SUZI C. KERR

October 2013

Motu Economic and Public Policy Research Level 1, 97 Cuba St. Wellington, PO Box 24390 64 4 939 4250 Suzi.kerr@motu.org.nz

Nationality: New Zealand

PRESENT POSITIONS

Senior Fellow, Motu Economic and Public Policy Research, New Zealand Adjunct Professor, School of Geography, Environment and Earth Sciences, Victoria University of Wellington

EDUCATION

Ph.D., Economics, Harvard University, 1995

A.M., Economics, Harvard University, 1995

B.Sc. honours (first class), Economics, University of Canterbury, 1987

PREVIOUS POSITIONS

Visiting Professor, Economics Department, Stanford University, June 2009 – June 2010 Senior Research Associate, Program in Energy and Sustainable Development, Stanford University, June 2009 – June 2010

Director and Senior Fellow, Motu Economic and Public Policy Research Trust, November 1998 - May 2009

Visiting Scholar, MIT Center for Energy and Environmental Policy and Research and Joint Program on the Science and Policy of Global Change, Jan – August 2001

 $Visiting\ Researcher,\ Resources\ for\ the\ Future,\ Washington\ DC,\ June-October\ 1998$

Research consultant for Center for Clean Air Policy, Washington DC. September 1998 – January 2000

Visiting Researcher, Victoria University of Wellington, Jan. - May 1998

Assistant Professor, Department of Agricultural and Resource Economics, University of Maryland, College Park, August 1995 – August 1998

Analyst on Housing and Social Policy, The New Zealand Treasury, 1988 - 1990

AWARDS AND MEMBERSHIP OF BOARDS AND TRUSTS

NZIER Economics Award 2010

Member of New Zealand Association of Economists Council, 2007 - 2009

Founding Trustee, Hikurangi Foundation, from 2007

Founding Trustee, Motu Research and Education Foundation, 2007 – 2009

Member of government convened Climate Change Leadership Forum, 2007 - 2008. Leader of Cluster Group B.

- Member of He Waka Tangata, Social Science Leadership group established by the Ministry of Research Science and Technology, 2007 2009
- Member of Scientific Steering Committee of the Analysis, Integration and Modeling of the Earth Systems' project under the International Geosphere/Biosphere Programme (IGBP) from March 2005 2009 and the Global Land Project under the IGBP and International Human Dimensions Project (IHDP) December 2005 2007.
- Member of European Environment Agency and Directorate General for Environment of the European Commission 'High-level network of leading economists'. From May 2004
- Member of inaugural advisory board for the Victoria University Centre for Marine Environmental and Economic Research (2004-2005)

Founding Trustee, Motu Economic and Public Policy Research Trust

New Zealand Senior Scholarship 1987

Kelliher Foundation Economics Prize 1983

PUBLICATIONS AND RESEARCH

1 Journal Articles

- Van Benthem, Arthur and Suzi Kerr (2013) 'Scale and Transfers in International Emissions Offset Programs' *Journal of Public Economics* Volume 107, November, pp. 31-46
- Anastasiadis, Simon and Suzi Kerr (forthcoming) 'Does complex hydrology require complex water quality policy?' *Australian Journal of Agricultural and Resource Economics*
- Funk, Jason, Chris Field, Adam Daigneault and Suzi Kerr (forthcoming) 'Modeling the impact of carbon farming on land use in a New Zealand landscape' *Environmental Science and Policy*
- Cox, Timothy J., Suzi C. Kerr, J. C. Rutherford, Duncan C. Smeaton, Chris. C. Palliser. 2013 "An integrated model for simulating nitrogen trading in an agricultural catchment with complex hydrogeology" *Journal of Environmental Management* (2013), pp. 268-277
- Kerr, Suzi C. 2013. "The Economics of International Policy Agreements to Reduce Emissions from Deforestation and Degradation", *Review of Environmental Economics and Policy* 7:1, pp. 47–66.
- Kerr, Suzi and Adam Millard-Ball 2012. "Cooperation to reduce developing country emissions." *Climate Change Economics* Vol. 3, No. 4
- Kerr, Suzi; Anastasiadis, Simon; Olssen, Alex; Power, William; Timar, Levente; Zhang, Wei. 2012. "Spatial and Temporal Responses to an Emissions Trading Scheme Covering Agriculture and Forestry: Simulation Results from New Zealand." Forests 3, no. 4: 1133-1156.
- McDonald, Hugh, and Suzi Kerr. 2012. "Why do New Zealanders Care about Agricultural Emissions?" *Policy Quarterly*, 8(2), Wellington.
- Lundquist, Carolyn J., Doug Ramsay, Rob Bell, Andrew Swales and Suzi Kerr 'Predicted impacts of climate change on New Zealand's biodiversity'. 2011. *Pacific Conservation Biology* Vol 17: 179-191. Surrey Beatty & Sons, Sydney

- Betz, Regina, Stefan Seifert, Peter Cramton and Suzi Kerr. 2010. "Auctioning Greenhouse Gas Emissions Permits in Australia," *Australian Journal of Agricultural and Resource Economics* Special Issue: Climate Change Volume 54, Issue 2, pages 219–238, April
- 'Nutrient Trading in Lake Rotorua: Overview of a Prototype System' (with Kelly Lock) Resource Management Theory and Practice, 2009
- 'Inclusion of Agriculture in a Domestic Emissions Trading Scheme: New Zealand's Experience to Date' (with Andrew Sweet) *Farm Policy Journal* 5(4), November, 2008
- 'Restoring forests through carbon farming on Maori land in New Zealand/Aotearoa' (with Jason Funk) *Mountain Research and Development* 27 (3) August, 2007
- 'Will buying tropical forest carbon benefit the poor? Evidence from Costa Rica' (with Alexander Pfaff, Leslie Lipper, Romina Cavatassi, Benjamin Davis, Joanna Hendy, G. Arturo Sanchez-Azofeifa) *Land Use Policy* 24 600–610, 2007
- 'The Housing Fulcrum: Balancing Economic and Social Factors in Housing Research and Policy' (with Arthur Grimes, Andrew Aitken and Robert Sourell) *Kotuitui*, New Zealand, 2006
- 'Rating Systems in New Zealand: An Empirical Investigation into Local Choice' (with McLuskey, William, Andrew Aitken, Arthur Grimes, Suzi Kerr & Jason Timmins) *Journal of Real Estate Literature* 14(3), 2006
- 'Fishing Quota Markets' (with Richard G. Newell and James N. Sanchirico) *Journal of Environmental Economics and Management* Vol. 49 pp. 437-462, 2005
- 'Efficient contracts for carbon credits from reforestation projects' *New Zealand Science Review* 61(1). 2004
- 'Motu, Excellence in Economic Research and the challenges of 'Human Dimensions' research' Science and Technology Policy edition of *Science Review*, the Journal of the New Zealand Association of Scientists Vol. 60 (2-3), 2003
- 'Carbon dynamics and land-use choices: building a regional-scale multidisciplinary model' (with Shuguang Liu, Alexander Pfaff and R. Flint Hughes) *Journal of Environmental Management* Volume 69, Issue 1, September 2003, Pages 25-37
- 'Policy-Induced Technology Adoption: Evidence from the U.S Lead Phasedown' (with Richard Newell) *Journal of Industrial Economics*. Vol. LI, No. 3, 2003
- 'Tradeable carbon permit auctions: How and why to auction not grandfather' (with Peter Cramton) *Energy Policy* 30 pp: 333-345, 2002
- 'A Case Study of Costa Rican LUCC: Carbon Sequestration Supply from and Clean Development Mechanism Rules for Tropical Forest Carbon Sinks' (with Alexander Pfaff and Arturo Sanchez) *LUCC Newsletter*, May 2001, No. 6
- 'The Kyoto Protocol & Payments for Tropical Forest: An Interdisciplinary Method for Estimating Carbon-Offset Supply and Increasing the Feasibility of a Carbon Market under the CDM' (with Alexander S.P. Pfaff, R. Flint Hughes, Shuguang Liu, G. Arturo Sanchez-Azofeifa, David Schimel, Joseph Tosi and Vicente Watson) *Ecological Economics* 35(2):203-221, 2000
- 'Using Emissions Trading to Regulate US Greenhouse Gas Emissions: An Overview of Policy Design and Implementation Issues' (with Carolyn Fischer and Michael Toman) *National Tax Journal* LI No. 3 September, 1998

- 'Devolution and the Resource Management Act' *Victoria Economic Commentary*. 15(2): November, pp.11-26, 1998
- 'A case study for devolution: The problem of preserving kiwi habitat in the Far North' (with Megan Claridge) *Victoria Economic Commentary*. 15(2): November, pp. 27–36, 1998
- 'Who trades tradeable permits?' (with David Maré) *Victoria Economic Papers*, September, 1996
- 'Environmental Aid' *Environment* January/February 1997 39(1) (Heldref Publications: Washington DC)

2 Books and Monographs

Global Emissions Trading: Key Issues for Industrialized Countries ed. Suzi Kerr.

Edward Elgar: Glos. UK, 2000. Chapters by Kerr:

Introduction: Trading Toward a Stable Climate

Fair Competition and Annex I Trading

Additional Compliance Issues Arising from Trading

An International Tracking System for Greenhouse Gas Trading

Market Power and Annex I Trading

Treaty Compliance as background for an effective trading program (with Tim Hargrave, Ned Helme, and Tim Denne)

Domestic Greenhouse Regulation and International Emissions Trading

The Way Forward? Design Principles for Annex B Trading

The Private Residential Rental Market in New Zealand (with John Savage and Stephen Toplis) New Zealand Institute of Economic Research, Research Monograph No. 50, 1989

3 Book Chapters and refereed conference proceedings

- OECD (2013), *Water Security for Better Lives*, OECD Studies onWater, OECD Publishing. Contributor to Chaps 3&4. http://dx.doi.org/10.1787/9789264202405
- Kerr, Suzi and Zack Dorner. 2013. "Tackling agricultural emissions: Potential leadership from a small country" in Korea Legislation Research Institute edited *Climate Change and Green Growth: Achievements and Prospects* Seoul, Korea.
- 'Relationships between farm productivity, profitability, N leaching and GHG emissions: a modelling approach' (with Duncan C. Smeaton, Tim Cox and Robin Dynes)

 Proceedings of the New Zealand Grassland Association 73: 57-62 (2011)
- 'Improving Lake Water Quality through a Nutrient Trading System: The Case of New Zealand's Lake Rotorua' (with Kelly Lock) in Claus, Iris, Norman Gemmell, Michelle Harding and David White eds. *Tax Reform in Open Economies: International and Country Perspectives*, Edward Elgar. 2010
- 'How can agriculture be included in an emissions trading system? Some thoughts from New Zealand' Proceedings of the *Agriculture, Greenhouse and Emissions Trading Conference*, Australian Farm Institute, Maroochydore, May 2009
- Hendy, Joanna; Suzi Kerr and Troy Baisden. 2008. "Greenhouse Gas Emissions Charges and Credits on Agricultural Land: What can a Model Tell Us?" In *Clean*

- *Development Mechanism and Law*, Amicus Books series, ed. L Lakshmi. Hyderabad, India: The Icfai University Press, pp. 198-209.
- 'Greenhouse gases and Nutrients: The Interactions Between Concurrent New Zealand Trading Systems' (with Marianna Kennedy) in Productivity Commission eds. Promoting Better Environmental Outcomes, Roundtable Proceedings, Australian Productivity Commission, Melbourne, 2009
- 'Effects of Poverty on Deforestation: distinguishing behavior from location' (with A. Pfaff, R. Cavatassi, B. Davis, L. Lipper, A. Sanchez and J. Timmins) in *Economics of poverty, the environment and natural resource use*. Eds Rob B. Dellink and Arjan Ruijs, Wageningen University, Environmental Economics and Natural Resources Group. 2008
- 'Emissions Trading' (2004) in Macmillan Reference USA's Pollution A to Z, Macmillan Reference USA
- 'Evaluating the New Zealand Individual Transferable Quota Market for Fisheries Management" (with Richard G. Newell, and James N. Sanchirico) in *Tradeable Permits: policy evaluation, design and reform* ed. OECD, Paris, 2004. (previous version is Motu Working paper 03-02)
- 'Joint implementation in climate change policy' (with Catherine Leining) in Tom Tietenberg and Henk Folmer eds. *The International Yearbook of Environmental* and Resource Economics 2003/04, 2004 (previous version is Motu Working Paper 03-04)
- 'The Causes and Consequences of Air Pollution in Santiago' (with Matthew Kahn) in Edward L. Glaeser and John R. Meyer *Chile: Political Economy of Urban Development* Harvard Studies in International Development, John F. Kennedy School of Government, Harvard University, 2002
- 'A Regulatory History of New Zealand's Quota Management System: setting targets, defining and allocating quota' (with Gina Straker and Joanna Hendy) *Papers and Proceedings of the IIFET Conference 2002*.
- 'An Empirical Analysis of New Zealand's ITQ Markets' (with Richard G. Newell and James N. Sanchirico) *Papers and Proceedings of the IIFET Conference 2002*.
- 'Deciding the Eligibility of Land Use, Land-Use Change and Forestry Projects under the CDM: Negotiation Issues Post COP6' (with Catherine Leining) in Raymond Saner, Sergio Jauregui, Lichia Yiu eds. *Bolivian Environmental Conflict Management Cases and CC + CDM Sectoral Preparations for Kyoto Protocol Negotiations*, 2001
- 'Enforcing Compliance: the Allocation of Liability in International GHG Emissions
 Trading and the Clean Development Mechanism' in Michael A. Toman, Editor,
 Climate Change Economics and Policy: An RFF Anthology, RFF, Washington
 DC, 2001
- 'Using Emissions Trading to Regulate National Greenhouse Gas Emissions' (with Carolyn Fischer and Michael A. Toman) in Michael A. Toman, Editor, *Climate Change Economics and Policy: An RFF Anthology*, RFF, Washington DC, 2001
- 'The Dynamics of Deforestation and the Supply of Carbon Sequestration: Illustrative Results from Costa Rica' (with Alexander Pfaff and Arturo Sanchez) in Theodore Panayotou ed. *Environment for Growth: Environmental Management for*

- Sustainability and Competitiveness in Central America. Harvard Studies in International Development, Harvard University Press pp. 409 431, 2001
- 'How Can Carbon Sequestration in Tropical Forests be Rewarded? Evidence from Costa Rica' (with Alexander Pfaff, Arturo Sanchez and Marco Boscolo) in Theodore Panayotou ed. *Environment for Growth: Environmental Management for Sustainability and Competitiveness in Central America.* Harvard Studies in International Development, Harvard University Press pp. 371 408, 2001 (previous version is Development Discussion Paper # 675 Harvard Institute of International Development)
- 'The Distributional Effects of Carbon Regulation: Why auctioned carbon permits are attractive and feasible' (with Peter Cramton) *The Market and the Environment* ed. Thomas Sterner in International Studies in Environmental Policy Making Series (Edward Elgar Publishing: Glos, UK), 1999
- 'The Clean Development Mechanism, Tropical Carbon Sinks and Biodiversity: An economics/ecology model for predicting policy effects and evaluating policy options' (with Alexander Pfaff, Arturo Sanchez, David Schimel, Joseph Tosi and Vicente Watson) *Papers and Proceedings of the 1998 Global Biodiversity Forum*, Buenos Aires
- 'The Operation of Tradeable Rights Markets: Empirical Evidence from the United States Lead Phasedown' Papers and Proceedings of the Air and Waste Management Association meeting "New Partnerships: Economic Incentives for Environmental Management" November 3-4 1993, Rochester, New York.
- 'Relative Poverty and Welfare Distribution' in *The Welfare State: Foundations and Alternatives* ed. Michael James (The Centre for Independent Studies: 1989)

4 Recent Reports and Working Papers

- Allan, Corey, Arthur Grimes and Suzi Kerr (2013) "Value and Culture: An economic approach" Report for Manatu Taonga Ministry of Culture and Heritage, August
- Kerr, Suzi, and Zack Dorner. 2013. "Tackling Agricultural Emissions: Potential Leadership from a Small Country", Motu Note #13, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi. 2013 "Managing Risks and Tradeoffs Using Water Markets" *Motu Working Paper* 13-13. November http://ssrn.com/abstract=2351589
- Kerr, Suzi, Catherine Leining, Chris Dodwell, Ruben Lubowski, Juan-Pablo Montero,
 Justine Sefton, Sebastian Vicuna, with Eduardo Sanhueza, Lucy Young. 2012.
 "Roadmap for Implementing a Greenhouse Gas Emissions Trading System in
 Chile: Core Design Options and Policy Decision-Making Considerations," Motu
 Working Paper 12-14, Motu Economic and Public Policy Research, Wellington.
 Also available as a report to the World Bank Partnership for Market Readiness
 https://www.thepmr.org/content/chile-implementing-ghg-ets-design-options-and-decision-making-motu-2012
- Anastasiadis, Simon, Suzi Kerr, Alec MacKay, Jon Roygard and Mark Shepherd. 2012. "The Mitigation of Nutrient Loss from New Zealand Agriculture: Separating the

- Probable from the Possible", Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi. 2012. "The Economics of International Policy Agreements to Reduce Emissions from Deforestation and Degradation," Motu Working Paper 12-12, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi and Zack Dorner. 2012. "Coordination and Cooperation for Effective Climate Policy Design and Implementation: Synthesis of research" Report to the Ministry of Primary Industries
- Daigneault, Adam, Hugh McDonald, Sandy Elliott, Clive Howard-Williams, Suzie Greenhalgh, Maksym Guysev, Suzi Kerr, James Lennox, Linda Lilburne, Uwe Morgenstern, Ned Norton, John Quinn, Kit Rutherford, Ton Snelder, and Bob Wilcock. 2012. Evaluation of the Impact of Different Policy Options for Managing to Water Quality Limits. Wellington: Ministry for Primary Industries. Available online at http://www.mpi.govt.nz/news-resources/publications
- Kerr, Suzi, and Millard-Ball, Adam. 2012. "Cooperation to Reduce Developing Country Emissions", Motu Working Paper 12-03, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi, Simon Anastasiadis, Alex Olssen, William Power, Levente Timar, and Wei Zhang (2012) 'Spatial and temporal responses to an emissions trading system covering agriculture and forestry: simulation results from New Zealand' Motu working paper 12-10
- Olssen, Alex, Wei Zhang, David Evison, and Suzi Kerr. 2012. "A Forest-Profit Expectations Dataset for New Zealand, 1990–2008," Motu Working Paper 12-07, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi, and Alex Olssen. 2012. "Gradual Land-use Change in New Zealand: Results from a Dynamic Econometric Model", Motu Working Paper 12-06, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi and Adam Millard Ball. 2012 'Cooperation to reduce developing country emissions' Motu Working Paper 12-, Motu Economic and Public Policy Research, Wellington.
- McDonald, Hugh, and Suzi Kerr. 2011. "Why do New Zealanders Care About Agricultural Emissions?" Motu Note #9, Motu Economic and Public Policy Research, Wellington.
- Anastasiadis, Simon, Marie-Laure Nauleau, Suzi Kerr, Tim Cox, and Kit Rutherford. 2011. "Does Complex Hydrology Require Complex Water Policy? NManager Simulations for Lake Rotorua," Motu Working Paper 11-14, Motu Economic and Public Policy Research, Wellington.
- McDonald, Hugh, and Suzi Kerr. 2011. "Trading Efficiency in Water Quality Trading Markets: An Assessment of Trade-Offs," Motu Working Paper 11-15, Motu Economic and Public Policy Research, Wellington.
- Kerr, Suzi. 2011. "Submission to the Emissions Trading System Review Panel," comments on the Emissions Trading System Review. www.motu.org.nz
- Karpas, Eric, and Suzi Kerr. 2011"Preliminary Evidence on Responses to the New Zealand Forestry Emissions Trading Scheme," *Motu Working Paper* 11-09,

- Van Benthem, Arthur and Suzi Kerr. 2011 "Bigger is better: Avoided deforestation offsets in the face of adverse selection" *PESD working paper #201* March
- Van Benthem, Arthur and Suzi Kerr. 2010. "Optimising Voluntary Deforestation Policy in the Face of Adverse Selection and Transfers" *Motu Working Paper 10-04*, August.

RECENT PAPER PRESENTATIONS

2013

- (with Adam Daigneault) 'What's the Use? How can we get more from land-use and economic models?' Landcare Link Seminar, Oct 22. Wellington.
- 'Allocation of allowances in greenhouse gas markets: lessons from New Zealand' *China-Australia Carbon Market Design Expert Workshop* organized by Tsinghua University and the University of New South Wales; October 12, Beijing.
- 'Making emissions trading effective: lessons from New Zealand' in symposium on *Theoretical Advances and Empirical Lessons on Emission Trading Schemes* organised by the Institute of Policy and Management, Chinese Academy of Sciences and Fraunhofer Institute for Systems and Innovation Research ISI; October 10-11, Beijing.
- 'Policy Instability and Investment Certainty under emissions trading' and 'Challenges going forward: linking (and agricultural emissions)' Institute of Policy and Management, Chinese Academy of Sciences, Beijing Oct. 8-9
- "Greenhouse gas emissions in New Zealand: A consumption-based analysis" New Zealand Association of Resource Economists, Lincoln, August 2013
- "Allocation and cost sharing in agricultural greenhouse gas markets" New Zealand Association of Resource Economists, Lincoln, August 2013
- "Life after Kyoto: How can New Zealand contribute to global mitigation beyond our borders?" New Zealand Climate Change Conference, Palmerston North, June 2013
- 'Tackling Agricultural Emissions' New Zealand Climate Change Conference, Palmerston North, June 2013
- 'Contracting for credible climate mitigation' University of Waikato, May 2013
- "Emissions trading in Chile?" Universidad de los Andes workshop: Sistema de Negociación de Emisiones en Colombia Bogotá, Colombia April 15 and Centro de Estudios Públicos workshop. Hacia una economía de bajo carbono: Lecciones internacionales y una propuesta de mercado para Chile, Santiago, Chile. April 17
- "Ejemplos de sistemas en Colombia" Universidad de los Andes workshop: *Sistema de Negociación de Emisiones en Colombia*. Bogotá, Colombia April 15
- "El diseño y la implementación de una sistema de transacción de emisiones (ETS): la experiencia Neozelandés" Centro de Estudios Públicos workshop. Santiago, Chile. April 17
- "El sistema de Nueva Zelanda que incorpora el sector forestal" Workshop: The role of the forestry sector in an emissions carbon trading system in Chile. Workshop organised by Pontifícia Universidad Católica de Chile, Santiago, Chile April 17
- "Credible climate mitigation from forests and agriculture in Colombia: three prototype markets" Stanford Environmental and Energy Policy Analysis Center, April

- "Water A Commons or a Commodity", Presentation to Network Waitangi Otautahi, Christchurch, 26 February
- "Tackling NZ's Agricultural Emissions" Invited presentation in AARES pre-conference workshop "Source or Sink? Farm level implications of pricing carbon and policy responses to manage greenhouse gas emissions" Sydney, Australia 5 February, 2013
- "Life after Kyoto: How New Zealand can effectively help reduce greenhouse gas emissions in developing countries" Motu Public Policy Seminar, Wellington, February
- **2012** "Creating a seller: How New Zealand can effectively help reduce greenhouse gas emissions in developing countries" Motu Auckland Public Policy Seminar.

 December
- "Can Growth be Sustainable?" in session on "Can growth be sustainable? 25 years on from Brundtland" with lead speaker Phil O'Reilly. Lincoln University State of the Nation's Environment Series 18 October, Lincoln University
- with Hugh McDonald 'New Zealand Environmental Policy Pioneers' Half-day Workshop at Freie Universität Berlin, 20 September, 2012 (with support from the New Zealand Embassy)
- 'Emissions trading in Latin America: thoughts from a Chilean Context' Economics
 Department Universidad de los Andes, Bogota, Colombia, 14 September 2012
- 'Allocation and cost sharing: Nutrient trading and greenhouse gas markets' New Zealand Agricultural and Resource Economics Society Conference, Nelson, 31August 2012
- 'Emerging solutions: The who, why and how of acting on agricultural emissions' Institute of Agricultural and Horticultural Science, Lincoln, 22 August, 2012
- 'Emissions trading in a small country' Expert Group Meeting on Current Status of Carbon Market and Prospects of Linkage, Joint meeting of Korean Legislation Research Institute and New Zealand Ministry for the Environment, Seoul, Korea, 17 August 2012
- 'The who, why and how of acting on agricultural emissions'; 'Mitigation through land use and behavioural change'; and 'Emerging Solutions' Joint forum Institute of Governance and Policy Studies and Motu, 7 August, 2012
- 'New Market Mechanisms' Institute of Policy Studies Roundtable on Carbon Markets, June 28 2012
- 'Qué es la transacción de emisiones (ETS) y que son sus ventajas' in *Potencial para una sistema de transacción de emisiones en Colombia en el largo plazo* 12 June, 2012 Bogota, Colombia
- 'Managing Risks and Tradeoffs Using Water Markets' OECD Expert Workshop on Water Security: Managing Risks and Tradeoffs in Selected River Basins, Paris, 1 June 2012
- 'Managing Water Quality using Markets' Auckland Public Policy Seminar 4 April 2012 'Key concepts for allocating costs of water quality management' and 'Markets and Water Quality: Integrated Assessment for Policy Design' Motu / NIWA / LAWF Water

Quality Symposium 3 April, 2012

- Addressing Agricultural GHGs 'fairly' and 'Emerging Solutions' Agricultural emissions dialogue 8 May, 2012
- 'Cooperation to reduce developing country emissions' Motu Economic Researchers' Climate Change workshop, March 2012
- 'When and why more accurate information on groundwater flows and nitrate attenuation are valuable for the design of efficient water quality management' in *Freshwater Nitrogen Management: Can Isotopes Help* Symposium at the National Isotope Center, GNS-Science. March 14, 2012
- 'Key concepts for quality and quantity allocation mechanisms' Land and Water Forum Allocation Working Group, February 2012
- 'A climate for change in water quality?' Australian Association of Agricultural and Resource Economics Conference, Perth, February 2012

MAJOR GRANTS

- New Zealand Foundation for Research Science and Technology(2009 2012), 'Coordination and cooperation for effective climate policy design and implementation' \$250,000 per year.
- Ministry of Agriculture and Forestry (2008) Secretariat for the Agricultural Technical Advisory for the NZ Emissions Trading system. \$250,000
- New Zealand Foundation for Research Science and Technology, (2007 2011) "Integrated Economics of Climate Change" \$450,000 per year.
- New Zealand Foundation for Research Science and Technology, (2007 2009) "Markets and water quality: Integrated assessment for policy design" \$500,000 per year.
- Climate Change Policy Dialogue group: Stage 1 Total budget \$100,000 from 5 separate funders; Tindall Foundation, Meridian Energy, Fletcher Building, Morgan Family Charitable Foundation and Foundation for Research Science and Technology
- 'Nutrient trading study group' (2007-08) funded by Environment Bay of Plenty, Ministry of Agriculture and Forestry and Ministry for the Environment \$140,000
- Tindall Foundation (2005-2007) Carbon sequestration on Maori land.
- New Zealand Foundation for Research Science and Technology, (2002 2007)

 "Adjustment and Inequality" \$500,000 per year in 2007 and "Land Use, Climate
 Change and Kyoto: Human Dimensions Research to Guide NZ Policy" \$150,000
 per year.
- Lincoln Institute of Land Policy (2002) "Land Taxes and Revenue Needs as Communities Grow and Decline: Evidence from New Zealand"
- New Zealand Ministry of Fisheries (2002) "To assess the efficiency of the NZ market and identify possible sources of inefficiency by studying quota price formation and market operation." with Jim Sanchirico and Richard Newell.
- WWF grant to study Migration and the Environment in Galapagos, (2002).
- National Science Foundation: Methods and Models for Integrated Assessment (2000 2002) "A Supply Function And CDM Rules For Tropical Forest Carbon Sinks: multi-disciplinary estimation and integrated sensitivity analysis for Costa Rica" (Proposals 9980276 and 9980252)
- Resources for the Future (1999 2000) "Economic Fishery Conservation through Individual Transferable Quota: Evidence from the New Zealand Experience" with Jim Sanchirico and Richard Newell

- US Environmental Protection Agency (1999-2000) "Technology Adoption in response to the Phasedown of Lead in Gasoline"
- Tinker Foundation (1998 2000) "Achieving Greatest Benefits from Sequestration in Costa Rica: Costa Rican Land-Use Policies In Light Of Global Climate Change" with Alex Pfaff (Columbia University), David Schimel (National Center for Atmospheric Research), Arturo Sanchez (University of Costa Rica), and Joseph Tosi and Vicente Watson (Tropical Science Center, Costa Rica)
- Subcontractor to Resources for the Future Research on International Emissions Trading, June August 1997
- National Center for Ecological Analysis and Synthesis, UC Santa Barbara, Working group grant for "A Supply Function for Carbon Sequestration in Costa Rica: Multi-Disciplinary Estimation and Integrated Sensitivity Analysis". May, 1998 May, 2000 with Alex Pfaff (Columbia University), David Schimel (National Center for Atmospheric Research), Arturo Sanchez (University of Costa Rica), and Joseph Tosi and Vicente Watson (Tropical Science Center, Costa Rica)
- Contract for Harvard Institute of International Development to work on Carbon Sequestration in Costa Rica, 1998/99
- Subcontractor on US Environmental Protection Agency grant through Resources for the Future to study design issues relating to a domestic carbon permit market for the United States, July Sept. 1997.
- Center for Environmental Research and Conservation, Columbia University: Research Planning Grant 1996/97 to develop a grant proposal on "Economic and ecological tradeoffs in the definition of tradeable carbon sequestration permits"

TEACHING EXPERIENCE

Graduate Student Teaching

STANFORD UNIVERSITY

Graduate Environmental and Natural Resource Economics sequence (ECON 250, 251) cotaught with Larry Goulder and Frank Wolak, 2009/10

VICTORIA UNIVERSITY OF WELLINGTON

SCIE 401 Climate science and decision-making (2013) Co-taught with David Frame and Adrian Macey

Econ/Publ 411 Economics of the Public Sector (2001 - 2004)

University of Maryland at College Park

AREC 689M Advanced Topics in Environmental Regulation (Fall 1996)

AREC 689L Workshop on Environment and Development Economics (Spring 1996)

Informal Dissertation Seminar (Spring, Fall 1997)

Reading Course on Taxation and the Double Dividend (Fall 1997)

Undergraduate Teaching

STANFORD UNIVERSITY

Environmental Economics and Policy (ECON 155), 2010

Cooperative and Regulatory Approaches to Environmental Policy (ECON 156), 2010

UNIVERSIDAD AUSTRAL DE CHILE

Sistemas Agropecuarios (PRAN 100-04): Agricultural and fisheries systems. Two lectures on cooperation. 2006

UNIVERSITY OF MARYLAND AT COLLEGE PARK

Professor AREC 332/432 Introduction to Natural Resource Policy (Spring 1996 - 97)

HARVARD UNIVERSITY

Teacher, Sophomore Tutorial on Environmental Economics (Spring 1995).

Teaching Fellow, Senior Thesis seminar in Applied Microeconomics (1994/95).

Teaching Fellow, Senior Thesis seminar on Labor Economics (1992/93).

Resident Economics Tutor at Currier House (1992/93), Non-Resident Tutor (1991-95).

Tutor for Graduate Microeconomics General Examinations (1992).

Section leader for Economics 1410 Public Sector Economics (1991/92).

University of Canterbury

Section Leader, First Year Economics (1986-87).

LANGUAGES Spanish (conversational)