Curriculum Vitae

OSCAR J. CACHO

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EDUCATION

B.Sc., Marine Biology	Universidad Autonoma Metropolitana Mexico City, Mexico. 1979.
M.Sc., Fisheries	Auburn University Alabama, U.S.A. 1984.
Ph.D., Economics	Auburn University Alabama, U.S.A. 1988.

Updated November 2019

PRESENT POSITION

Professor Chair of Research UNE Business School University of New England, Australia

Lecturer from Jul 1994 – Dec 1999; promoted to senior lecturer Jan 1999; promoted to associate professor Jan 2004; promoted to Professor Jan 2011.

As Chair of Research in the UNE Business School I am member of both the Head of School Executive Committee and the University Research Committee. In these roles I contribute to University policy and manage the allocation of the School research budget to improve our research outcomes as a continuing process.

I was the School coordinator of High Degree Research from October 2010 to December 2016. This involves dealing with policy, allocating scholarships, evaluating PhD applications and organising confirmation seminars for PhD students.

I was Coordinator of the Bachelor of Agricultural Economics (BAgEc) and Bachelor of Agribusiness (BAgBus) Degrees from October 2003 until March 2009.

In recent years I have obtained over 2.1 million dollars in research funds for several projects dealing with global warming and carbon sequestration, management of invasive populations and management of dryland salinity. More details on these projects are presented in a later section.

I have designed and taught many units, with emphasis on applied quantitative methods: ARE3/414 (applied production and prices); ARE3/415 (quantitative methods) ; ARE3/420 (agricultural and resource sector planning); RSNR120 (sustainable resource use and environmental management); ECON3/429 (natural resource economics); ECON3/434 (finance and risk management); ECON3/431 (introduction to bioeconomics); ECON223 (farm and resource management); QM2/365 (business decision making); MBA742 (introduction to management science).

Other duties during my tenure at UNE have included: computer committee chair; organising the seminar series; workload allocation; development and maintenance of the department's web

pages; organisation of the 42nd Conference of the Australian Agricultural and Resource Economics Society; Member of the School Research Committee; Member of the University Research Grants Panel; Member of the Promotion Committees (A to B and B to C).

EMPLOYMENT HISTORY

1979-1981Research Associate

Hydrobiology Department Universidad Autonoma Metropolitana, Mexico

Participated in experimental design, sampling and analyses of chemical and biological processes in aquatic environments.

Coauthored reports of two research projects:

Effects of an oil spill on coral reefs of the Gulf of Mexico, sponsored by Mexican Navy. *Dynamics of a coastal lagoon*, sponsored by the National Institute for Biotic Resource Research.

1979-1982 Instructor

Hydrobiology Department Universidad Autonoma Metropolitana, Mexico

Was responsible for designing and teaching laboratory exercises, and organising field trips for third and fourth year university courses on: marine ecology, sampling and analysis techniques, dynamics of freshwater ecosystems. Also assisted in the instruction of courses on limnology, crustacean biology and botany.

1984-1988 Research Assistant

Agricultural Economics Department Auburn University, U.S.A.

(1) Developed a bioeconomic model to optimize the operation of a fish farm. (2) Modified an existing linear programming model to study the effects of tax laws on optimal farm business decisions. (3) Assisted in data analysis of various research projects. (4) Participated in the development of a farm tax annotated bibliography.

1988-1990 Research Associate

Agricultural Economics Department Auburn University, U.S.A.

(1) Implemented economic optimization models for fish production. (2) Designed aquaculture experiments and wrote computer programs to manage them. (3) Assisted staff and students with data analysis, mathematical modelling, and use of software packages.

1990-1994 Post-Doctoral Fellow

Farm Management Department Lincoln University, New Zealand

Started in June 1990, with a two-year fellowship to develop simulation models of alternative farming systems. Further funding was obtained to extend the duration of the position. I was involved in four major projects:

Development of a model to study management of grazing systems and production risks. Development of a dairy cow model (growth and milk production). Development of a lucerne growth model.

Development of a nonlinear regression package used to estimate parameters of dynamic models.

I also played a 'technical support' role in the department, by assisting staff and students with statistical analysis, computer programming, design and use of simulation models and general problem-solving.

Lecturer

Centre for Computing and Biometrics (CCB) Lincoln University, New Zealand

In 1993 I was subcontracted to the CCB (part time) to teach courses on: Structured programming (COMP204). Advanced programming and computer files (COMP301).

CONSULTANCIES

NSW National Parks and Wildlife Service (2018):

Feasibility of Eradicating Hawkweeds in NSW: analysis of resource requirements. Developing analytical tools based on principles of search theory and population dynamics.

Food and Agriculture Organization (FAO) of the United Nations (2016):

EPIC (Economic and Policy Analysis for Climate Smart Agriculture) program; developing the analytical infrastructure to complement econometric analyses with climate scenario and farm systems modelling.

Food and Agriculture Organization (FAO) of the United Nations (2014):

Climate Smart Agriculture Program; integrating spatial data, farm household survey data and econometric results to develop analytical tools for policy analysis. Development of spreadsheet tool to assist in screening national agricultural policies for 'climate smartness' based on potential contribution to carbon mitigation and resilience to climate change and variability.

Meat and Livestock Australia (MLA) (2012)

Analysis of R&D investment under uncertainty. Review of methods available to assess potential investments.

Victorian Department of Primary Industries (2011-2012)

Integrating DPI whole-farm models to support policy analysis. Consists of integrating GIS regional maps with optimisation models at the farm level to enhance communication between scientists and economists and undertake scenario and policy analysis.

National Fire Ant Eradication Program, Biosecurity Queensland (2009):

Development of computer models to assist in the planning and management of the eradication effort in collaboration with scientists at Monash University.

Food and Agriculture Organization (FAO) of the United Nations (2006):

Contracted to write a book chapter on the economics of carbon sequestration projects involving smallholders.

Food and Agriculture Organization (FAO) of the United Nations (2006):

Visiting Expert under the partnership program; working on global warming policy and bioenergy (August to December).

Cooperative Research Centre for Plant-Based Solutions to Salinity (2003-2005):

Contracted to provide advice on linking catchment-level and farm-level salinity models incorporating hydrological and economic information.

Food and Agriculture Organization (FAO) of the United Nations (2003):

Contracted to prepare a paper on potential for carbon sequestration and poverty alleviation in smallholder agroforestry projects under the Clean Development Mechanism of the Kyoto Protocol.

CSIRO, Marine Science (1999):

Cost-Benefit analysis brown tiger prawn (Penaeus esculentus) aquaculture in Australia.

Inner-Mongolia Grasslands Conservation Project (1999):

Developed and delivered a training program on farm economics and database management for a participant in the project (subcontracted by Hassall's International).

University of Agriculture, Faisalabad, Pakistan (1996):

Three-month, in-country technical assistance as part of a twinning agreement financed by the World Bank.

Centre for Resource Management, Lincoln, New Zealand (1993):

Developed a dynamic model to analyse optimal strategies for exploitation of fishery resources under stochastic conditions.

Ministry for the Environment, Wellington, New Zealand (1992):

"Using option pricing theory to estimate option value: A preliminary study.", 1992 (with P. Seed, B.M. Longley and B.M.H. Sharp).

Implemented a computer program to evaluate operating policies of a gas field. Participated in the elaboration of the report.

Wildlife International Ltd. U.S.A. (1990):

Developed a computer program to design and manage environmental impact experiments, saving an estimated 1500 person-hours per experiment. Instructed staff on the use of computer graphic packages.

Fishery Information Management Systems, U.S.A. (1989):

Developed a computer program to schedule probabilistic catch and fishing effort surveys. Time required to design a survey with space/time components was reduced from 8 hours to 15 minutes.

RESEARCH GRANTS*

Year	Source	Title	Amount
2019-20	NSW DPI	Economic potential of abatement options for farming systems in NSW	\$113,900
2019-20	CEBRA	Modelling the costs and benefits of European wasp control	\$40,000
2018-2021	ACIAR / The University of Adelaide	Agricultural Policy Research to Support Natural Resource Management in Indonesia's Upland Landscapes. Total project budget \$1.6 million.	\$173,615
2015-16	FAO	Background paper on adaptation paths for vulnerable areas in support of SOFA 2016	\$138,431
2014	ACIAR / ANU	Extension of Project FST/2007/052: 'Improving governance, policy and institutional arrangements to reduce emissions from deforestation and degradation'	\$30,000
2014	ACIAR / The University of Adelaide	Contributing to Indonesia's Sustainable Agricultural Research Strategy	\$10,000
2013	ACIAR / ANU	Clean-up and analysis of survey data for project FST/2007/052	\$10,000
2012-2013	ACERA	Post Border Investment Return, managed by Dr. S. Hester	\$110,000
2011	ACERA	A tool to support the decision to switch between eradication and containment of an invasion	\$90,000
2011	LMDCMA	Economic Impact of Off Site Wind Erosion Assessment, collaboration with NSW Department of Environment, Climate Change and Water	\$135,000

2010-2011	ACERA	Valuing community engagement in biosecurity surveillance	\$77,000
2009-2011	ACERA	Post-border surveillance techniques: review, synthesis and deployment (ACERA Project # 1004), managed by Dr S. Hester	\$236,618
2009	AWRC	Estimation of investment required to achieve weed eradication. With Dr D. Panetta from Queensland Department of Primary Industries and Fisheries	\$30,177
2008-2011	ACIAR (PI)	Improving governance, policy and institutional arrangements to reduce emissions from deforestation and degradation (REDD). In collaboration with ANU, total project budget \$1.4 million	\$65,163
2007-2009	ACERA	Application of search theory to invasive- species control programs	\$151,621
2007-2008	Salinity CRC	A raster catchment model for economic analysis of land use change and salinity	\$30,000
2006	Weed CRC	Allocating funds for weed surveillance and control (with A.Prof J. Sinden)	\$192,962
2005	FEB&L Research Fellowship	Faculty of Economics Business and Law, UNE. Research Incentive Scheme	\$20,000
2005	NOAA, USA (PI)	Predicting and monitoring the spread of marine invasive species: B Leung, McGill University (CI) total project budget US\$134,473	\$8,300
2004	UNE Research Grant	Multi-Agent Systems as tools for management of complex ecosystems	\$10,000
2003	ACIAR	Economic potential of land-use change and forestry for carbon sequestration and poverty reduction, 2 years	\$400,000
2003	DAFF	Cost-benefit analysis of responses to weed incursions	\$20,000
2002	AFFA	Cost-benefit analysis of responses to weed incursions	\$55,000
2002	ARC, DP0208038	Institutional transitions to sustainable agriculture: An interdisciplinary analysis of a novel common property resource governance system (Brunckhorst et al.)	\$202,000
2002	Weed CRC, GRDC	Economic evaluation of weed incursions, their risk and their management. Postdoctoral fellowship (with A.Prof J. Sinden)	\$270,000
2001	ACIAR	The role of carbon sequestration credits in influencing the economic performance of farm forestry systems, 2 years	\$420,886
2000	ACIAR	The role of carbon sequestration credits in influencing the economic performance of farm forestry systems, project preparation funds	\$13,153
2000	ARC Small Grant	Economic evaluation of Agroforestry in the context of environmentally responsible farming practices.	\$6,000

1998	ARC Small Grant	Investigating the potential of genetic algorithms to solve agricultural and resource management problems involving conflicting objectives.	\$6,500
1997	UNE Grant	Bioeconomic Modelling of sustainable grazing systems.	\$4,000

*All funds in Australian Dollars. ACERA: Australian Centre of Excellence for Risk Analysis; ACIAR: Australian Centre for International Agricultural Research; ARC: Australian Research Council; AFFA: Agriculture Fisheries and Forestry Australia (later renamed DAFF); AWRC (Australian Weeds Research Centre); Salinity CRC: Cooperative Research Centre for Plant-Based Solutions to Salinity; Weed CRC: Cooperative Research Centre for Australian Weed Management; UNE: University of new England; FEB&L: Faculty of Economics Business and Iaw at UNE; LMDCMA: Lower Murray Darling Catchment Management Authority.

INVITATIONS AS SPEAKER / WORKSHOP PARTICIPANT

- 48 Organization for Economic Cooperation and Development (OECD), Paris (September 2017). Combining evidence and modelling to contribute to climate adaptation by farmers in developing countries
- 47 World Agroforestry Centre, Indonesia (November 2016) Combining evidence and modelling to contribute to climate adaptation by smallholders
- ⁴⁶ FAO, Rome (November 2016) Combining evidence and modelling to contribute to climate adaptation by smallholders
- ⁴⁵ CSIRO, Agriculture Flagship, Brisbane (November 2015) Climate smart agriculture through bioeconomic modelling and policy analysis
- 44 UNE Business School (May 2015) Designing Effective Policies by Combining Evidence and Modelling for Climate Smart Agriculture.
- ⁴³ Institute for Rural Futures, UNE (February 2015) Understanding small-holder forest conservation motivations and the implications for climate policy.
- ⁴² FAO, Rome (December 2014) Climate Smart Agriculture: Designing Effective Policies by Combining Evidence and Modelling.
- 41 FAO, Rome (July 2014) Can agent-based models contribute to policy analysis of climate adaptation by smallholders?
- ⁴⁰ FAO, Rome (August 2013). Tropical deforestation and climate policy: the role of oil palm in Indonesia.
- ³⁹ AgResearch, Lincoln, New Zealand (April 2013). The value of passive surveillance in the management of invasive species. Also invited as workshop participant to contribute to the Great White Butterfly eradication program in Nelson (1 week).
- 38 Queensland Department of Primary Industries, Brisbane (May 2012). Biosecurity economics: overview and examples.
- ³⁷ Armidale Chamber of Commerce (October 2011). Pricing carbon: challenges and opportunities for the rural sector.
- ³⁶ Victorian Department of Primary Industries, Melbourne (October 2011). Economic and policy aspects of carbon markets: opportunities for the rural sector.
- ³⁵ La Trobe University, School of Economics, Melbourne (October 2011). The value of passive surveillance in the management of biological invasions.
- ³⁴ Rural Climate Change Solutions symposium, UNE, Armidale (May 2011). Economic and policy aspects of carbon markets: opportunities for the rural sector.
- ³³ Frontiers in the Economics of Biosecurity and Environmental Economics, Crawford School, ANU (March 2011). Invited paper on "The Economics of Containment Versus Eradication of an Invasive Species.

- ABIN Workshop, Building Biosecurity Intelligence Capacity, Brisbane (November 2010). Invited to present a paper on "Incorporating economic impacts into simulation models: Challenges and opportunities".
- 31 Biosecurity Queenland Control Centre, Brisbane (October 2010). Seminar to Red Imported Fire Ant Review Panel on the use of modelling to inform pest control programs.
- ³⁰ Australian Biosecurity Inteligence Network (ABIN) Workshop, Brisbane (March 2010). Invited to present a paper on the decision tools for biosecurity.
- 29 AARES Biosecurity Symposium, Australian National University (September 2009). Invited Speaker: "Surveillance strategies and bioeconomics in invasive species control programs".
- 28 Department of Botany and ACERA, Melbourne University (June 2009). Seminar on Bioeconomic approaches to invasive species control.
- ²⁷ The Epicentre, Massey University, New Zealand (May 2009). Invited to present a paper on "application of search tehory to invasive-species control programs" to biosecurity personnel at MAF and Massey.
- ²⁶ University of Southern Queensland, School of Accounting, Economics & Finance (September 2008). Invited to present a seminar on "the potential for the agriculture and forestry sectors to participate in the carbon market".
- ²⁵ Australian National University (June 2008). Invited to present on "the role of transaction costs" at the symposium: "Challenges to the National Implementation of Activities to Reduce Emissions from Deforestation and Forest Degradation (REDD)".
- ²⁴ Sydney University (April 2008). Invited to present a seminar on Carbon markets, transaction costs and bioenergy.
- 23 Trent University, Ontario, Canada (November 2007). Invited to present two seminars: (1) "Integrating population dynamics and search theory to determine the feasibility of eradicating a biological invasion". (2) "Carbon sequestration policy and smallholders: the influence of transaction costs on project feasibility".
- ²² National Weed Incursion Response Plan workshop, Melbourne (November 2007). Invited to present two papers (on search theory and eradication feasibility).
- ²¹ Hawaii Conservation Conference, Honolulu (July 2007). Invited speaker for a workshop on economics of invasive species.
- 20 AARES Conference, Queenstown, New Zealand (February 2007). Invited to present a workshop on Bioeconomics.
- 19 FAO, Rome, Visiting Expert under the Partnership Program (August to December 2006).
- ¹⁸ Horizons in Livestock Science, CSIRO, Brisbane (October 2006). Invited to present a paper on "The role of bioeconomics on the farm of the future".
- UNESCO, Trieste, Italy (October 2006). Invited to present a paper at a workshop on "Climate Mitigation Measures in the Agro-Forestry Sector and Biodiversity Futures".
- 16 Galapagos Islands, Ecuador, (September 2006). Invited to a workshop as a member of the Technical Advisory Group on Control of Invasive Species. Participants included the Galapagos National Park, Charles Darwin Foundation, Galapagos Quarantine and Inspection Service and others.
- ¹⁵ Conference of the IAAE, Gold Coast (August 2006). Invited to be a discussant at a special session on "Sustainable Development of Aquaculture and Fisheries Challenges for Economists".
- ¹⁴ Conference of the IAAE, Gold Coast (August 2006). Invited to present at a learning workshop on "Environmental Service Incentives and Poverty Reduction".

- ¹³ FAO, Rome (May 2005). Invited to speak at a workshop on environmental services and poverty alleviation. Presented a paper on transaction costs of carbon-sink projects.
- 12 Australian Weeds Conference, Wagga Wagga (September 2004). Invited speaker on "When is it optimal to eradicate a weed invasion?"
- ¹¹ World Aquaculture Society meeting, Hawaii (February 2004). Invited to present a paper on biological invasions in aquaculture: "invasive species in aquatic ecosystems: economics and matrix population models".
- FAO (Food and Agricultural Organization of the United Nations), Rome (November 2003). Presented two seminars to researchers and negotiators involved in the UN Climate Mitigation meetings: "Carbon accounting systems, monitoring costs, and incentives to sequester carbon through forestry" and "Designing Smallholder Agroforestry Projects for Carbon Sequestration: The Role of Abatement Costs and Transaction Costs".
- ⁹ Symposium on Carbon Sequestration to Contribute to Poverty Alleviation, IAAE Conference, Durban (August 2003). Organised by FAO. Presented an invited paper.
- ⁸ Millennium Ecosystem Assessment, Kenya, (March 2003). This is an initiative of the United Nations with the objective of enhancing human well being without undermining ecosystems. I was one of 36 people invited to the workshop.
- ⁷ Symposium on Carbon Monitoring, Taiwan (November 2002). Presented an invited paper on carbon monitoring costs and reforestation incentives.
- 6 Meeting on the Clean Development Mechanism of the Kyoto Protocol, Bogor, Indonesia (March 2001). Organised by the Centre for International Forestry Research (CIFOR).
- 5 Symposium on Natural Resource Management and Economic Change, IAAE (International Association of Agricultural Economists) Conference, Berlin (August 2000): Invitation to present a paper on the application of genetic algorithms to natural resource management.
- ⁴ Visit ICLARM's headquarters in Manila, Philippines (May 1998). Presented a seminar and developed research funding applications.
- ³ Visit and seminar presentation. ICLARM's Coastal Aquaculture Center, Solomon Islands (October 1997).
- ² University of Western Australia (September 1997), presented a seminar on "Dynamic models, externalities and sustainability in agriculture: The saga continues".
- ¹ Discussant. International Consultation on Fisheries Policy Research, Denmark (June1997). Meeting organised by the International Food Policy Research Institute (IFPRI) and International Center for Living Aquatic Resource management (ICLARM).

LANGUAGES

Fluent: Spanish, English, MATLAB, Pascal/Delphi Visual BASIC. Working knowledge: C, C++, Fortran.

RESEARCH STUDENT SUPERVISION

I have supervised 30 PhD students, 15 Master of Economics students and 29 Bachelor of Agricultural Economics research students since 1994.

MEMBERSHIPS and AWARDS

Distinguished Fellow, Australian Agricultural and Resource Economics Society (AARES), 2017.

International Association of Agricultural Economists

American Economic Association

- Australian Agricultural and Resource Economics Society (AARES). President of the New England Branch (1996, 2008, 2014)
- Gamma Sigma Delta Honor Society of Agriculture, USA
- International Association of Aquaculture Economics and Management. Member of the editorial board (since 1996)
- Modelling and Simulation Society of Australia
- Australian Journal of Agricultural and Resource Economics (2008). Best journal paper (Cacho, Hester and Spring 2007).
- Cooperative Research Centre for Australian Weed Management (2008). Best scientific project (Program 1); Cacho, Hester, Spring and Sinden.

AARES, Member of PhD Prize Committee (2008-2011).

PUBLICATION RECORD

REFEREED JOURNAL ARTICLES

- 76 Tighe K., Piggott N., Cacho O., Mounter S., Villano R. 2019. Testing for pre-committed quantities of Australian meat demand. *Australian Journal of Agricultural and Resource Economics*. 63:247-264. doi: 10.1111/1467-8489.12300.
- 75 Bateman, L., Yi, D, **Cacho**, O.J., Stringer, R. 2018. Payments for environmental services to strengthen ecosystem connectivity in an agricultural landscape. *Environment and Development Economics*. 1-20. doi:10.1017/S1355770X1800030X
- 74 Henderson B., Cacho O., Thornton P., van Wijk M., Herrero M. 2018. Climate change impacts and options for mixed smallholder farmers in Burkina Faso. *Agricultural Systems*. 167: 195-205. https://doi.org/10.1016/j.agsy.2018.09.012
- 73 Mohammadi, A. Cowie, A.L., Cacho, O. Kristiansen, P. Mai, T.L.A. Joseph, S. 2017. Biochar addition in rice farming systems: economic and energy benefits. *Energy*. 140: 415-425.
- 72 Tighe, K., **Cacho**, O., Mounter, S., Villano, R., Ball, A., Pethick, D and Fleming E. 2017. Determinants of consumer willingness to pay for quality-graded Australian sheep meat. *Animal Production Science*. http://dx.doi.org/10.1071/AN15873.
- ⁷¹ Hester, S.M. and **Cacho**, O.J. 2017. The contribution of passive surveillance to invasive species management. *Biological Invasions*. 19:737–748.
- 70 Henderson, B., Golub, A., Pambudi, D., Hertel, T., Godde, C., Herrero, M., Cacho, O. and Gerber, P. 2017. The power and pain of market-based carbon policies: a global application to greenhouse gases from ruminant livestock production. *Mitigation and Adaptation Strategies for Global Change*. https://doi.org/10.1007/s11027-017-9737-0.
- 69 Behrendt, K., Cacho, O., Scott, J.M and Jones, R. 2016. Using Seasonal Stochastic Dynamic Programming to identify optimal management decisions that achieve maximum economic sustainable yields from grasslands under climate risk. *Agricultural Systems*. 145: 13-23
- 68 Henderson, B., Godde, C., Medina-Hidalgo, D., van Wijk, M., Silvestri, S., Douxchamps, S., Stephenson E., Power, B., Rigolota, C., Cacho. O., Herrero, M. 2016. Closing system-wide yield gaps to increase food production and mitigate GHGs among mixed crop–livestock smallholders in Sub-Saharan Africa. *Agricultural systems*, 143: 106-113.
- 67 Shabani, F., Cacho, O., & Kumar, L. 2016. Effects of climate change on economic feasibility of future date palm production: An integrated assessment in Iran. *Human and Ecological Risk Assessment. 22: 1268-1287.*
- 66 Zull, A.F., Lawes, R.A. and Cacho, O. J. 2016. A crowding-dependent population model for woody weeds – where size does matter. *Environmental Modelling and Software*. 76: 108-116.
- 65 Spring, D. and **Cacho**, O.J. 2015. Estimating eradication probabilities and trade-offs for decision analysis in invasive species eradication programs. *Biological Invasions*.17: 191-204.
- 64 Cacho, O.J., Milne, S., Gonzalez, R. and Tacconi, L. 2014. Benefits and costs of deforestation by smallholders: Implications for forest conservation and climate policy. *Ecological Economics*. 107: 321–332.
- 63 Panetta, F. D. and Cacho, O.J. 2014. Designing weed containment strategies: An approach based on feasibilities of eradication and containment. *Diversity and Distributions*. 20: 555-566. DOI: 10.1111/ddi.12170, 1-12.
- 62 Power, B., **Cacho**, O.J. 2014. Identifying risk-efficient strategies using stochastic frontier analysis and simulation: an application to irrigated cropping in Australia. *Agricultural Systems*. 125: 23-32.
- 61 Behrendt, K., **Cacho**, O., Scott, J.M and Jones, R. 2013. Optimising pasture and grazing management decisions on the Cicerone Project farmlets over variable time horizons. *Animal Production Science*. 53:796-805.
- 60 Behrendt, K., Scott, J.M, **Cacho**, O. and Jones, R. 2013. Simulating the impact of fertiliser strategies and prices on the economics of developing and managing the Cicerone Project farmlets under climatic uncertainty. *Animal Production Science*. 53: 806-816.
- 59 Cacho, O.J., Lipper, L. and Moss, J. 2013. Transaction costs of carbon offset projects: a comparative study. *Ecological Economics*. 88: 232-243.

- 58 Hester, S.M., Cacho, O.J., Panetta, F.D. and Hauser, C.E. 2013. Economic aspects of weed risk management. *Diversity and Distributions*. 19 (5-6): 580-589.
- 57 Scott, F., **Cacho**, O. and Scott, J.M. 2013. Economic risk analysis of different livestock management systems. *Animal Production Science*. 53:788-795.
- 56 Scott, F., Scott, J.M and Cacho, O. 2013. Whole-farm returns show true profitability of three different livestock management systems. *Animal Production Science*. 53:780-787.
- 55 Scott, JM, Behrendt. K, Colvin, A, Scott, F, Shakhane, LM, Guppy, C, Hoad, J, Gaden, CA, Edwards, C Hinch, GN, Cacho, OJ, Donald, GE, Cottle, D, Coventry, T, Williams, G and Mackay, DF. 2013. Integrated overview of results from a farmlet experiment which compared the effects of pasture inputs and grazing management on profitability and sustainability. *Animal Production Science* 53:841-855.
- 54 Sinden, J., Downey, P., Cacho, O. and Hester, S. 2013. Cost effectiveness in site selection to protect native plant communities from the weed, bitou bush, in New South Wales, Australia. *Journal of Environmental Management*. 128: 1071-1080
- 53 Hester, S.M and Cacho, O.J. 2012. Optimisation of search strategies in managing biological invasions: a simulation approach. *Human and Ecological Risk Assessment*. 18(1): 181-199.
- 52 Panetta, F. D. and **Cacho**, O.J. 2012. Beyond fecundity control: which weeds are most containable?. *Journal of Applied Ecology*. 49: 311-321.
- 51 **Cacho**, O.J. and Hester S.M. 2011. Deriving efficient frontiers for effort allocation in the management of invasive species. *Australian Journal of Agricultural and Resource Economics*. 55: 72-89.
- 50 Mewton, R. and **Cacho**, O.J. 2011. Green Power voluntary purchases: Price elasticity and policy analysis. *Energy Policy*. 39: 377–385.
- 49 Panetta, F. D., Cacho, O.J., Hester, S., Sims-Chilton, N. and Brooks, S. 2011. Estimating and influencing the duration of weed eradication programmes. *Journal of Applied Ecology*. 48: 980– 988.
- 48 Wise, R.M. and **Cacho**, O.J. 2011. A bioeconomic analysis of the potential of Indonesian agroforests as carbon sinks. *Environmental Science & Policy*. 14: 451-461.
- 47 Cacho, O.J., Hester, S., Spring, D. and Mac Nally, R. 2010. Allocating surveillance effort in the management of invasive species: a spatially-explicit model. *Environmental Modelling and Software*. 25: 444-454.
- 46 Hester, S.M., Brooks, S.J., Cacho, O.J. and Panetta, F.D. 2010. Applying a simulation model to the management of an infestation of *Miconia calvescens* in the wet tropics of Australia. *Weed Research.* 50, 269–279.
- 45 Leung, B., **Cacho**, O. and Spring, D. 2010. Searching for non-indigenous species: rapidly delimiting the invasion boundary. *Diversity and Distributions*. 16 (3): 451-460.
- 44 Schmidt, D., Spring, D., Mac Nally, R., Thomson, J.R., Brook, B.W., Cacho, O.J. and McKenzie, M. 2010. Finding needles (or ants) in haystacks: Bayesian prediction of locations of invasive organisms to inform eradication and containment programs. *Ecological Applications*. 20(5): 1217-1227.
- 43 Guy, J.A, Johnston, B. and Cacho, O.J. 2009. Economic assessment of an intra-specific cross of silver perch (*Bidyanus bidyanus* Mitchell) for commercial farming. *Aquaculture Economics and Management*. 13(4): 328-343.
- 42 Cacho, O.J., Hean, R. and Karanja, F. 2008. Accounting for carbon sequestration and its implications for land-use change and forestry projects. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources.* 3 (077): 1-17.
- 41 **Cacho**, O.J., Wise, R.M., Hester, S.A. and Sinden, J.A. 2008. Bioeconomic modeling for control of weeds in natural environments. *Ecological Economics*. 65: 559-568.
- 40 Farquharson, R., **Cacho**, O.J., Mullen, J. and Schwenke, G.D. 2008. An economic approach to soil fertility management for wheat production in north-eastern Australia. *Agricultural Economics*. 38:181-192.

- 39 Sinden, J., Downey, P.O., Hester, S.M. and Cacho, O. 2008. Economic evaluation of the management of bitou bush (*Chrysantemoides monilifera* subsp. *rotundata* (DC.) T.Norl.) to conserve native plant communities in New South Wales. *Plant Protection Quarterly*. 23(1):34-37.
- 38 Cacho, O.J., Hester, S. and Spring, D. 2007. Applying search theory to determine the feasibility of eradicating an invasive population in natural environments. *Australian Journal of Agricultural and Resource Economics*. 51: 425–443.
- 37 Spring, D.A., **Cacho**, O.J. MacNally, R. and Sabbadin, R. 2007. Pre-emptive conservation versus 'fire-fighting': a decision theoretic approach. *Biological Conservation*. 136: 531-540.
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