



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Centre for Environmental
Economics & Policy

Climate Change

CAPABILITY STATEMENT

UWA's Centre for Environmental Economics and Policy addresses complex, multi-faceted environmental problems through quality multidisciplinary research, engagement and training.

Our Centre specialises in providing socio-economic research and policy analysis, including for: mitigation of climate change, adaptation to climate change, design of climate policy.

Our work aims to inform policy and provide evidence through economic analysis, including prioritisation and community values.



WHY CHOOSE US?

1. We have established collaborations with researchers from leading universities and partnerships with research institutes.
2. We have more than 20 years' experience working on nationally funded research programs, industry projects and providing consulting services.
3. Our internationally recognised experts can support your organisation by:
 - a. Conducting quality research, policy analysis and state-of-the-art bio-economic modelling
 - b. Developing and applying economic tools and frameworks to improve decision-making processes
 - c. Delivering customised training and activities to build capacity among your staff and key stakeholders.

SKILLS AND SERVICES

- Interdisciplinary research
- Bio-economic modelling of environmental issues
- Economic evaluation, investment choice and prioritisation frameworks
- Design and evaluation of environmental policies
- Valuation of non-market benefits, and conducting benefit transfer
- Informing adoption of environmental practices
- Environmental decision support tools
- Business case development/Benefit Cost Analysis
- Questionnaire/survey design and analysis
- Focus group facilitation & semi-structured interview techniques
- Multi-stakeholder project management
- Tailored training packages, including workshops and knowledge-sharing activities



OUR PARTNERSHIPS

- UWA Public Policy Institute
- Australian Research Council
- NESP Resilient Landscapes Hub
- Australian Department of Foreign Affairs and Trade
- Worldwide universities network
- Research Council of Norway
- Department of Water and Environmental Regulation

OUR PEOPLE

Our centre consists of highly qualified academic staff, senior research fellows and postgraduate research students. Our **Climate Change Team** is led by:

PROFESSOR DAVID PANNELL

Prof. Pannell is an environmental economist who specialises in economic evaluation, risk, prioritisation and policy analysis. He is a prolific researcher, recognised with several awards, and has supervised 30+ PhD students to completion. He collaborates with a wide variety of industry & government organisations to help them improve their planning and decision-making processes.

ASSOCIATE PROFESSOR MARIT KRAGT

A/Prof Kragt's research integrates biophysical science and economics to help improve natural resource management focussing largely on climate change mitigation in the agricultural industry. Her research considers people's preferences for environmental outcomes. She has published 60+ peer reviewed articles and 7+ conference papers.

RECENT OUTPUTS

- INFFER - is a tool to apply economic analysis in environmental management. <https://www.inffer.com.au>
- 'EAST' benefit-cost analysis screening tool and the 'Value Tool for Natural Hazards' for prioritising investment in mitigation of coastal hazards, designed for Bushfire and Natural Hazards CRC partners. Available at: <https://www.bnhcrc.com.au/research/policy-economics-hazards/229>
- IPBES-IPCC co-sponsored workshop report on biodiversity and climate change
- Gender dimension of climate change research for agriculture in southeast Asia
- Carbon farming policy and activities
- Greenhouse gas emissions
- Climate change impacts and farm-level adaptation: economic analysis of a mixed cropping-livestock system
- Willingness to pay for product ecological footprint
- The economics of risk, uncertainty and learning in the adoption of new agricultural technologies.
- Consumers' willingness to pay for renewable energy
- Capitalization of residential solar photovoltaic systems in Western Australia
- Climate change reduces the mitigation obtainable from sequestration in an Australian farming system
- Environmental costs of using poor decision metrics to prioritise environmental projects.
- Blog posts focussing on environmental economics: <https://www.pannelldiscussions.net/>
- [Introductory Course on Economics of Natural Hazards](#)
- [Introductory Course on Agriculture, Economics and Nature](#)

CONTACT US

For enquiries, potential collaborations or new partnerships, contact:

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Climate Change

RELEVANT PUBLICATIONS – JOURNAL ARTICLES

- Adler, A.A., Doole, G.J., Romera, A.J., Beukes, P.C. (2013). [Cost-effective mitigation of greenhouse gas emissions from different dairy systems in the Waikato region of New Zealand](#). Journal of Environmental Management, 131, 33-43.
- Adler, A.A., Doole, G.J., Romera, A.J., Beukes, P.C. (2015). [Managing greenhouse gas emissions in two major dairy regions of New Zealand: A system-level evaluation](#). Agricultural Systems, 135, 1-9
- Asseng, S. and Pannell, D.J. (2013). [Adapting dryland agriculture to climate change: farming implications and research and development needs in Western Australia](#), Climatic Change, 118(2), 167-181.
- Bryan, B.A., Runting R.K., Capon, T., Perring, M.P., Cunningham, S.C, Kragt, M.E., Nolan, M., Law, E.A., Renwick, A., Eber, S., Christian, R. & Wilson, K. (2016). [Designer policy for carbon and biodiversity co-benefits under global change](#). Nature Climate Change, 6: 301–305.
- Doole, G.J. (2014). [Least-cost greenhouse gas mitigation on New Zealand dairy farms](#). Nutrient Cycling in Agroecosystems, 98(2), 235-251.
- Dumbrell, N., Kragt, M., Gibson, F. (2016). [What carbon farming activities are farmers likely to adopt? A best-worst scaling survey](#). Land Use Policy, 54, pp. 29-37.
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- Hawkins, J., Ma, C., Schilizzi, S., Zhang, F. (2015). [Promises and pitfalls in environmentally extended input-output analysis for China: A survey of the literature](#). Energy Economics, 48, 81-88.
- Ji, Y., Ramjan, R. and Burton, M.P. (2017). [A bivariate probit analysis of factors affecting partial, complete and continued adoption of soil carbon sequestration technology in rural China](#). Journal of Environmental Economics and Policy 6(2):153–167.
- Kragt, M.E., Pannell, D.J., Robertson, M.J. & Thamo, T. (2012) [Assessing costs of soil carbon sequestration by crop-livestock farmers in Western Australia](#), Agricultural Systems, 112, 27-37.
- Kragt, M., Gibson, F., Maseyk, F., Wilson, K. A. (2016). [Public willingness to pay for carbon farming and its co-benefits](#). Ecological Economics, 126, pp. 125-131.
- Ma, C., Rogers, A., Kragt, M., Zhang, F., Polyakov, M., Gibson, F., Chalak Haghighi, M., Pandit, R., Tapsuwan, S. (2015). [Consumers' willingness to pay for renewable energy: A metaregression analysis](#). Resource and Energy Economics, 42, pp. 93-109.
- Ma, C., Polyakov, M. and Pandit, R. (2016). [Capitalization of Residential Solar Photovoltaic Systems in Western Australia](#). Australian Journal of Agricultural and Resource Economics, 60 (3):366-385.
- Ma, C. and Burton, M. (2016). [Warm glow from green power: evidence from Australian electricity consumers](#). Journal of Environmental Economics and Management 78: July: 106- 120.
- Mamouni Limnios, E., Schilizzi, S., Burton, M., Ong, A., Hynes, N. (2016). [Willingness to pay for product ecological footprint: Organic vs non-organic consumers?](#) Technological Forecasting & Social Change 111: 338-348.

Meier, E.A., Thorburn, P., Kragt, M.E., Dumbrell, N.P., Biggs, J.S., Hoyle, F.S. & van Rees, H. (2017). [Greenhouse gas abatement on southern Australian grains farms: biophysical potential and financial impacts](#). *Agricultural Systems*, 155: 147–157.

Pandit, R., P. Neupane, and B. H. Wagle. (2017). [Economics of carbon sequestration in community forests: Evidence from REDD+ piloting in Nepal](#). *Journal of Forest Economics*, 26: 9-29.

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BOOKS & BOOK CHAPTERS

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