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Research interests

Economic evaluation of agricultural and environmental policy

Economics of natural capital and ecosystem services

Non-market valuation and cost-benefit analysis

Natural capital modelling using Bayesian Networks

Interdisciplinary research of agriculture and the environment

Projects

Current projects

Scottish Government (2016-21): Natural Asset Register and Natural Capital Accounts – lead investigator

Scottish Government (2016-21): Biodiversity management – offsetting and net gain – principal investigator

Global Food Security Programme (2018-21): Sustainable Economic and Ecological Grazing Systems – Learning from

Innovative Practitioners (SEEGSLIP) – co-investigator

Recent projects

Joint Nature Conservation Committee (2021): Developing a Decision Support Tool to Inform Land Management Scenarios in Montserrat – principal investigator

South Atlantic Environmental Research Institute (2018-19): Natural Capital Assessment of St Helena – principal investigator

European Commission (2016): EU strategy on adaptation to climate change: knowledge assessments - Partner in DG Clima service contract

Scottish Natural Heritage (2015-16): A review of the social, economic and environmental benefits and constraints linked to wild land in Scotland – project manager

Scottish Government (2011-16): Assessing the value of ecosystem services – work package leader

WWF (2014-15): The benefits to people of expanding Marine Protected Areas

Committee on Climate Change (2015): Provision of services to review and update the UK agriculture MACC and to assess abatement potential for the 5th carbon budget period and to 2050

European Commission (2013-15): Natural Water Retention Measures - Partner in DG Environment service contract

Adaptation Subcommittee (2012-13): Assessing the preparedness of England's natural resources for a changing climate

Valuing Nature Network (2011-12): Valuing the impacts of ecosystem service interactions for policy effectiveness – project leader

Scottish Government (2012-13): Evaluating the cost-effectiveness of biodiversity measures in Scotland – project manager

EU Framework 7 (2011-15): Sustainable farm Management Aimed at Reducing Threats to SOILs under climate change (SmartSOIL)

Activities

2018 - present: Scottish Forum on Natural Capital, member of Sustainable Land Management Working Group

2018 - present: Scottish Government, member of steering group Office for National Statistics Natural Capital Accounts for

Scotland

2017 - 2020: Valuing Nature Programme, member Programme Advisory Group

2014 - present: Ecosystem Services Community Scotland (ESCom), member central committee

Research outputs

Roberts, M, Irvine, KN & McVittie, A 2021, 'Associations between greenspace and mental health prescription rates in urban areas', *Urban Forestry and Urban Greening*, vol. 64, 127301. <https://doi.org/10.1016/j.ufug.2021.127301>

Yuniarti, I, Glenk, K, McVittie, A, Nomosatryo, S, Triwisesa, E, Suryono, T, Santoso, AB & Ridwansyah, I 2021, 'An application of Bayesian Belief Networks to assess management scenarios for aquaculture in a complex tropical lake system in Indonesia', *PLoS ONE*, vol. 16, no. 4, e0250365. <https://doi.org/10.1371/journal.pone.0250365>

McVittie, A & Faccioli, M 2020, 'Biodiversity and ecosystem services net gain assessment: A comparison of metrics', *Ecosystem Services*, vol. 44, 101145. <https://doi.org/10.1016/j.ecoser.2020.101145>

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McVittie, A, Cole, LJ, Wreford, A, Sgobbi, A & Yordi, B 2017, 'Ecosystem-based solutions for disaster risk reduction: lessons from European applications of ecosystem-based adaptation measures', *International Journal of Disaster Risk Reduction*, vol. 32, pp. 42 - 54. <https://doi.org/10.1016/j.ijdr.2017.12.014>

McVittie, A, Bryce, R, Glass, J, Woolvin, A, Carver, S, Fisher, M, McMorran, R & Sedee, C 2017, *A review of the social, economic and environmental benefits and constraints linked to wild land in Scotland*. Commissioned Report, no. 919, Scottish Natural Heritage.

Rees, RM, Griffiths, BS, McVittie, A, Ginzky, H (ed.), Dooley, E (ed.), Heuser, IL (ed.), Kasimbazi, E (ed.), Markus, T (ed.) & Qin, T (ed.) 2017, Sustainable intensification of agriculture: impacts on sustainable soil management. in H Ginzky, E Dooley, IL Heuser, E Kasimbazi, T Markus & T Qin (eds), *International Yearbook of Soil Law and Policy 2017*. vol. 2, Springer, pp. 7 - 16.

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