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| **Prof Michael Christie**  Professor in Environmental and Ecological Economics  (Aberystwyth University) |  |

Personal statement

I am a Professor of Environmental and Ecological Economics in Aberystwyth University’s School of Management and Business. My research specialises in the economic and social valuation of biodiversity and ecosystem services. Although I utilise a wide range of non-market valuation methods, my speciality is in the use of stated preference method (choice experiments). I am also interested in exploring ways in which these methods might be enhanced by e.g. incorporating participatory and deliberative approaches to improve people’s preference revelation. Other areas of expertise include: outdoor recreation, tourism, agri-environment, and economic impact.

Recent research projects have been funded by NERC’s VNN, BESS and ESPA programmes, as well more applied Defra research on e.g. the ecosystem service value of the UK BAP and SSSIs. Increasingly, I am focusing my research to examine the human welfare impacts of biodiversity loss in developing countries, with recent studies in Malawi, Nigeria, Ghana, the Solomon Islands and the Caribbean. I also contributed to TEEB and the UK National Ecosystem Assessment.

Contact details

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Qualifications and employment

**Educational Qualifications:**

1988-1992 BSc (Hons) Agriculture, Class 2i, University of Aberdeen.

1993 to 1996.Ph.D. Aberdeen University / MLURI, '*An economic analysis of the provision of recreation improvements in the Grampian countryside'*.

**Previous Employment:**

1996 **-** 2012 Lecturer in Environmental Economics, Institute of Biological, Environmental and Rural Sciences, Aberystwyth University.

1992Research assistant**,** Dept. of Agricultural and Rural Economics,

Scottish Agricultural College, Aberdeen.

1993 - 95PhD student**,** University of Aberdeen / MLURI.

1993 - 95 Part-time lecturer, University of Aberdeen.

2000 Six month research sabbatical to Economics Department, Iowa State University, USA

2005 Six month research sabbatical to Department of Rural Economy, University of Alberta, Canada

**Current Employment:**

2012 **-** present Prof in Environmental and Ecological Economics, School of Management and Business, Aberystwyth University.

Teaching responsibilities

**Current teaching:**

* Food security: Solutions (MSc, 20 credits)
* Environmental policy appraisal and evaluation (BSc, level 3, 20 credits, Module coordinator)
* Intermediate economics (BSc, level 2, 20 credits, Module coordinator)
* Economics of the environment (BSc, level 2, 10 credits, Module coordinator)
* Rural and Environmental Policy (BSc, level 2, 20 credits, Module coordinator)

**Past teaching:**

* European environmental issues (BSc, level 3)
* Integrated Rural Development (BSc, level 3)
* Strategic Planning for Tourism and Recreation (BSc, level 3)
* Agricultural & equine business budgeting and control (BSc, level 2)
* Trade, agriculture and rural business (BSc, level 1)
* Business Management (HND, level 1)
* Rural Tourism Management (BSc and HND level 1)

**PhD supervisions:**

* Tony Hyde. ‘*An economic evaluation of the environmental benefits associated with agri-environmental schemes in Wales*’ UWA studentship. Awarded 2004.
* Michelle Guthrie. ‘*The economic and social value of our Earth heritage*’ English Nature sponsored studentship. Awarded 2009
* Ben Tantua*. An evaluation of the potential of participatory approaches to rural development in Nigeria’s oil economy. Awarded 2009.*
* Liz Conrad. *Developing a value-based system for zoning protected areas in Gozo, Malta*. Awarded 2010
* Nika Balomenou *Comparison of tourism management and planning in protected areas in Wales To be awarded 2011.*
* Joseph Dzanja. *Defining and Measuring Social Capital: A case study of rural development in Malawi. Awarded 2010*
* Trevlyn Webb*: Wildlife management as a tool for development in developing countries.*
* Christian Schader. *Cost-effectiveness of organic farming for achieving environmental policy targets in Switzerland. Awarded 2010*
* Sera Gondwe: *Impact of financial sector reforms on improving small and medium enterprise access to formal credit in Malawi.*
* Simon Moakes:*Adaptation of the FARMIS agri-sector-level model to the UK, to determine policies that encourage the sustainable intensification of UK agriculture*
* Ally Evans*: Biological habitat enhancement of coastal defence structures*
* UWA PhD assessor: Juern Saunders,
* External PhD examiner (Imperial College; Universitat de les Illes Balears, University of Stirling, University of Reading) and Internal Aberystwyth University PhD examiner x2.

Administrative responsibilities / Esteem indicators

**Aberystwyth University**

* *Director of Learning and Teaching (2011 – present)*
* *Faculty of Science Representatives on Senate: (2011 to 2014)*
* *Member of the SMB Executive Committee*
* *Member of the SMB Research Committee.*
* *Co-ordinator of the Sustainable Rural Development degree scheme.*
* *Member of the IBERS ‘Curriculum Development Working Group.*
* *Member of the Research Excellence Framework (REF) strategy group*
* *Careers Liaison Officer (1996 – 2000).*
* *Personal Tutor to ~25 students*

**External**

* *Member of Welsh Water / Dŵr Cymru’s Independent Environmental Advisory Panel (IEAP).*
* *Editorial board member of the Ecosystem Services journal.*
* *Yale University – Invited lecturer on ‘The Economics of Ecosystems and Biodiversity’ module (September 2011)*
* *Consultant to UNEP to run high-level ‘TEEB’ capacity training courses:*
* *UNEP Regional Workshop on Mainstreaming Ecosystem Services Approaches into Development: Application of Economic Valuation for Designing Innovative Response Policies. 6-10 February 2012 in Bangkok, Thailand.*
* *UNEP workshop ‘Valuation of Ecosystem Services in Practice: Lessons Learned from Africa and Asia’. Nairobi, Kenya. 10-11 October 2011.*
* *UNEP Capacity building training course for the Caribbean and Latin America on ‘The elaboration of studies at the country level on the economics of ecosystems and biodiversity (TEEB)’. Trinidad, 28 – 31 March 2011.*
* *Member of project review panels for: NERC, ESRC, Defra, Irish EPA.*
* *Member of the Scottish Government’s RERAD Strategic Research Portfolio 2011-2016 Review Panel.*
* *Member of the Welsh Assembly Government’s Natural Environment Framework (2010 – 12).*
* *External examiner on the BSc ‘Sustainable Rural Development’ course at the University of the Highlands and Islands. (2008 – 2012)*
* *External examiner on the FdSc ‘Rural Sustainability’ course at Queen’s University Belfast. (2006 – 2010)*
* *Scientific expert on European Environmental Agencies EURopean Ecosystems Assessment programme (EURECA)*
* *Chair of the Welsh Assembly Government’s ‘socio-economic’ Technical Advisory Group for the ‘Marine Conservation Zone Project Wales’*
* *Country representative of the UK Network of Environmental Economists (UKNEE)*
* *Member of the scientific committee of EnvEcon.*
* *Executive committee member and Director of the Agricultural Economics Society (2000 - 2005)*
* *Member of the International Association of Agricultural and Resource Economists.*
* *Member of the Agricultural Economics Society*
* *Member of the Institute of Learning and Teaching in Higher Education.*
* *Member of ‘Advisory Panel of Expert’ to the Wales Audit Office’s ‘Value for money examination of Tir Gofal’.*

Research papers

**Publications by year**

**2013**

Schader C, Lampkin N, **Christie M**, Nemecek T, Gaillard G, Stolze M (2013) Economic evaluation of organic farming support as an agri-environmental measure at Swiss agricultural sector level. *Land Use Policy*, 31, 196-208

**2012**

**Christie M**, Fazey I, Cooper R, Hyde H and Kenter JO. (2012) An Evaluation of Monetary and Non-monetary Techniques for Assessing the Importance of Biodiversity and Ecosystem Services to People in countries with developing economies. *Ecological Economics,* 83, 69-80.

de Groot RS, Brander L, van der Ploeg S, Costanza R, Bernard F, Braat L, **Christie M,** Crossman N, Ghermandi A, and Hein L, Kumar, P, McVittie, A, Portela, R, Rodriguez, L C, ten Brink, P, and van Beukering, P (2012). Global estimates of the value of ecosystems and their services in monetary units. *Ecosystem Services*. 1 (1), 50 – 61.

**Christie M** and Rayment M (2012) An economic assessment of the ecosystem service benefits derived from the SSSI biodiversity conservation policy in England and Wales. *Ecosystem Services* 1, 70-84.

**2011**

Whitfield, S.; Reed, M.S.; Thomson, K.; **Christie, M**.; Stringer, L.C.; Quinn, C.H.; Anderson, R.; Moxey, A.; Hubacek, K. (2011). Managing Peatland Ecosystem Services: Current UK policy and future challenges in a changing world. *Scottish Geographical Journal*. 127, 209-230.

**Christie M** and Gibbons J. (2011) The effect of individual ‘ability to choose’ (scale heterogeneity) on the valuation of environmental goods. *Ecological Economics*. 70. 2250-2257.

Conrad, Cassar, Jones, Eiter, Izakovicova, Barankova, **Christie** and Fazey (2011) Rhetoric and Reporting of Public Participation in Landscape Policy. *Journal of Environmental Policy and Planning*. 13(1), 23 – 47.

Conrad L, Cassar LF, **Christie M** and Fazey I (2011). Hearing but not listening? A participatory assessment of public participation in planning. *Environment and Planning C: Government and Policy*. 29 (5), 761-782. (Paper selected as ‘Editors Choice’)

Conrad L, Fazey I and **Christie M** (2011) Is research keeping up with changes in landscape policy? A review of the literature. *Journal of Environmental* Management. 92 (9), 2097-2108.

Kenter J, Hyde T, **Christie M** and Fazey I (2011). The importance of deliberation in valuing ecosystem services in developing countries – evidence from the Solomon Islands. *Global Environmental Change Human and Policy Dimensions, 21(2), 505-521*. http://www.sciencedirect.com/scidirimg/clear.gif

Conrad, L, **Christie, M**, and Fazey, I (2011). Understanding public perceptions of landscape: A case study from Gozo Malta. *Applied Geography*. 31, 159 - 170 http://www.sciencedirect.com/scidirimg/clear.gif

**2010**

Fazey, I, Kesby, M, Evely, A, Latham, I, Wagatora, D, Hagasua, J-E, Reed, M, S, **Christie, M** (2010). A three-tiered approach to participatory vulnerability assessment in the Solomon Islands. *Global Environmental Change.* 20, 713-728., doi:10.1016/j.gloenvcha.2010.04.011

Fazey, I, Gamarra, JGPJ, Fischer, J, Reed, MS, Stringer, LC, **Christie, M** (2010) Adaptation strategies to reduce vulnerability to future environmental change. *Frontiers in Ecology and the Environment.* 8 (8) 414-422.

**Older**

**Christie M** and Azevedo C (2009). Testing the Consistency Between Standard Contingent Valuation, Repeated Contingent Valuation, and Choice Experiments. *Journal of Agricultural Economics* 60(1), 154-170.

**Christie M,** Hanley, N and Hynes S. (2007). Valuing enhancements to forest recreation using choice experiments and contingent behaviour methods. *Journal of Forest Economics*. 13(2), 75-102.

**Christie M** (2007) An examination of the disparity between hypothetical and actual willingness to pay for Red Kite conservation using the contingent valuation method. *Canadian Journal of Agricultural Economics* 55, 159-169.

**Christie M,** Hanley, N, Warren, J, Murphy K, Wright R and Hyde T. (2006) Valuing the diversity of biodiversity *Ecological Economics.* 58(2), 304-317.

Scott A, **Christie M**, and Midmore P. (2004) **Impact of the 2001 foot-and-mouth disease outbreak in Britain: implications for rural studies**. *Journal of Rural Studies* 20(1), 1 – 14*.*

Scott A, **Christie M,** and Tench H. (2003) Visitor payback: Panacea or Pandora’s box for conservation in the UK? *Journal of Environmental Planning and Management* 46(4), 583-604.

**Christie M** (2001). A comparison of alternative contingent valuation elicitation treatments for the evaluation of complex environmental policy. *Journal of Environmental Management*. 62(3), 255-269.

**Christie M**, Crabtree B and Slee B (2000) An economic assessment of recreation policy in the Scottish countryside. *Scottish Geographical Journal* 116(2), 125-142.

**Christie M** (1999). Designing strategic recreation policy using contingent valuation. *Journal of* *Environmental Planning and Management*. 42(4), 547-564.

**Peer-reviewed publications under review / in prep.**

**Christie M**, Fazey I (2012). An Evaluation of Economic and Non-economic Techniques for Assessing the Importance of Biodiversity to People in Developing Countries. *Ecological Economics* (Accepted subject to minor revisions)

de Groot R, Brander L, **Christie M**, Bernard F, v Beukering P, Braat L, Costanza R, Crossman N, Ghermandi A, Hein L, Hussain S, Kumar P, McVittie A, vd Ploeg S, Portela R, Rodriguez RC (2012). Global estimates of monetary values of ecosystems and their services. *Ecosystem Services* (Under review)

Dzanja J, Fazey, I and Christie M. (2012). The influence of social capital on rural household welfare in Malawi. *Journal of Agricultural Economics* (Under review).

Dzanja J, Fazey, I and Christie M. (2012) Characterizing Social Capital in Central Malawi using a Nested Latent Class Model. *Quarterly* *Journal of Economics* (Under review).

Colombo S, Hanley N, and **Christie M** (2012)What are the consequences of ignoring attributes in choice experiments? An application to ecosystem service values. *Ecological Economics* (In Prep)

Dzanja J, Gondwe, S, Fazey, I and **Christie M.** (2012). Social Capital and Rural Development Policy. *Journal of Development Studies* (In prep).

**Christie M** and others (2012). Harnessing plant genetic resources to address global grand challenges: the impacts of Nagoya Protocol on the plant breeding sector. (In Prep)

Conrad L, Fazey I and **Christie M** (2012). Enhancing public input in managing landscape change: a proposed methodology (In Prep)

Books and book chapters

Russell S, Blackstock T**, Christie M**, Clarke M, Davies K, Duigan C, Durance I, Elliot R, Evans H, Falzon C, Frost P, Ginley S, Hockley N, Hourahane S, Jones B, Jones L, Lorn J, Ogden P, Pagella S, Pagella T, Pawson B, Reynolds B, Robinson D, Sanderson B, Sherry J, Skates J, Small E, Spence B, Thomas C (2011) *Chapter 20 Status and Changes in Ecosystems and their Services to Society: Wales*. In Bateman I et al. (Ed) UK National Ecosystem Assessment: Technical Report.

de Groot, R, Kumar, P, Sukhdev, P, van Beukering, P, Brander, L, **Christie, M,** Crossman, N, Ghermandi, A, Hein, L, Hussian, S, Pitt, D, van der Ploeg, S, Portela, R, Rodriguez, L (2010). Evidence on Estimates of Economic Value. In Kumar et al (Ed). *The Economics of Ecosystems and Biodiversity: The Ecological and Economic Foundations* (TEEB D0).

de Groot, R, Fisher, B, **Christie, M** (2010). Integrating the ecological and economic dimension in biodiversity and ecosystem service valuation. In Kumar et al (Ed). *The Economics of Ecosystems and Biodiversity: The Ecological and Economic Foundations* (TEEB D0).

Pascual, U, Muradian, R, Brander, L, Gómez-Baggethun, E, Martín-López, B, Verma, M, Armsworth, P, **Christie, M**, Cornelissen, H, Eppink, F, Farley, J, Loomis, J, Pearson, L, Perrings, C, Polasky, S (2010) The economics of valuing ecosystem services and biodiversity. In Kumar et al (Ed). *The Economics of Ecosystems and Biodiversity: The Ecological and Economic Foundations* (TEEB D0).

Conrad, E., **Christie, M**. and Fazey, I. (2009). Incorporating people’s perception into landscape planning: ethical challenges in dealing with diversity of opinion within a community. In E. Weber (ed.) *Environmental Ethics: Sustainability and Education*. The Inter-Disciplinary Press (E-book).

**Christie M** and Hanley N(2008). ‘Evaluation of heterogeneous preferences for forest recreation using choice experiments’ In Birol E and Koundouri P *Choice Experiments and Environmental Policy in Europe*. New Horizons in Environmental Economics Series. Edward Elgar: Cheltenham.

**Christie M**, Hanley, N, Warren, J, Hyde, T, Murphy, K and Wright R (2007). Valuing ecological and anthropocentric concepts of biodiversity: a choice experiments application. Eds Kontoleon A, Pascual U and Swanson T. *Biodiversity Economics: Principles, Methods and Applications*. Cambridge University Press: Cambridge.

**Christie M**, Hanley N, Warren J, Hyde T, Murphy K and Wright R (2006) ‘Valuing changes in farmland biodiversity using stated preference methods’. In Pearce D (Eds) *Valuing the Environment in Developed Countries: Case Studies*. Edward Elgar: Cheltenham.

**Christie M** (2005) *Book review: G.C* van Kooten and H. FolmerLand and Forest Economics, *Journal of Rural Studies 21,* 373 – 378.

**Christie M**. (2001). The economic impact of Welsh National Nature Reserves. In Byron and Sinclair (Eds) *Community Development on the North Atlantic Margin.* Aldershot: Ashgate Publishing Co.

**Christie M**, Slee B, Crabtree B (1999). An economic evaluation of the provision of recreational opportunities: The Grampian Region. In: Byron and Hutson (Eds). *Local Enterprise on the North Atlantic Margin*. Aldershot: Ashgate Publishing

**Christie M** (1996). The economic benefits of countryside improvements. In: Etchell (Ed), *Today’s thinking for tomorrow’s countryside*. Cardiff, CRN.

Published reports

Rayment M, **Christie M** and Minter R (2011). *Benefits of Sites of Special Scientific Interest*. Defra: London

**Christie M**, Hyde T, Cooper R, Fazey I, Dennis P, Warren, Colombo S and Hanley N (2011). *Economic valuation of the Benefits of Ecosystem Services delivered by the UK Biodiversity Action Plan*. Defra: London.

Reed M, Buckmaster S, Moxey A, Keenleyside C, Fazey I, Scott A, Thomson K, Thorp S, Anderson R, Bateman I, Bryce R, **Christie M**, Glass J, Hubacek K, Quinn C, Maffey G, Midgely A, Robinson G, Stringer L, Lowe P and Slee B (2010). *Policy Options for Sustainable Management of UK Peatlands*. IUCN:

Moorby, J. M., **Christie, M.,** Chadwick, D. R., Misselbrook, T. H., Chambers, B. J., Harris, D. (2010). [*A review of research to identify best practice for reducing pollution gas emissions from agriculture and land management*](http://publications.ibers.aber.ac.uk/netans-bin/gate.exe?f=doc&state=qql0oo.1.1)*.* Defra: London

**Christie, M**., Fazey, I., Cooper, R., Hyde, T., Deri, A., Hughes, L., Bush, G., Brander, L., Nahman, A., de Lange, W. and Reyers, B. (2008). *An Evaluation of Economic and Non-economic Techniques for Assessing the Importance of Biodiversity to People in Developing Countries.* Defra: London.

**Christie, M.,** Fazey, I., and Hyde T (2008). *Economic Valuation of the Benefits of the UK Biodiversity Action Plan: Phase 1 report*. Defra: London

**Christie M**, and Matthews J (2006). *The Economic and Social Value of Coastal Walking in England*. The Ramblers Association: London

Webber, M., **Christie, M**., & Glasser, N. 2006. *The social and economic value of the UK’s geodiversity* English Nature Research Reports, No 709.

**Christie M**, Hanley N, GarrodB, HydeT, Lyons N, BergmannE, Hynes S (2006). *Valuing heterogeneity of forest recreation activities: Final report*. Forestry Commission: Edinburgh.

**Christie M,** Hyde T, Lyons, N, Hanley, N (2005). *Valuing heterogeneity of forest recreation activities: Phase 1 report*. Forestry Commission: Edinburgh.

Hyde T, **Christie M** and Lyons N (2005). *Socio-Economic Impact of the Adfywio grant scheme*. CCW: Bangor

Taylor K, Short C, Scott A, **Christie M** and Hutchings R. (2004) *Regulatory Impact Assessment of Proposals for the Reform of Common Land Legislation*. DEFRA: London

**Christie M**, Warren J, Hanley N, Murphy K, Wright R, Hyde T and Lyons N (2004). *Developing measures for valuing changes in biodiversity: Final Report*. DEFRA: London.

**Christie M**, Hyde T, Jenkins P, Leitch M, Lyons N, Moore-Colyer R and Warren J. (2004). *The Genetic Resources of Traditional Welsh Crops.* CCW: Bangor

Hyde T, Lyons N and **Christie M** (2004). An audit of human resource training needs in Ceredigion. Antur Teifi: Aberystwyth

Bickerton L, **Christie M** and Matthews J (2004) *Economic Benefit of Community Buildings*. Powys Association of Voluntary Organisations: Llandrindod Wells

**Christie M** and Matthews J (2003). *The economic and social value of walking in England*. The Ramblers Association: London

**Christie M**, Warren J, Hanley N, Murphy K and Wright R (2003). *Developing measures for valuing changes in biodiversity: Phase 1 a review of relevant ecological and economic literature.* DEFRA: London.

**Christie M**, Warren J, Hanley N, Murphy K and Wright R (2003). *Developing measures for valuing changes in biodiversity: Phase 2 report*. DEFRA: London.

Munday M, Roberts A, **Christie M** and Midmore P (2002). *Developing an Index of Sustainable Economic Welfare in Wales.* CCW: Bangor

Scott A and **Christie M** (2002) *Charging for conservation: visitor payback*. CCW: Bangor

**Christie M**, Midmore P and Scott (2002) *The implications of foot and mouth disease on agricultural restructuring in Wales. CCW*: Bangor

**Christie, M**, Youell R, and Midmore (2002). *Review of the extent and impact of FMD in Wales: Summary of existing research.* CCW: Bangor

Midmore P, **Christie M**, Scott A and Youell R (2002). *Report of a survey of key informants on the impact of FMD on agricultural structures*. CCW: Bangor

Scott A, **Christie M** and Midmore (2002) *The impact of FMD on rural communities in Wales.* CCW: Bangor

**Christie M** (2001). *Does money still make the Welsh countryside go round*? A report to WWF on how Welsh farmers are coping with the currently crisis in agriculture. WWF-UK: London

Midmore P, Matthews J and **Christie M** (2000) *Monitoring Sustainable Development in Wales: a Pilot Index of Sustainable Economic Welfare.* Working Paper No. 11. Welsh Institute of Rural Studies: Aberystwyth

**Christie M** and Adams S (2000). *Making the case for increasing countryside spend on Agri-environmental programmes*. WWF-UK: London.

**Christie M**, Keirle I and Scott A (1998). *The economic impact of Welsh National Nature Reserves*. Bangor: CCW.

Keirle I, **Christie M** and Scott A (1998). *An evaluation of interpretation of Welsh National Nature Reserves*. Bangor: CCW.

Scott A, **Christie M** and Keirle I (1998). *Recreational use of Welsh National Nature Reserves*. Bangor: CCW.

**Christie M**, Keirle I and Scott A (1998). *The effectiveness of interpretation, it’s economic impact and recreational use of National Nature Reserves in Wales*. Bangor: CCW.

**Christie M** (1992) *Understanding Accounts for Fish Farmers - A Distance Learning Workbook*. University of Aberdeen: EC Funded FORCE Project.

Current and recently completed research awards

**Title: Can capturing global ecosystem services reduce poverty?**

Source: NERC Ecosystem Services and Poverty Alleviation (ESPA)

My role: Co-PI

Dates: 09/13 – 9/16

Amount: £2million (Aber WP = £17k)

Collaborators: Bangor University (lead), University of Southampton, University of Antananarivo, Laboratoir des RadioIsotopes, Narivo, and Conservation International

**Title: Estimating the impact on public benefits from changes in investment in the EA waterways**

Source: Defra

My role: PI

Dates: 04/13 – 11/13

Amount: £80k (Aber WP = £50k)

Collaborators: GHK Consulting

**Title: Cultural, shared and plural values: ecosystem services and decision making.**

Source: UK National Ecosystem Assessment Follow-on phase

My role: Co-PI

Dates: 05/12 – 11/13

Amount: £250k (Aber WP = £5k)

Collaborators: Aberdeen University (Lead), Bangor University, University of Brighton, University of St Andrews, Lancaster University, Exeter University, De Montford University and Forest Commission.

**Title: ‘Diversity of Upland Rivers for Ecosystem Services and Sustainability’ (DURESS).**

Source: NERC ‘Biodiversity, Ecosystem Services and Sustainability’ (BESS)

My role: Co-PI

Dates: 04/12 – 03/15

Amount: £3.1m (Aber WP = £250k)

Collaborators: Cardiff University (Lead), Bangor University, Public Health Wales, Forest Research, Lancaster University, QMUL, CEH, BTO

**Title: Measuring, Mapping and Modelling for Management, Poverty and Health in African Savannah’ (M-Phase).**

Source: NERC ‘Ecosystem Services for Poverty Alleviation’ (ESPA)

My role: Co-PI

Dates: 04/10 – 01/11

Amount: £50k

Collaborators: INDEPTH (Ghana), Africa Harvest (Kenya), Calgary University, Durham University, Bangor University, Ifakara Health Institute (Tanzania), Sokoine University (Tanzania),

**Title: BRIDGE: Bridging the gap between supply and demand for valuation evidence**

Source: NERC ‘Valuing Nature Network’ (VNN)

My role: PI

Dates: 11/11 – 11/12

Amount: £50k

Collaborators: University of St Andrews, University of Exeter, UEA + others

**Title: Economic valuation of the ecosystem services associated with Marine Protected Areas in St. Vincent and the Grenadines**

Source: St. Vincent and Grenadine Government

My role: PI

Dates: 06/11 – 06/12

Amount: £3k

Collaborators: University of Trinidad

**Title: An Evaluation of Economic and Non-economic Techniques to Assess the Importance of Biodiversity to People in Developing Countries**

Source: Defra

My role: PI

Dates: 2008

Amount: £50k

Collaborators:

**Title: Economic Valuation of the Benefits of the UK Biodiversity Action Plan and SSSIs**

Source: Defra

My role: PI

Dates: 2007 - 2009

Amount: £225k

Collaborators: University of Stirling, GHK

Past Research Awards

**Christie M,** Fazey I. (2008) *An Evaluation of Economic and Non-economic Techniques to Assess the Importance of Biodiversity to People in Developing Countries*. Defra. (£50,000)

**Christie M** (in collaboration with IGER). (2007). *The translation of existing research outputs into actions that reduce pollution gas emissions from agriculture*. Defra (£150,000)

**Christie M** and Guthrie M (2006). *Further valuation of Geological heritage*. English Nature (£2,500)

Garrod B, **Christie M,** Hinge, M and Williams, R (2005). *The Economic Potential of Game Shooting in Wales.* Welsh Development Agency. (£40,000)

**Christie M**, Hanley N, Hyde T, Garrod B, Swales K, Adamowicz V and Boxall P (2005). *Valuing forest recreation*. Forestry Commission. (£95,000)

**Christie M,** Scott A, Taylor K, Short C. (2004) *Regulatory Impact Assessment for Common Land Legislation*. DEFRA: (£52,000)

**Christie M,** Hyde T, Lyons N and Youell R (2004). *Socio Economic Impact of Adfywio Grant scheme*. CCW (£33,500)

**Christie M,** Travelling Scholarship to University of Alberta (2003) ‘*An examination of heterogeneity in valuation studies*’. Farmers’ Club. (£4,000)

**Christie M,** Warren J, Leitch M, Jenkins P, Moore-Colyer R, (£22,500)Hyde T and Lyons N. (2004). *The Genetic Resources of Traditional Welsh Crops*. CCW

**Christie M** and Matthews J (2003). *The economic and social value of walking in England*. The Ramblers Association. (£4,000)

**Christie M** (+ University of Western Sydney, The University of New England, The University of Western Australia and The University of Queensland, The Royal Veterinary and Agricultural University, Wageningen University and the University of Kassel). *Learning through Exchange – Agriculture, Food Systems and Environment*. (2002 – 2006). (300,000 Euro)

Midmore P and **Christie M** (in association with Cardiff Business School) (2002-2003) Countryside Council for Wales. *Developing an Index of Sustainable Economic Welfare: Phase 2*. (£30,000)

**Christie M** and Warren J (in association with Universities of Glasgow and Stirling) (2002-2004) MAFF / DEFRA *Developing measures for valuing changes in biodiversity*. (£100,000)

**Christie, M** and Glasser N (2002-2005). English Nature PhD studentship *The economic and social value of our Earth heritage*. (£48,000)

Midmore P and **Christie M** (in association with Cardiff Business School) (2001-2002) Countryside Council for Wales. *Developing an Index of Sustainable Economic Welfare*. (£30,000)

**Christie M**, Scott A and Midmore P. (2001-2002) Countryside Council for Wales. *The implications of Foot and Mouth Disease on agricultural restructuring in Wales. (29,000)*

**Christie M** (in association with Cheltenham and Gloucester College of Higher Education) (2001-2002) CCW  *Maximising Economic Benefit from the new right of access*. (£10,000)

Scott A, **Christie M**, Youell R, Keirle I and Falzon C. (2001-2002) CCW *Charging for conservation: Visitor Payback*. (£11,500)

**Christie M.** (2001). WWF-UK. *Does money still make the Welsh countryside go round? An investigation on how Welsh farmers are coping with the current crisis in agriculture*. (£1,000)

**Christie M** and Adams S. (2000) WWF-UK. *Making a case for increasing countryside spend on agri-environmental programmes*.

**Christie M**. UWA, (1998). College Research Fund. *An examination of factors affecting the disparity between hypothetical and actual willingness to pay for Red Kite conservation using the Contingent Valuation method*. (£2,000)

Midmore P and **Christie M.** (1998) Huws-Parry Fund. *An Index of Sustainable Economic Welfare for Wales* (£2,000)

**Christie M**, Keirle I, Scott A. (1997). Countryside Council for Wales. *The effectiveness of interpretation, its economic impact and recreational use of National Nature Reserves in Wales*. (£16,000)

**Christie M**. (1996). UWA, College Research Fund. *An evaluation of embedding bias effects associated with the contingent valuation method.* (£2,000)

Conference presentations

**Invited conference / workshop presentations**

**Christie M** *Challenges facing the private sector to adopt valuation.* CBD / UNEP WCMC workshop on ‘Markets for biodiversity and ecosystem services’. Chatham House, London 29 November 2011

**Christie, M** UNEP Regional Workshop on Mainstreaming Ecosystem Services Approaches into Development: Application of Economic Valuation for Designing Innovative Response Policies. 6-10 February 2012 in Bangkok, Thailand.

**Christie, M** *Valuation of ecosystem services: sharing experiences*. Keynote presentation at the UNEP workshop ‘Valuation of Ecosystem Services in Practice: Lessons Learned from Africa and Asia’. Nairobi, Kenya. 10-11 October 2011.

**Christie, M.** *Module 1.1Rational for the economics of ecosystems and biodiversity; Module 2.1 Introduction to the TEEB study; Module 2.3.Valuation across stakeholders. Module 4.1 Strengthening indicators and accounting systems for natural capital.* UNEPCapacity building training course for the Caribbean and Latin America on the elaboration of studies at the country level on the economics of ecosystems and biodiversity (TEEB). Trinidad, 28 – 31 March 2011.

**Christie, M** ‘*Research showcase’: economic valuation of ecosystem services and biodiversity: UK and international case studies*. BEAA Ecosystem Service conference, Cardiff, 21-23 June 2011.

**Christie, M** ‘*Putting the Ecosystems Approach into Practice in Wales: Valuation tools*’. BEAA Ecosystem Service conference, Cardiff, 21-23 June 2011.

**Christie, M** *Pricing nature: Recent advances in the valuation of biodiversity and ecosystem services*. Invited Seminar: Macaulay Institute (Nov 2010)

**Christie M** *Economic evaluation of the benefits from the UK Biodiversity Action Plan*. Natural England workshop on Ecosystem Valuation: Reading (2010)

**Christie M** *Valuing biodiversity in developing countries***.** Scottish Agricultural College Seminar Series, Edinburgh (December, 2009)

**Christie M** *Valuing the UK Biodiversity Action Plan*. UK Biodiversity Partnership Conference 2008. Aberystwyth (10 – 11 September 2008).

**Christie M** and Adamowicz V. *Measuring marginal values for protected areas planning: An Ecosystems approach*. Asociación Hispano-Portuguesa de Economía de los Recursos Naturales y Ambientales (AERNA) conference Palma, Mallorca. (4 June 2008)

**Christie M** *Economic valuation of biodiversity in a policy context: problems and best practice.* Invited paper at the European Environmental Agency expert workshop on ‘Biodiversity and Economics’. 5th October 2006, Copenhagen.

Conrad L and **Christie M** *Protected landscapes: their value and potential in the Mediterranean setting.* Invited paper at the UNIDO workshop ‘Protected area management in Mediterranean coastal areas: the importance of wildlife refugia and corridors within an urban and industrial landscape. 11-13 September 2006, Tunis, Tunisia.

**Christie M** *An overview of the potential of environmental valuation to inform protected area management*. Invited paper at the UNIDO workshop ‘Protected area management in Mediterranean coastal areas: the importance of wildlife refugia and corridors within an urban and industrial landscape. 11-13 September 2006, Tunis, Tunisia.

**Christie M** *Using choice experiments to value biodiversity*. Department of Rural Economy, University of Alberta, July 2005

**Christie M**. *Valuing the diversity of biodiversity* University of Saskatchewan, June 2005

**Other academic papers presented at conferences**

**Christie, M** *Climate change impact modelling: A socio-economic perspective*. C3W conference. 19-2- March 2012, Gregynog

**Christie, M** “*Valuing nature in times of socio-economic and environmental crisis*”. IGES Panel discussion. 16 March 2012, Aberystwyth

**Christie M**. *Valuing Nature Network*. Env Econ conference: London (March 2012)

**Christie M** The Economics of Ecosystems and Biodiversity (TEEB): Opportunties and barriers to mainstreaming TEEB to business. Business and Economics Society International. 6 – 11 January 2012. Queenstown, New Zealand.

**Christie M.** *Valuing biodiversity and ecosystem services*. Biosffer Dyfi Biosphere Forum. Aberystwyth. 18 May 2011.

**Christie, M.** *TEEB in the UK.* Ecosystem Service Partnership conference, Wageningen, 4 – 7 October 2011.

**Christie, M** *Evaluating the benefits people attain from biodiversity and ecosystem services*. Aberystwyth University- WAG seminar on Environmental Behaviours: Aberystwyth13 April 2011.

**Christie, M,** Kenter, J, Fazey J and Hyde T. *The importance of deliberation form environmental valuation in developing countries*. Env Econ conference: London (March 2011)

**Christie, M**. *Can local ecosystem services valuation studies be up-scaled for use in global assessments?*ACES: A Community on Ecosystem Services conference. 6 – 9 December 2010, Phoenix, Arizona, USA.

**Christie, M** and Warren J. *Flog it: A guide to valuing biodiversity*. Aber Science Café. (September 2010)

**Christie M** *Economic evaluation of the ecosystem services benefits delivered by the UK Biodiversity Action Plan.* Env Econ conference: London (March 2010)

Conrad, L, **Christie, M** and Fazey I. *Public engagement in landscape issues in Malta.* 1st European Conference on the Local Implementation of the European Landscape Convention: Nove Hrady, Czech Republic (May 2009)

Conrad, L, **Christie, M** and Fazey I. *Incorporating people’s perception into landscape planning.* 8th Global Conference on Environmental Justice and Global Citizenship. Oxford, UK (July 2009)

Conrad, L, **Christie, M** and Fazey I. *Exploring perceptions of landscape: case study – Gozo, Malta.* European IALE (International Association for Landscape Ecology) Conference: Challenges for Landscape Ecology and Management. Salzburg, Austria (July 2009) (Presentation:)

**Christie M** *An Evaluation of Economic and Non-economic Techniques to Assess the Importance of Biodiversity to People in Developing Countries*. EnvEcon conference. London. (20 March 2009).

**Christie M** *Valuing the UK Biodiversity Action Plan: Issues, challenges and opportunities*. Moving to an Ecological Economy conference, London (3 June 2008)

**Fazey, I**. Latham, I., **Christie, M**., Gamarra, J., Hagasua, E., Wagatora, D. (Apr 2008) *A three-tiered learning approach to research in the Solomon Islands*. Resilience 2008, Stockholm University, Sweden.

**Christie M** and Gibbons J. *Assessing Respondent’s ‘Ability to choose’ in Choice Experiments: A Bayesian Estimation of Relative Individual Scales***.** Applied Environmental Economics Conference London, (14th March 2008)

Conrad, L, Fazey, I and Christie M (July 2007) *Society, culture and people in landscape research.* Poster at the International Association for Landscape Research's World congress, 2007 in the Netherlands.

**Christie M** *Disparity between hypothetical and actual willingness to pay in a biodiversity conservation context.* 7th International conference of European Society of Ecological Economics in Leipzig, Germany: (June 2007).

Conrad L, Fazey I, **Christie M** *Society, culture and people in landscape research*7th International conference of European Society of Ecological Economics in Leipzig, Germany. (June 2007).

Christie M *The amenity values of alternative coastal defence options.* UK Network of Environmental Economist's seminar on 'Incorporating the Environment into Flood and Coastal Erosion Risk Management', London, 17th October 2006.

**Christie M**, *An economic assessment of the amenity benefits associated with alternative coastal defence options.* International Conference of the International Association of Agricultural Economists. 12-18 August 2006. Brisbane, Australia.

Weight DH, and **Christie M** *The economics of multi-purpose reefs*. The **5th International Surfing Reef Conference. July 31-August 3, 2006 Lombok, Indonesia.**

**Christie M** *An economic valuation of heterogeneous preferences for forest recreation*. EnvEcon conference, 24th March 2006, London.

**Christie M** *How much to people really value biodiversity?* IBS-IRS seminar series, UWA. February 2006.

Sriskandarajah N, Mulley R, **Christie M**, Taji A, Wals AEJ, Abbott L, Fragstein P, Williams R, Langer V, Olsen H, Parvez Q, Ward P, Packham R, Scullion J, Daniel H, Kristiansen P, Galea V. *Learning through exchange about organic agriculture – Case of Europe and Australia*. IFOAM conference. September 2005. Adelaide: Australia.

**Christie M**. *Capturing the value of ecological services: a case study of UK biodiversity*. Aquatic and Terrestrial Eco-toxicology and Risk Management’ conference, 2-3 December 2004, Darmstadt, Germany

**Christie M** and Hanley N *A comparison of ecologists and public preferences for biodiversity.* Sixth Annual BioEcon Workshop. September 2004. Kings College Cambridge.

Guthrie M, Christie M and Glasser N. *The social and economic value of geodiversity.* **Earth heritage: World heritage** conference. 7-10th September 2004. Wareham, Dorset

**Christie M**, Warren J, Hanley N, Murphy K, Wright R *An economic valuation of UK biodiversity using stated preference valuation techniques*. European Association of Environmental and Resource Economists. May 2004 Budapest.

**Christie M**, Warren J, Hanley N, Murphy K, Wright R, *Developing measures for valuing changes in biodiversity on farmland using choice experiments and contingent valuation.*  Agricultural Economics Society conference. April 2004: London.

**Christie M**, Warren J, Hanley N, Murphy K, Wright R, *A valuation of biodiversity in the UK using choice experiments and contingent valuation.*  Applied Environmental Economics conference. March 2004: London.

**Christie M** *Demonstrating the economic impact of countryside recreation projects.* Countryside Recreation Network conference. March 2004: Bristol

**Christie M** and Mulley R, *Learning through Exchange – Agriculture, Food Systems and Environment: A new Australian – European programme*. The Third Global conference of GCHERA ‘Global Reforms in Higher Agricultural Education and Research: Responding to Challenges of Quality and Safety of Food and Agricultural Products’. September 2003, Kyiv, Ukraine.

**Christie M** and Azevedo C. *Testing the consistency in benefit estimates across contingent valuation and choice experiments: a multiple policy option application*. International Conference of the International Association of Agricultural Economists. 16-22 August 2003, Durban, South Africa

**Christie, M** and Matthews J. *An examination of factors affecting the disparity between hypothetical and actual willingness to pay for Red Kite conservation using the Contingent Valuation Method.* International Seminar for Marginal Regions conference: August, 2003, Aberystwyth.

**Christie M**, Hanley N Murphy K, WarrenJ and WrightR *Developing measures for the valuation of biological diversity.* Scottish Economic Society/Environmental Economics conference. June 2003, Glasgow.

**Christie M**, *Testing the consistency in benefit estimates across contingent valuation and choice experiments: a multiple policy option application.* Second World Congress of Environmental and Resource Economists, Monterey, California, July 2002.

Scott A, **Christie M** & Midmore P *The Impact of Foot and Mouth: Implications for Rural Restructuring in Wales*Agricultural Economics Society Annual conference, Aberystwyth, April 2002

**Christie, M** and Azevedo C. *Valuing Preservation and Improvements of Water Quality in Clear Lake: A Comparison of the Choice Experiments and Contingent Valuation Methods***.** Agricultural Economics Society Annual conference, Aberystwyth, April 2002

**Christie M**, *An overview of Foot and Mouth disease as a driver for structural change in UK agriculture.* ‘Structural Change in Agriculture & Implications for the countryside’ seminar. Organised by FPD Savills for the GB Wildlife and Countryside Agencies. London, September 2001.

**Christie M**, *Testing convergent validity of contingent valuation and choice experiments: a case study of lake water quality.* ‘Social and Economic Perspectives of Boreal Forest Ecosystem Management’ conference, Edinburgh, June 2001.

**Christie M**, [*A comparison of WTP for lake water quality using choice experiments and contingent valuation*](http://www.irs.aber.ac.uk/mec/CEconfpaper/Clear%20lake%20paper%20updated.htm)*.* Agricultural Economics Society One-day conference ‘Choice experiments: a new approach to environmental valuation’. London, April, 2001.

Hyde, T, **Christie, M** and Midmore P *Development of choice experiment surveys*. Agricultural Economics Society One-day conference ‘Choice experiments: a new approach to environmental valuation’. London, April, 2001.

**Christie M**, *The economic impact of Welsh National Nature Reserves.* International Seminar on Marginal Regions conference, Newfoundland, July, 1999.

**Christie M**, *An examination of factors affecting the disparity between hypothetical and actual willingness to pay for Red Kite conservation using the Contingent Valuation method*. Agricultural Economics Society Annual conference, Belfast, March, 1999.

**Christie M**, *An evaluation of the economic benefits associated with a multi-component environmental policy using CVM*. Agricultural Economics Society Postgraduate Conference, Aberystwyth, January 1997.

**Christie M**, *An economic evaluation of the provision of recreational opportunities in the countryside: the Grampian Region*. International Seminar on Marginal Regions, Inverness/Stornoway, July 1997.

Guthrie M, **Christie M** and Glasser N. *The Social and Economic Value of the UK’s Geodiversity.* Student Conference on Conservation Science, 2004: Cambridge

**Studentships / Lectureships / sponsorships**

**Christie M** and Garrod B(2006 – 2009). European Social Fund studentship for Nika Balomenou. *Tourism management and planning in protected areas.*

**Christie, M** and Glasser N (2002-2005). English Nature PhD studentship for Michelle Guthrie *The economic and social value of our Earth heritage*.

**Christie M** and Midmore P. (2000 – 2003) UWA PhD studentship for Tony Hyde. *An economic evaluation of the environmental benefits associated with agri-environmental schemes in Wales.*

**Christie M**. (2000) International Higher Education Loan Programme (I-HELP) scholarship for a four-month research and training sabbatical at Iowa State University

**Christie M** (2001). MAFF / DETR Sponsorship for International conference. *Choice Experiments: a new approach to environmental valuation*. London, April, 2001

**Conferences Organised**

‘*Choice experiments: A new approach to environmental economics*’ conference, London, April 2001

*The Agricultural Economics Society Annual conference*, Aberystwyth, April 2002.

*The Agricultural Economics Society Post-graduate conference*, Aberystwyth, April 2002.

Member of organization and scientific committees of *ENVECON: Applied Environmental Economics* Annual Conference, London, 2006, 2007, 2008.

‘*Ecosystems valuation: Issues, opportunities and challenges*’ London, 21 – 22 January 2008.

**Papers / Books review**

I have reviewed papers for the following journals:

Canadian Journal of Agricultural Economics; Ecological Economics; Environmental and Resource Economics; Environmental Science and Technology; International Journal of Biodiversity Science and Management; Journal of Agricultural Economics; Journal of Environmental Management; Journal of Forest Economics; Journal of Rural Studies; Landscape and Urban Planning; Journal of Applied Ecology; Marine Ecology, PLos ONE, Ecosystem Services, ‘Ethics, Policy & Environment’, and the NOW *Vidi* programme ‘Innovational Research Incentive scheme’ (Netherlands), Resource and Energy Economics.

**Books reviewed**

*Land and Forest Economics*, by van Kooten and Folmer. (Edward Elgar)

*Environmental Policy* by Jane Roberts (Routeledge)

*Environment and Politics* by Doyle T and McEachern D (Routeledge)

*Environment and Economy* by Molly Scott-Cato (Routeledge)

*Introduction to Environmental Economics* by Nick Hanley et al. (Oxford University Press)