climate Change Impacts on Agriculture” EU Joint Research Center Workshop: Comparing Methods and improving the Empirical Foundation of Agricultural Impacts. Seville, Spain, June 6-7, 2016.

Invited participant, Panel on Climate Resilience, Coca Cola Sustainability Summit, Chicago, August 24, 2016.

Invited presentation, “(Re-)Designing Water Rates.” Fourth Urban Water Demand Roundtable. Denver, September 22-23, 2016.

Invited keynote speech. “The Problem of Translating Climate Change into Impacts.” SIAM Conference on Mathematics of Planet Earth, Philadelphia, October 30, 2016.

Invited presentation, “The Role of Irrigation in the Agricultural Impacts of Climate Change.” Stanford University, December 15, 2016.

“Economic Valuation for the Policing Project” Invited presentation. Conference on Cost- Benefit Analysis of Policing. New York University, February 9-10, 2017.

Invited participant, River Basins Project Workshop, University of New South Wales, March 9, 2017.

Invited participant, River Basin Project Workshop, Kings College, London. April 19, 2017.

Panelist, Policy Session “The Trump Administration, Climate Change and the World” Annual Meeting of the European Association of Environmental and Resource Economists, Athens, Greece, June 28, 2017.

“Lessons from the Deepwater Horizon Oil Spill Study.” Invited presentation, Annual Meeting of the European Association of Environmental and Resource Economists, Athens, Greece, June 29, 2017.

Invited participant, Conference on the Fiftieth Anniversary of ‘Conservation Reconsidered’ Resources for the Future, Washington, DC, September 8, 2017.

“Improving Water Rights Administration During Droughts” with Nell Green Nysten, Mike Kiparsky, Holly Doremus and Dave Owen. UC Water Symposium, Davis CA, September 15, 2017.

“The Economic Value of the Natural Environment – What it Means, Why it is Measured, How it is Measured.” Invited presentation, Thunderbird Independent Alumni Association, Panama City, September 23, 2017.

Invited panelist, California-Germany Climate Policy Workshop, UC Berkeley, October 2, 2017.

Invited presentation, “Cross-cutting Issues.” Conference on Closing the Carbon Cycle, Columbia University, NYC, October 12, 2017.

Keynote speech, “Urban Water Conservation in California.” 7th Water Economics Forum, Madrid, Spain, October 25, 2017.

Invited presentation, “Water Rights and Water Markets in California” Water Markets Workshop, St. Edmund Hall, Oxford University, November 6, 2017.

Keynote speech, “Why is Water Difficult to Value?” Conference Valuing Water for Sustainable Development, Corpus Christi College, Oxford University, November 7, 2017.

Discussant “Randomized Safety Inspections and Risk Exposure” University of Arizona Environmental & Energy Economics Workshop, Tucson AZ November 11, 2017.

Invited participant, Rethinking Law in a Nexus Future: Governing Energy, Water, Food and Climate Challenges. Arizona State University College of Law, January 11-12, 2018.

Invited participant, Berkeley Climate Economics Workshop, University of California, Berkeley, January 19-20, 2018.

“Economic Analysis of the Use of Marginal Lands for Perennial Bioenergy Crops.” Invited presentation, USDA Agricultural and Food Research Initiative Annual Meeting, Washington DC, January 29-31, 2018.

“Why the Economics of Water is So Hard” Invited lecture, Manchester University, UK, March 8, 2018.

“Climate Change and Water in California: The State of Adaptation.” Invited presentation, Workshop on Monitoring and Evaluation of Mitigation and Adaptation Policies for Climate Change, Mexico City, April 16-18, 2018.

“The Problem of Translating Climate Change into Impacts” Invited presentation, St. Louis University Climate Summit, St. Louis MO, April 23, 2018

“Economic and Institutional Obstacles to New Water Technologies” Invited presentation, International

Workshop on Water Resources Management, University of Hong Kong, May 29-30, 2018.

Invited participant, GEMCLIME Research Workshop (EU funded project on Energy and Climate Change), World Congress of Environmental & Resource Economists, Gothenburg, Sweden, June 28, 2018.

Invited panel member “Economic Instruments for Water Scarce Cities” World Congress of Environmental & Resource Economists, Gothenburg, Sweden, June 28, 2018.

“California’s Climate Assessment Program” Invited presentation, Workshop on Making Climate Assessments Work. National Academy of Sciences, Washington DC, August 14, 2018.

“Groundwater Management in California” Invited presentation, Environmental Defense Economics Advisory Council Meeting, New York, October 3, 2018.

“Governance of Rivers Across Different Institutions, Governments and Ecosystems – Opportunities and Challenges” (with Dave White) Invited presentation, International River Symposium, Sydney Australia, October 15, 2018

“Re-thinking the Economics of Water: Introduction” (With Dustin Garrick) Kickoff presentation, Conference: Re-Thinking the Economics of Water, Arizona State University, October 29-30, 2018.

“Re-Thinking Water Marketing” Day Two kickoff presentation, Conference: Re-Thinking the Economics of Water, Arizona State University, October 29-30, 2018.

“Social Cost of Carbon – Economic and Ethical Approaches to Damage Evaluation” Invited presentation, Conference on Climate Change, Responsibility, and Liability, University of Graz, Austria, November 8-9, 2018.

“Water Marketing” Invited lecture, Department of Economics, National Distance Education University, Madrid, Spain, November 12, 2018.