

# KATRINA MULLAN

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## EDUCATION

### **PhD Environment and Development Economics, 2009**

Department of Land Economy, University of Cambridge

Dissertation title: "Impacts of land-use reforms on household behaviour and welfare in rural China"

### **MSc Development Economics, 2001**

School of Oriental and African Studies, University of London

Dissertation title: "International co-operation over highly-migratory fish stocks: the case of Southern Bluefin Tuna"

### **MA Hons Economics, 2000**

Sidney Sussex College, University of Cambridge

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## PROFESSIONAL EXPERIENCE

### **University of Montana, Department of Economics**

Professor, Aug 2023 - present

Associate Professor, Aug 2017-Aug 2023

Assistant Professor, Aug 2012 – Aug 2017

### **Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), Environment for Development Central America**

Visiting Researcher, Oct 2019-May 2020

### **University of California, Berkeley, Department of Agricultural and Resource Economics**

Ciriacy-Wantrup Research Fellow, Jan 2011 – Aug 2012

### **University of San Francisco, Department of Economics**

Adjunct Professor, Aug 2011 – Dec 2011

### **North Carolina State University, Department of Forestry and Environmental Resources**

Postdoctoral Research Associate, Jan 2009 - Sep 2010

### **University of Cambridge, Department of Land Economy**

Research Assistant and Teaching Assistant, Oct 2004 - Dec 2008

### **UK Department for Environment, Food and Rural Affairs**

Economic Adviser, Sustainable Agriculture and Fisheries, Oct 2002 – Oct 2004

Economic Assistant, Policy Evaluation, Oct 2001 – Oct 2002

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## PEER REVIEWED PUBLICATIONS

Orr, A., Adam, C.E., Graham, J., Holden, Z.A., Hu, L., Jaffer, Z., Leary, C., Migliaccio, C.T., **Mullan, K.**, Noonan, C. and Semmens, E.O. (2025). A state of the science review of wildfire-specific fine particulate matter data sources, methods, and models. *Environmental Health Perspectives*. (forthcoming)

\*Sevigny, C., Caviglia-Harris, J., Santiago, T. & **Mullan, K.** (2025). The New Frontier: Social Media's Influence on Farming Practices in the Brazilian Amazon. *Agricultural and Resource Economics Review*. (forthcoming)

Liddell, J. L., Monroe, A., Carlson, T. A., & **Mullan, K.** (2025). The Cost of Untreated Perinatal Mood and Anxiety Disorders (PMADs) in Montana: An Economic Analysis of Perinatal Mental Health in a Rural State. *Birth*.

- Honey, M., Biggs, T., Sousa, D., Abe, C., & **Mullan, K.** (2024). Woody vegetation cover on cleared areas in the Amazon Basin: temporal mixture mapping suggests a revised conceptual model of deforestation. *Regional Environmental Change*, 24(4), 1-12.
- Mullan, K.**, Avery, T., Boise, P., Leary, C. S., Rice, W. L., & Semmens, E. O. (2024). Impacts of wildfire-season air quality on park and playground visitation in the Northwest United States. *Ecological Economics*, 224, 108285.
- Stewart, T., Monroe, A., **Mullan, K.**, Jones, D., McIver, A., & Walker, E. S. (2024). Behavioral responses to wildfire smoke: a case study in Western Montana. *Journal of Community Health*, 1-14.
- Madrigal-Ballester, R., **Mullan, K.**, Pacay, E., Pattanayak, S. K., Robalino, J., & Evia, P. (2024). Volumetric pricing in rural Central America: Drivers of adoption and potential effects on water delivery. *World Development Sustainability*, 4, 100163.
- \*Sheehan, D., **Mullan, K.**, West, T., and Semmens, E.O. (2024) "Protecting Life and Lung: Protected Areas affect fine particulate matter and respiratory hospitalizations in the Brazilian Amazon Biome" *Environmental and Resource Economics*. 87(1), 45-87
- Robalino, J., **Mullan, K.**, Piaggio, M. and Guzmán, M. (2023) "Does Green Infrastructure Work? Precipitation, Protected Areas, Floods and Landslides". *Economics of Disasters and Climate Change*. 7, 457–482
- Hansen, A. J., **Mullan, K.**, Theobald, D. M., Robinson, N., East, A., & Powell, S. (2022). Informing conservation decisions to target private lands of highest ecological value and risk of loss. *Ecological Applications*, e2612.
- Mullan, K.**, J. Caviglia-Harris, E. Sills (2021) "Sustainability of agricultural production following deforestation in the tropics: Evidence on the value of newly-deforested, long-deforested and forested land in the Brazilian Amazon" *Land Use Policy*, Vol. 108.
- Caviglia-Harris, J., T. Biggs, E. Ferreira, D. W. Harris, **K. Mullan**, E. O. Sills (2021) "The color of water: The contributions of green and blue water to agricultural productivity in the Western Brazilian Amazon" *World Development*, Vol. 146.
- Hansen, A., **K. Mullan**, D. Theobald, N. Robinson, A. East (2021) "Natural vegetation cover on private lands: locations and risk of loss in the northwestern United States" *Ecosphere*, Vol. 12(10)
- \*Wu, Y., **K. Mullan**, T. Biggs, J. Caviglia-Harris, D. Harris, E. Sills (2021) "Do Forests Provide Watershed Services for Farmers in the Humid Tropics? Evidence from the Brazilian Amazon" *Ecological Economics*, Vol. 183.
- \*Reisig, D., **K. Mullan**, A. Hansen, S. Powell, D. Theobald and R. Ulrich (2021) "Natural amenities and low-density residential development: Magnitude and spatial scale of influences" *Land Use Policy*, Vol 102.
- De Sales, F., Santiago, T., Biggs, T. W., **Mullan, K.**, Sills, E. O., & Monteverde, C. (2020) Impacts of Protected Area Deforestation on Dry-season Regional Climate in the Brazilian Amazon. *Journal of Geophysical Research: Atmospheres*, 125(16)
- Mullan, K.**, E. Sills, S. Pattanayak and J. Caviglia-Harris (2018) "Converting Forests to Farms: The Economic Benefits of Clearing Forests in Agricultural Settlements in the Amazon" *Environmental and Resource Economics*, Vol. 71(2), pp 427-455
- \*Young, J., N. Anderson, H. Naughton and **K. Mullan** (2018) "Economic and policy factors driving adoption of institutional woody biomass heating systems in the US" *Energy Economics*, Vol. 69, pp 456-470.
- Caviglia-Harris, J., E. Sills, A. Bell, D. Harris, **K. Mullan** and D. Roberts (2016) "Busting the Boom–Bust Pattern of Development in the Brazilian Amazon" *World Development*, Vol. 79, pp 82-96
- Caviglia-Harris, J., M. Toomey, D. Harris, **K. Mullan**, A. Bell, E. Sills and D. Roberts (2015) "Detecting and interpreting secondary forest on an old Amazonian frontier", *Journal of Land Use Science*, Vol. 10 (4), pp 442-465
- Liu, C., **K. Mullan**, H. Liu, W. Zhu and Q. Rong (2014) "The estimation of long term impacts of China's key priority forestry programs on rural household incomes" *Journal of Forest Economics*, Vol 20(3), pp 267-285

**Mullan, K.**, E. Sills and S. Bauch (2014) “The reliability of retrospective data on asset ownership as a measure of past household wealth” *Field Methods*, Vol 26(3), pp223-238

Caviglia-Harris, J., E. Sills and **K. Mullan** (2013) “Migration and Mobility on the Amazon Frontier” *Population and Environment*, Vol. 34 (3), pp 338-369

Ferraro, P., K. Lawlor, **K. Mullan** and S. Pattanayak (2012) “Forest figures: Ecosystem services valuation and policy evaluation in developing countries” *Review of Environmental Economics and Policy*, Vol. 6 (1), pp 20-44

**Mullan, K.** and A. Kontoleon (2012) “Participation in Payments for Ecosystem Services programs: accounting for participant heterogeneity” *Journal of Environmental Economics and Policy*, Vol. 1 (3), pp 235-254

Caviglia-Harris, J., S. Hall, **K. Mullan**, C. MacIntyre, S. Bauch, D. Harris, E. Sills, J. Dawson, B. Klitch, D. Roberts, M. Toomey and H. Cha (2012) “Improving Household Surveys Through Computer Assisted Data Collection. Use of Touchscreen Laptops in Challenging Environments” *Field Methods*, Vol. 24, pp 74-94

**Mullan, K.**, P. Grosjean and A. Kontoleon (2011) “Land tenure arrangements and rural-urban migration in China” *World Development*, Vol. 39(1), pp123-133.

**Mullan, K.**, A. Kontoleon, T. Swanson and S. Zhang (2011) “When should households be compensated for land-use restrictions? A decision-making framework for Chinese forest policy” *Land Use Policy*, Vol 28 (2), pp 402-412.

**Mullan, K.**, A. Kontoleon, T. Swanson and S. Zhang (2010) “An evaluation of the impacts of the Natural Forest Protection Programme on rural household livelihoods” *Environmental Management*, Vol 45, pp 513-525

\*denotes student advisee lead author

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## OTHER PUBLICATIONS AND ACTIVITIES

“Murder and Illegal Logging in Peru”, BBC Business Daily - Radio Interview, December 2014

“The Value of Forest Ecosystem Services to Developing Economies” Center for Global Development Working Paper 379, September 2014

“Payments for Ecosystem Services” (with Rodrigo Arriagada) in *Environmental and Natural Resource Economics: An Encyclopedia*, Haab, T and J. Whitehead (eds). Greenwood: Denver, Co. 2014

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## GRANTS, FELLOWSHIPS AND AWARDS

University of Montana University Grants Program, “Reforestation and Energy Poverty”. 2023-2024, lead PI, \$4,975  
NSF EPSCoR “Sensors, Machine Learning, and Artificial Intelligence in Real Time for Fire Science (SMART FireS)”. 2023-28, co-I, \$20m

Environment for Development Initiative “Quasi-Experimental Analysis of National Forestry Authority Afforestation Projects in Uganda”. 2021-22, co-I

National Institutes of Health "Center for Population Health Research". 2020-2025, co-I, \$10m

Environment for Development Initiative “The impact of Protected Areas on the occurrence of water-related disasters in Guatemala”. 2021-22, co-I

Environment for Development Initiative “Social and ecological factors affecting water delivery outcomes in Central America”. 2021-22, co-I

University of Montana University Grants Program, "Impacts of protected areas on respiratory health in the Brazilian Amazon", 2020-2021, lead PI, \$5,000

Resources for the Future, "Deforestation reductions attributable to satellite data used for enforcement of the Brazilian Forest Code". 2020-2021, co-I, \$100,000

NSF Coupled Natural-Human Systems, “CNH-L: Land-Climate-Water Feedbacks and Farmer Decision-Making in an Agricultural System”, 2018-2023, lead PI, \$1.45m

NSF National Research Training program, “UM BRIDGES: Bridging Divides Across the Food, Energy and Water Nexus”, 2016-2021, Senior Personnel, \$10m  
National Socio-Environmental Synthesis Center, “Forests, Agriculture, and River Systems in the Brazilian Amazon”, 2016-17, co-I  
University of Montana University Grants Program, “Impacts of child health on caregiver labor supply”, 2016-17, lead PI, US\$5,000  
NASA Land Cover/Land Use Change, “Downscaling IPCC Land Use Scenarios for Global Change Adaptation Planning in Mountainous Environments”, 2015-2018, co-I, \$800,000  
Ciriacy-Wantrup Post Doctoral Fellowship in Natural Resources Economics and Political Economy, University of California, Berkeley, 2010-2012  
UK Economic and Social Research Council, PhD Scholarship, 2004-2007  
National Academy Keck Futures Initiative, Problem-Solving Workshop on Ecosystem Services, Irvine, California, 2011  
European Community's Sixth Framework Programme: Human Resources and Mobility, Summer School on “Trade, Property Rights and Biodiversity,” Venice, Italy, 2007  
European Science Foundation, Quantitative Methods in the Social Sciences Programme, Summer School on ‘Design and Analysis of Intervention Studies’, Dublin, Ireland, 2005; and Quantitative Methods in the Social Sciences Conference, Prague, 2007  
University of Cambridge Centre for Latin American Studies’ “Chile Projects Fund” for fieldwork in Chile, 2000, £2,000

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## **TEACHING AND ADVISING**

### **University of Montana**

Health Economics and Policy  
Advanced Econometrics  
Economics of the Environment  
Economics of Global Development  
Principles of Microeconomics  
Empirical Research Design

### **University of San Francisco**

Economics of Development, Instructor – Fall 2011

### **Graduate Advisees:**

#### ***MA Committee Chair***

Matilda Kabutey-Ongor “Impact of forest plantations on energy poverty: An assessment of reforestation efforts in Uganda” 2024  
Patrick Boise, Boise “Missed opportunities to vaccinate teens against Human Papillomavirus: Variation and mechanisms between public and private facilities”, 2023  
Teigan Avery, “Pharmacy-based immunization laws and adolescent Well-Child checkup tradeoffs: Results from the NIS-Teen” 2022  
Brenna Swinger, “Does Diversification in the Face of Increased Climate Risks Depend on Individual Risk Preferences? Evidence from Rondônia, Brazil” 2022  
Derek Sheehan, “Protecting Life and Lung: Protected areas impact fine particulate matter and respiratory hospitalizations in the Brazilian Amazon Biome” 2021  
Cassandra Sevigny, "Impacts of Social Media on Pasture Management in the Brazilian Amazon" 2020  
Dawson Reisig, “Natural Amenities and Rural Development” 2018  
Madison Cole, “The role of behavior in the effectiveness of indoor air pollution interventions” 2018  
Shefije Miftari, “Do the impacts of natural amenities on population change differ in New West versus Old West places?”, 2017  
Tina Cummins, “Impact of local government revenue and spending during oil and gas booms in the Rocky Mountain States”, 2017  
Neil Bennett, “Environmental Shocks, Differentiated Households and Migration: A Study in Thailand”, 2015  
Yoonsoo Nam, “Do Democratic Governments Improve Environmental Quality”, 2015  
Chris Bradley, “Reforestation in the Brazilian Amazon: Policy implications for current and future reforestation”, 2014

#### ***MA Committee Member***

Katharine Johnson, 2024; Jared Gibbs (Philosophy), 2022; Sam Supplee-Niederman, 2019; Madison Nagle, 2018; Jesse Young, 2015; Eric Johnson, 2015; Charles MacIntyre, 2010

### ***PhD Committee Member***

Chris Armatas, 2019; Kika Bradford, 2024

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## **PRESENTATIONS**

Department of Agricultural, Environmental, and Development Economics, Columbus OH, April 2024 (invited)  
Department of Economics Seminar, Laramie WY, February 2023 (invited)  
Environment for Development Annual Meeting, Kampala, Uganda, September 2022  
American Association of Environmental and Resource Economists, Miami FL, May 2022  
Surrey Business School Workshop on Public Policy and Deforestation, Virtual. 24-25 June 2021 (invited)  
European Association of Environmental and Resource Economists Annual Meeting, Virtual. June 2020  
Environment for Development Annual Meeting, Bogota, Colombia, November 2019  
Environment for Development Annual Meeting, Hanoi, Vietnam, November 2018  
World Congress of Environmental and Resource Economists, Gothenburg, Sweden, June 2018  
Northeast Agricultural and Resource Economics Association Annual Meeting, Washington D.C., June 2017  
BIOECON Annual Meeting, Cambridge UK, September 2016  
European Association of Environmental and Resource Economists Annual Meeting, Zurich, Switzerland, June 2016  
World Congress of Environmental and Resource Economists, Istanbul, Turkey, June 2014  
Montana Institute on Ecosystems Seminar, University of Montana and Montana State University, October 2013 (invited)  
13th Occasional California Workshop on Environmental and Resource Economics, February 2012  
Environment and Resource Economics Seminar, UC Berkeley, October 2011 (invited)  
Southeastern Economics Association Annual Meeting, Washington DC, November 2011  
Association of American Geographers Annual Meeting, Seattle WA, April 2011  
Pacific Conference on Development Economics, Berkeley CA, March 2011  
Northeastern Agricultural and Resource Economics Association Annual Meeting, Atlantic City NJ, June 2010  
Association of Environmental and Resource Economists Annual Meeting, Atlanta GA, January 2010  
Center for Environmental and Resource Economic Policy Seminar, North Carolina State University, Oct 2009 (invited)  
Camp Resources XVI, Asheville NC, August 2009  
10<sup>th</sup> International BIOECON Conference, Cambridge, September 2008  
European Association of Environment and Resource Economists Meeting, Gothenburg, Sweden, June 2008  
Quantitative Methods in the Social Sciences Conference, Prague, June 2007  
European Association of Environment and Resource Economists Meeting, Thessaloniki, Greece, June 2007  
Cross-disciplinary China Studies Conference, Cambridge, UK, April 2007 (invited)  
8<sup>th</sup> International BIOECON Conference, Cambridge, UK, August 2006  
Environmental Policy Impacts Conference, Beijing, China, May 2006 (invited)

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## **EXTERNAL CONSULTING**

### **World Bank**

Policy Mixes to Address Deforestation in the Brazilian Amazon, Jan-June 2022

### **Center for Global Development**

The Value of Forest Ecosystem Services for Developing Economies, June 2014

### **Poverty and Economic Policy Research Network, Policy Impact Evaluation Research Initiative**

External expert on Chinese forest policy, Sept 2010 – Sept 2013

### **Department of Housing, Spatial Planning and Environment, Government of the Netherlands**

Development of an International Mechanism for Biodiversity Conservation, Nov 2008 – Jan 2009

**IUCN/European Environment Agency**

The Economics of Forest Biodiversity, Dec 2007- Jun 2008

**China Council for International Cooperation and Development**

Impacts of the Natural Forest Protection Program on Community Welfare, Oct 2004 – May 2005

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**ADDITIONAL INFORMATION**

Mentoring: Environment for Development (EfD) Early Career Fellowship; Association for Environmental and Resource Economists (AERE) Junior Scholar Program; Women in Environmental Economics for Development (WinEED); University of Gondar/University of Montana Mentorship Program for Women (GMM)

Referee Activities: World Development; Ecological Economics; Journal of Environmental Economics and Management; Environment and Development Economics; Environmental Management; Journal of Forest Economics; Journal of Development Studies; Land Use Policy; Spatial Economic Analysis; Urban Studies; Development and Change; Journal of Environmental Management; China Quarterly; Journal of Economic Surveys; Nature Communications

Languages: Intermediate Spanish; Basic Portuguese, French and German