

## ERIN O. SILLS

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### EDUCATION

#### **Duke University**, Department of the Environment

Ph.D., Natural Resource and Environmental Economics, 1998  
M.A., Natural Resource Economics and Policy, 1996

#### **Princeton University**, Woodrow Wilson School of Public and International Affairs

B.A., International Development and Latin American Studies, High Honors, 1990

### PROFESSIONAL EXPERIENCE

#### **North Carolina State University**

Department of Forestry & Environmental Resources  
Director of International Programs and Professor 2013 - , Associate Professor 2005 – 2013, Assistant Professor 1999 – 2005, and Instructor 1997 – 1998

Department of Agricultural and Resource Economics  
Center for Environmental and Resource Economic Policy, Faculty Affiliate, 2009 -  
Economics Graduate Faculty, member, 2016 -

#### **Virginia Polytechnic Institute & State University**, Department of Agricultural Economics

Research Associate, Economic Impacts of Migrant Labor Force, January-August 1992

#### **Federal University of Pará**, NAEA (Brazil)

Associate Researcher, August 1990- August 1991

### UNIVERSITY ADMINISTRATION AND SERVICE

#### **University**

Chair-elect of Research Leadership Academy, 2019  
College representative to International Operations Council, 2018 –  
Faculty affiliate, WaSH (Global Water, Sanitation and Hygiene) Cluster, 2018 –  
Member, South Asia Faculty Group, 2012 -  
Co-coordinator of R.L. Rabb Symposium on Sustainable Cities, 2018  
Member of University Council on Undergraduate Education, 2015 – 2018  
Member of cluster search committees for Genetic Engineering and Society in 2013 and WaSH in 2016 - 2017  
Chair, University Committee on International Programs, 2003 – 2004 (co-chair in 2002-03)  
Association of Women Faculty, NC State University, Co-Chair 2001 – 2002  
Member of search committee for vice-provost of international affairs, 2000

#### **College of Natural Resources**

Member of ad-hoc committees

Working Group on Land and Water, 2014 - 2015  
College Strategic Planning Committee, 2013 - 2014  
College International Task Force, 2001 – 2002  
Diversity Task Force, 1999 – 2000

Member of RPT committee for Parks, Recreation and Tourism, 2016

### **Department of Forestry and Environmental Resources**

Member of committee reviewing and recommending changes to allocation of faculty responsibilities through Faculty Workload and Rewards Project (FWRP), 2018 -

Member of search committees for policy in 2000, wildlife science in 2010, head in 2013, and silviculture and director of Forest Productivity Cooperative in 2015

Member of post-tenure review (2006, 2013, 2017) and tenure (2007-2008) committees

Co-chair of RPT committee for faculty member in Genetics and Society Cluster (2015), member of RPT committees for faculty members in Public Science and Genetics and Society clusters (2019)

Member of graduate studies committee, 1997 – 2011

Director of International Programs

Committee on International Programs and Endowments, Chair 2002 – 2005, 2007 – 2013, 2014 - Masters International Program, established and coordinated program that integrated Peace Corps service into masters degree programs, 1998 – 2016

Forestry Collaboration with Chile, obtained funding, established, and co-coordinated program that included faculty exchange, study tours, graduate student research, undergraduate internships, and language training, 2005 – 2009

Forest Ecosystem Services Exchange Program with Brazilian universities (UFPR, UFMG, UFT), departmental coordinator, 2008 – 2012

Advise student chapter of the International Society of Tropical Foresters (including seminar series, field trips to international conferences and organizations, and annual spring symposium)

Supervise student webmaster for international section of department website

Promote study abroad and advise student participants

Mentoring committees for junior faculty (chair for Martin, member for Forrester), 2017 -

Manage endowments and funds

Bruce and Barbara Zobel Endowment for International Forestry Studies (supports mini-grants for international research by undergraduate and graduate students)

Gunnar and Lillian Nicholson Graduate Fellowship and Faculty Exchange Fund (supports faculty and student exchange with Sweden, doctoral fellowships for Swedish students, summer study abroad in Sweden, and seminar series)

Laarman International Gift Fund (supports mini-grants for international research by graduate students)

Sunny and Lee Allen Fund (supports study abroad scholarships)

### **Inter-institutional**

Co-coordinator of Tri-HET (Triangle Working Group on Household Energy Transitions), bringing together economists and engineers from NC State, UNC-CH, Duke, RTI, EPA, and NIEHS, 2018 –

Coordinator, Triangle Working Group on REDD+, 2010 - 2012

Faculty Advisor, Triangle Pan-Amazon Discussion Group, 2004 – 2007

BRIDGES: Academic Leadership for Women, professional development program, 2003

### **HONORS**

Edwin F. Conger Professorship, 2018

Jackson Rigney International Service Award, 2018

Alumni Association Outstanding Research Award, 2017

Outstanding Global Engagement Award, 2011

**GRANTS**

- The sociohydrological system of a tropical forest frontier: land-climate-water feedbacks and farmer adaptation. Funded by NSF through University of Montana. Sub-contract budget: \$282,224, September 2018–August 2023.
- Confronting Energy Poverty: Building an Interdisciplinary Evidence Base, Network, and Capacity for Transformative Change. Co-PIs: Andrew Grieshop, Steve Kelley. Funded by NSF through UNC. Sub-contract budget: \$934,979, August 2017 – July 2022.
- Johns Island Community Conservation Initiative: Ecosystem Services Mapping & Land Protection Toolkit. Co-PI: Jelena Vukomanovic. Funded by the Gaylord & Dorothy Donnelley Foundation through the Lowcountry Land Trust. Sub-contract budget: \$79,986, February 2018 – January 2020.
- Determining Use, Economic Impacts and Value of Game Lands in North Carolina. Co-PIs: Nils Peterson, Yu-Fai Leung, Krishna Pacifi. Funded by the NC Wildlife Resources Commission, \$341,697, January 2017 – June 2020.
- Valuation of Forest Ecosystem Services. Co-PIs: Fred Cabbage and Susan Moore. Funded by the USFS, \$164,400, August 2013 – September 2015.
- Harnessing Secondary Socio-Economic Data to Analyze Forest Conservation Interventions. Funded by CIFOR, \$73,000, August 2013 – July 2014.
- Improving models for Forecasting Suppression Expenditures by Federal Land Management Agencies. Funded by the USFS, \$266,000, August 2011 - August 2019.
- Systematic Development of a Software System for Suppression Expenditure Forecasts for Federal Land Management Agencies. Funded by the USDA Forest Service, \$71,000, July 2014 – April 2018.
- Sustaining Florida's Forest Ecosystems: Impacts of Local Land Use Ordinances. Co-PI: Fred Cabbage. Funded by the USDA Forest Service, \$40,000, June 2011 – January 2014.
- Living with Deforestation: Analyzing Transformations in Welfare and Land Use on an Old Amazonian Frontier. Co-PIs: Caviglia-Harris (Salisbury) and Roberts (UCSB). Funded by NSF, \$560,000, July 2008 – June 2013.
- Learning from REDD+: Global Comparative Analysis. Funded by CIFOR, \$17,000, Dec 2010 – Dec 2011.
- Forests and Climate: Meta-Analysis of REDD+ Projects. Funded by CIFOR, \$19,500, June 2009 – December 2010.
- Triangle Working Group on REDD+. Co-PIs: Brian Murray (Duke University), Pam Jagger (UNC-CH), and Robert Beach (RTI). Funded by Research Triangle Institute, \$14,200, December 2009 – September 2010.
- Assessing Willingness to Pay for Sporting Licenses and Non-Game Conservation in NC. Co-PIs: Nils Peterson and Fred Cabbage. Funded by NC Wildlife Resources Commission, \$84,466, June 2008 – June 2010.
- Economic Assessment of Ecosystem Services Provided by Cocoa Systems in Central America. Co-PI: Fred Cabbage. Funded by USDA Forest Service, \$25,000, September 2008 – June 2010.
- Graduate Education in Forest Resource Decision Sciences: Preparing professionals to meet global needs. Co-PIs: Roise, Warren, Bullock, Cabbage, Steelman, Peterson. Funded by USDA CSREES, \$172,000, September 2008 – August 2013.
- Strengthening Global Competence of Students & Faculty through Collaboration in Forestry. Co-PIs: Lee Allen, Doug Frederick, and Susan Moore. Funded by USDA CSREES ISE, \$100,000, April 2005 – September 2009.
- Assessment of the Economic Feasibility of the Gypsy Moth Slow the Spread Project. Funded by USDA Forest Service, \$50,000, October 2006 – February 2008.
- Economics of sustainable forest management in the Brazilian Amazon. Funded by USDA Forest Service, \$28,380, May 2005 – September 2007 (supplemented by grant from the European Union directly to collaborating organization IMAZON in Belém, Brazil).
- Private Provision of Public Goods: Applying Matching Estimators to Evaluate 'Direct Payments' for Tropical Forest Conservation. Funded by NSF for \$36,000 and FONAFIFO (Costa Rican Government) for \$46,800, August 2005 – February 2007.

- Econometric Evaluation of Costa Rica's Payments for Environmental Services: Scaling up Sample Size and Study Area. Dissertation Enhancement Grant for Rodrigo Arriagada, funded by NSF, February – December 2007.
- Development of the Milk and Beef Processing Sectors: Implications for Land Use by Small Farmers in the Amazon. Dissertation Enhancement Grant for Shubhayu Saha, funded by NSF, May 2006 – July 2007.
- Long Term Sustainability of Bloodroot Supply on the Qualla Boundary Lands of the Eastern Band of Cherokee Indians. Co-PIs: Fred Cabbage and Jill Braly, funded by RTCAR, May 2006 - May 2007.
- Mining, Biodiversity, and Forest Livelihoods in Orissa, India. Funded by World Bank through RTI International, \$18,500, December 2005 – July 2006.
- Global Forest Sustainability and Certification Course: International Teaching Collaboration. Co-PI: Susan Moore. Funded by NCSU Faculty Center for Teaching and Learning, \$2000, May – December 2005.
- Dynamics of Household Land Use and Economic Welfare on the Amazon Frontier. Co-PI: Jill Caviglia-Harris, funded by NSF, \$168,678 administered through Salisbury University, Mar 2005- Dec 2008.
- Poverty Mapping in Sri Lanka. Funded by the World Bank through RTI International. Sub-contract budget: \$3,000, December 2004 – January 2005.
- Developing Low-Literacy Extension Materials to Target Underserved Audiences. Co-PI: Kelly Mance, Funded by Small and Part-time Farm Fund, \$7,500, April – September 2004.
- Curricular Development in Temperate and Subtropical Sustainable Forest Management and Forest Certification. Co-PIs: Fred Cabbage and Susan Moore. Funded by International Partnership for Forestry Education Development Grant, \$16,500, March – October 2004.
- Criteria and Indicators: Evaluating Data Sources for the US South. cooperative agreement with USDA Forest Service Southern Research Station, \$12,700, October 2003 – August 2004.
- Evaluating US Forest Policies: New Econometric Tools from "Program Evaluation." Co-PI: S. Pattanayak. Cooperative agreement with USDA Forest Service Southern Research Station, \$25,000, Aug 2003 – Aug 2004.
- Developing Low-Literacy Extension Materials to Target Underserved Audiences. Co-PIs: Susan Moore, Bob Bardon, Rick Hamilton. Funded by NC Program of Renewable Resources Extension Act, \$10,000, May – September 2003.
- Environmental Assessment of NAFTA's Impacts in the Forest Sector, Co-PI: Gary Blank. Funded by the USDA Forest Service International Programs Office, \$10,000, February 2002 – March 2003.
- Determining the Potential for International Forestry Education Through Distance Learning. Co-PI: Bill Dvorak, funded by NC State DELTA (Distance Education and Learning Technology Applications), \$10,000, January - June 2002.
- Indicators of Forest Condition: Measuring Amenities, Aesthetics, and Sustainability. Co-PI: S. Pattanayak, cooperative agreement with USDA Forest Service Southern Research Station, \$50,000, Aug 2001 – Feb 2004.
- Econometric Methods for Tree Planting Models. Co-PI: Subhrendu Pattanayak, cooperative agreement with USDA Forest Service Southern Research Station, \$28,000, August 2001 - August 2003.
- Sustaining ecological and economic diversity among limited resource landholders by expanding opportunities for management of productive woodlands. Co-PI: Sarah Warren, funded by USDA Southern Region Sustainable Agriculture Research and Education Program, \$180,430, May 2001 - May 2004.
- Collaborative Research on Forest Use in India: Building International and Interdisciplinary Linkages. Funded by NC State Internationalization Seed Grant, \$4,000, January 2000 – January 2002.
- Economics of Low-Impact Logging: Cost & Benefits of Certified Timber Production in Belize. Funded by NC State Faculty Research and Professional Development Seed Grant, \$4,990, March 2000 - December 2001.
- Protecting Soil and Water Resources with Agroforestry: Econometric Techniques for Analyzing Soil Conservation Benefits. Co-PI: Subhrendu Pattanayak, cooperative agreement with USDA Forest Service Southern Research Station, \$20,000, August 1999 - January 2001.

**MENTORING AND ADVISING**

Mentor and fund post-doctoral scholars Pedro Pires de Matos, Katrina Mullan, Charlotte Ham, Pushpendra Rana, and Bruno Kanieski Da Silva (five since 2004)

Mentor for undergraduate research projects on environmental voting in NC legislature (2002), woodland holiday products (2004-2005), opportunities and barriers to forestry on heir property (2018)

Advise one post-doc (Bruno Kanieski Da Silva), one visiting international scholar (Delgerjargal Dugarjav), two doctoral students (Wizaso Munthali, Logan Richardson), four masters students, two exchange students, and five undergraduate students, as of spring 2019

Serve on masters and doctoral student committees in Applied Ecology, Center for Geospatial Analytics, Economics, Forest Biomaterials, Forestry & Environmental Resources, Parks Recreation and Tourism, and UNC Program in Public Policy

**Former graduate advisees (13 PhD, 19 MS, and 12 masters of)**

Tarik Durmus, MS, 2019, Forest Farming of Shiitake Mushroom

Yu Wu, PhD, 2018, Essays on Deforestation and Forest Ecosystem Services

Natasha James, PhD, 2018, Payments for Ecosystem Services: Targeting and Procurement Auctions

Stephanie Chizmar, MS, 2018, Comparative economic assessment of silvopasture systems in Peru and NC

Ti'Era Worsley, MNR, 2017, Integrating Active Learning Methods through Environmental Education in Peru

David Solis, PhD, 2017, Quasi-experimental impact evaluation: timber concessions and REDD+

Sadharga Koesbandana, MF, 2017, Analysis of Forest Development Program Impacts on NC's Economy

Mary Elmer, MNR, 2016, Local Perspectives a Food Security Program in the Comarca Ngäbe-Buglé, Panamá

Christopher Galik, PhD 2015, Institutional Design and Decision-Maker Response: Env Policy and Research

Connor Rice, MS 2015, The Ecosystem service of forests improving air quality: A literature review

Andreanne Meley, MS 2014, Sustaining Florida's Forest Ecosystems: Impacts of Forestry Ordinances

Sarah Wiener, MS 2014, Traditional Natural Resource Use and Modern Lifestyles in the Post-Apartheid Era

Cody Burnett, MS 2013, Evaluation of a Conservation Education Program in Cape Verde

Matleena Vuola, MS 2013, Regional Markets for Non-timber Forest Products in the Brazilian Amazon

Alicia Raimondi, MS 2013, Assessing Ecotourism in a National Forest of the Brazilian Amazon

Liwei Lin, PhD 2012, Geography of REDD+ at Multiple Scales: Country participation and project location

Hanna-Lotta Heikkonen, MS 2012, Developing Guidelines for an Ideal Eco-label for Wood Products

Simon Hall, MS 2012, Beef Consumption in Curitiba, Brazil: Willingness to Pay for Sustainable Production.

Akhilesh Khopkar, MNR 2011, Wood Fuel, Carbon Markets, and Black Carbon

Simone Bauch, PhD 2010, Evaluation of conservation policies in the Brazilian Amazon

Karnjana Sanglimsuwan, PhD 2010, Essays in Environmental Health

Charlie MacIntyre, MS 2010, Sustainability in Amazonian Development

Susan McIntyre, MNR 2009, Extending Government Assistance to a Diverse Audience

Koffi Bassan, MF 2009, Constraints to Technology Adoption in Rural West Africa

Kevin Bigsby, MS 2009, Anthropogenic Drivers of Gypsy Moth Dispersal

Nia Atmadja, PhD 2008, Discount Rate Estimation and Role of Time Preference

Rodrigo Arriagada, PhD 2008, Payments for Ecosystem Services in Costa Rica

Amanda Rogers, MNR 2008, Rural Adaptation to Climate Change in Guinea, West Africa

Shubhayu Saha, PhD 2008, Spatial Externalities: Evidence on Social Interactions

Tzu-Ming Liu, PhD 2007, Economic Analysis of Bioinvasion in the Pacific Region

Jill Braly, MS, 2007, Bloodroot supply on the Waynesville watershed in Western NC

Nevin Dawson, MS 2006, Identifying early adopters of cashew agroforestry in Senegal

Arthur Green, MS 2005, Natural resource management in Tchabal Mbabo, Cameroon

Kelly Jones, MS 2005, Technology adoption in West Africa: soybeans in Togo and Benin

Rodrigo Arriagada, MS 2004, Estimating Profitability and Fertilizer Demand in Costa Rica  
 Nia Atmadja, ME 2004, Looking for a win-win: meta-analysis of poverty and deforestation  
 Saeko Makino, MNR 2004, Linking Forests to Markets: Chain of Custody Certification  
 Kelly Mance, MNR 2004, Outreach to Limited Resource Forest Landowners  
 Luis Carrasco, MS 2002, Analysis of Environmental Impact Statements in North Carolina  
 Kirsten Cassingham, MS 2001, Landowner Participation in NC Natural Heritage Program  
 Deepak Chhabra, PhD 2001, Scottish Highland Games: Authenticity & Economic Impact  
 Erin Mirrett, MNR 2000, Agroforestry Practices on Organic Farms in the U.S.  
 Ginger Deason, MNR 1999, Non-Timber Forest Products & Selective Logging in Belize  
 Niken Sakuntaladewi, PhD 1998, Community Based Forest Management in Indonesia

## PUBLICATIONS

### Edited books

- Sills, E. S. Moore, F. Cabbage, K. McCarter, T. Holmes, D. Mercer, eds. 2017. *Trees at Work: Economic Accounting for Forest Ecosystem Services in the US South*. Gen. Tech. Rep. SRS-226. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 103 pp.
- Sills, E., S. Atmadja, C. de Sassi, A. Duchelle, K. Demetrius; I. Resosudarmo, W. Sunderlin, eds. 2014. *REDD+ on the ground: A case book of subnational initiatives across the globe*. Center for International Forestry Research, Bogor, Indonesia. 505 pp.
- Angelsen, A., M. Brockhaus, M. Kanninen, E. Sills, W. Sunderlin, S. Wertz-Kanounnikoff, eds. 2009. *Realising REDD+: National strategy and policy options*. Center for International Forestry Research, Bogor, Indonesia. 361 pp.
- Sills, E., K. Abt, eds. 2003. *Forests in a Market Economy*. Kluwer Academic Publishers, Dordrecht. 379 pp.

### Articles (peer reviewed)

- Peroff, D., D. Morais, T. Wallace, and E. Sills. In press. "Assessing residents' place attachment to the Guatemalan Maya landscape through mixed methods photo elicitation," *Journal of Mixed Methods Research*.
- Gebara, M. F., Sills, E., May, P., Forsyth, T. 2019. Deconstructing the polycscape for reducing deforestation in the Eastern Amazon: Practical insights for a landscape approach. *Environmental Policy and Governance*. DOI: 10.1002/eet.1846
- Andersson K, LJ Alston, SM Smith, AE Duchelle, E Mwangi, A Larson, C de Sassi, E Sills, WD Sunderlin, G Wong. 2018. Wealth and the distribution of benefits from tropical forests: Implications for REDD+. *Land Use Policy* 72, 510-522.
- Frew, K. N., Peterson, M. N., Sills, E., Moorman, C. E., Bondell, H., Fuller, J. C., Howell, D. L. 2018. Market and nonmarket valuation of North Carolina's tundra swans among hunters, wildlife watchers, and the public. *Wildlife Society Bulletin* 42(3), 478-487.
- Game, E. T., Tallis, H., Olander, L., Alexander, S. M., Busch, J., Cartwright, N., E. Kalies, Y. Masuda, A. Mupepele, J. Qiu, A. Rooney, E. Sills, W. Sutherland. 2018. Cross-discipline evidence principles for sustainability policy. *Nature Sustainability* 1(9), 452.
- Mullan, K, E Sills, S Pattanayak, and JL Caviglia-Harris. 2018. Converting forests to farms: the economic benefits of clearing forests in agricultural settlements in the Amazon. *Environmental and Resource Economics*. doi:10.1007/s10640-017-0164-1
- Qiu, J., E. Game, H. Tallis, L. Olander, L. Glew, J. Kagan, E. Kalies, D. Michanowicz, J. Phelan, S. Polasky, J. Reed, E. Sills, D. Urban, and S. Weaver. 2018. Evidence-based causal chains for linking health, development and conservation actions. *BioScience* 68(3): 182-193.

- Rana, P. and E. Sills. 2018. Does certification change the trajectory of tree cover in working forests in the tropics? An application of the synthetic control method of impact evaluation. *Forests* 9 (3), 98
- Rodriguez, S. L., M Peterson, F Cubbage, E Sills, H Bondell. 2018. What is Private Land Stewardship? Lessons from Agricultural Opinion Leaders in North Carolina. *Sustainability* 10(2), 297.
- Sills, E. and K Jones. 2018. Causal inference in environmental conservation: The role of institutions. *Handbook of Environmental Economics*, V4, Elsevier, <https://doi.org/10.1016/bs.hesenv.2018.09.001>
- Sunderlin W, C de Sassi, E Sills, A Duchelle, A Larson, I Resosudarmo, A Awono, D Kweka, T Huynh. 2018. Creating an appropriate tenure foundation for REDD+: The record to date and prospects for the future. *World Development* 106 (2018) 376–392.
- West, T.A.P., K. Grogan, M. Swisher, E. Sills, J. Caviglia-Harris, D. Harris, D. Roberts, F. Putz. 2018. SimREDD+: A Hybrid Optimization Agent-based Model of REDD+ Payments to Households on an Old Deforestation Frontier in the Brazilian Amazon. *Environmental Modelling & Software*, 100, 159-174.
- West, T. A., Grogan, K. A., Swisher, M. E., Caviglia-Harris, J. L., Sills, E. O., Roberts, D. A., Putz, F. E. 2018. Impacts of REDD+ payments on a coupled human-natural system in Amazonia. *Ecosystem services*, 33, 68-76.
- Vuola, M., S Bauch, E Sills. 2018. The regional market for non-timber forest products. *Desenvolvimento e Meio Ambiente*, 48.
- West, T.A.P., K. Grogan, M. Swisher, E. Sills, J. Caviglia-Harris, D. Harris, D. Roberts, F. Putz. 2018. SimREDD+: A Hybrid Optimization Agent-based Model of REDD+ Payments to Households on an Old Deforestation Frontier in the Brazilian Amazon. *Environmental Modelling & Software*, 100, 159-174.
- Bos A, AE Duchelle, A Angelsen, V Avitabile, V De Sy, M Herold, S Joseph, C de Sassi, E Sills, W Sunderlin, S Wunder. 2017. Comparing methods for assessing the effectiveness of subnational REDD+ initiatives. *Environmental Research Letters* 12. doi:10.1088/1748-9326/aa7032
- Romero, C, EO Sills, MR Guariguata, PO Cerutti, G Lescuyer, F Putz. 2017. Evaluation of the impacts of FSC certification of natural forest management in the tropics: a rigorous approach to assessment of a complex conservation intervention. *International Forestry Review* 19(S2).
- Atmadja, S., E. Sills, S. Pattanayak, J. Yang, S. Patil. 2017. Is disease prevention behavior related to discount rates? Empirical findings from India. *Environment and Development Economics*. doi:10.1017/S1355770X17000018
- Bashari, M., E. Sills, N. Peterson, F. Cubbage. 2017. Illegal Hunting in Afghanistan: variation in motivations across species. *Oryx*. doi:10.1017/S0030605316001174
- Ickowitz, A., C. de Sassi, E. Sills. 2017. Estimating Household Opportunity Costs of REDD+: Insights from a global comparative study. *World Development* 95: 15-26.
- Luttrell, C., E. Sills, R. Aryani, A.D. Ekaputri, M.F. Evinke. 2017. Beyond opportunity costs: who bears the implementation costs of reducing emissions from deforestation and degradation? *Mitig Adapt Strateg Glob Change*. doi:10.1007/s11027-016-9736-6
- Sills, E., C. de Sassi, P. Jagger, K. Lawlor, D. Miteva, S. Pattanayak, and W. Sunderlin. 2017. Building the evidence base for REDD+: Study design and methods for evaluating the impacts of conservation interventions on local well-being. *Global Environmental Change* 43: 148–160.
- Atmadja, S. and E. Sills. 2016. What is a "community perception" of REDD+? A systematic review of how perceptions of REDD+ have been elicited and reported in the literature. *PloS one*. 11(11), e0155636
- Burnett, E., Sills, E., Peterson, M. N., DePerno, C. 2016. Impacts of the conservation education program in Serra Malagueta Natural Park, Cape Verde. *Environmental Education Research* 22(4): 538-550.
- Caviglia-Harris, Jill, E Sills, A Bell, D Harris, K Mullan, D Roberts. 2016. Busting the Boom–Bust Pattern of Development in the Brazilian Amazon. *World Development* 79: 82-96.

- Urzedo, D. I., Vidal, E., Sills, E. O., Pina-Rodrigues, F. C. M., Junqueira, R. G. P. 2016. Tropical forest seeds in the household economy: effects of market participation among three sociocultural groups in the Upper Xingu region of the Brazilian Amazon. *Environmental Conservation* 43(01): 13-23.
- Arriagada, RA; Sills, EO; Ferraro, PJ; Pattanayak, Subhrendu K. 2015. Do Payments Pay Off? Evidence from Participation in Costa Rica's PES Program. *PLoS one* 7: e0131544.
- Bauch, Simone C; Birkenbach, Anna M; Pattanayak, Subhrendu K; Sills, Erin O. 2015. Public health impacts of ecosystem change in the Brazilian Amazon. *PNAS* 112 (24): 7414-7419.
- Caviglia-Harris, Jill L; Toomey, Michael; Harris, Daniel W; Mullan, Katrina; Bell, Andrew Reid; Sills, Erin O; Roberts, Dar A. 2015. Detecting and interpreting secondary forest on an old Amazonian frontier. *Journal of Land Use Science* 10(4): 442-465.
- Dudney, Katherine, S Warren, E Sills, J Jacka. 2015. How Study Design Influences the Ranking of Medicinal Plant Importance: A Case Study from Ghana, West Africa. *Economic Botany* 69(4): 306-317.
- Serenari, Christopher; Peterson, M Nils; Leung, Yu-Fai; Stowhas, Paulina; Wallace, Tim; Sills, Erin O. 2015. Private development-based forest conservation in Patagonia: comparing mental models and revealing cultural truths. *Ecology and Society* 20(3).
- Sills, Erin O; Caviglia-Harris, Jill L. 2015. Evaluating the long-term impacts of promoting "green" agriculture in the Amazon. *Agricultural Economics* 46(S1): 83-102.
- Sills, Erin O; Herrera, Diego; Kirkpatrick, A Justin; Brandão Jr, Amintas; Dickson, Rebecca; Hall, Simon; Pattanayak, Subhrendu; Shoch, David; Vedoveto, Mariana; Young, Luisa. 2015. Estimating the impacts of local policy innovation: the synthetic control method applied to tropical deforestation. *PLoS one* 10(7): e0132590.
- Sunderlin, WD; Sills, EO; Duchelle, AE; Ekaputri, AD; Kweka, D; Toniolo, A; Ball, S; Doggart, N; Pratama, CD; Padilla, JT. 2015. REDD+ at a critical juncture: assessing the limits of polycentric governance for achieving climate change mitigation. *International Forestry Review* 17(4): 400-413.
- Wendland, Kelly J; Pattanayak, Subhrendu K; Sills, Erin O. 2015. National-level differences in the adoption of environmental health technologies: a cross-border comparison from Benin and Togo. *Health Policy and Planning* 30(2): 145-154.
- 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*. 1525822X13510370
- Bauch, S. C., Sills, E. O., & Pattanayak, S. K. 2014. Have we managed to integrate conservation and development? ICDP impacts in the Brazilian Amazon. *World Development* 64: S135-S148.
- Duchelle, A. E., Cromberg, M., Gebara, M. F., Guerra, R., Melo, T., Larson, A., Cronkleton, P., Borner, J., Sills, E., Wunder, S., Bauch, S., May, P., Selaya, G., and Sunderlin, W. D. 2014. Linking forest tenure reform, environmental compliance, and incentives: Lessons from REDD plus Initiatives in the Brazilian Amazon. *World Development* 55: 53-67.
- Lin, L. W., Sills, E., and Cheshire, H. 2014. Targeting areas for reducing emissions from deforestation and forest degradation (REDD+) projects in Tanzania. *Global Environmental Change* 24: 277-286.
- Bigsby, K. M., Ambrose, M. J., Tobin, P. C., and Sills, E. O. 2014. The cost of gypsy moth sex in the city. *Urban Forestry & Urban Greening* 13(3): 459-468.
- Toomey, M., D. Roberts, J. Caviglia-Harris, M. Cochrane, C. Dewes, D. Harris, I. Numata, M. Sales, E. Sills, and C. Souza. 2013. Long term, high spatial resolution carbon balance monitoring of the Amazonian frontier: pre- and post-disturbance emissions and uptake. *Journal of Geophysical Research - Biogeosciences*. DOI: 10.1002/jgrg.20033
- Caviglia-Harris, J., E. Sills, and K. Mullan. 2013. Migration and Mobility on the Amazon Frontier. *Population and Environment* 34 (3): 338-36. DOI: 10.1007/s11111-012-0169-1
- Pfaff, A., G. Amacher, and E. Sills. 2013. Realistic REDD: Understanding and Improving Domestic Policy Impacts on Forest Loss. *Review of Environmental Economics and Policy*. DOI: 10.1093/reep/res023



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### **Panels organized**

Matching the means to the ends: choosing appropriate methods for valuation of forest ecosystem services. *International Society of Forest Resource Economics*. Raleigh NC, April 2016.

- REDD+ (Reducing Emissions from Deforestation and Forest Degradation plus Conservation of Forests in Developing Countries). *International Society of Forest Resource Economics*. Raleigh NC, April 2016.
- Deforestation in the Amazon: Dynamic Analyses and Recent trends, methods, and research. *Association of American Geographers Meeting*. Seattle WA, April 2011.
- Impact Evaluation in Practice. NAREA session at *Agricultural and Applied Economics Association Meeting*, Pittsburgh PA, July 2011.
- Causal effects of conservation investments: Applications of matching methods in Latin America. International Section of the *American Agricultural and Applied Economics Association Meeting*, Orlando FL, July 2008.
- Minority Landholders and Working Forests in the South. *Society of American Foresters Convention*, Winston-Salem NC, October 2002.
- The International Experience: Natural Resource Education Overseas. *University Education in Natural Resources Conference*, Raleigh NC, March 2002.
- Fate of the Forest: Birdwatchers, Blowguns, or Beef? *Southeastern Council on Latin American Studies Annual Meeting*, Chapel Hill NC, March 1995.

### **Selected presentations**

- Rana, P. and E. Sills. 2018. “Does Certification Change the Trajectory of Tree Cover in Working Forests in The Tropics? An Application of the Synthetic Control Method of Impact Evaluation,” presented at the *World Congress of Environmental and Resource Economists*, Gothenburg, Sweden, July.
- Sills, E. 2017. “Communicating Science and Public Policies for Natural Resource Conservation: Building an evidence base that bridges conservation, development, and health” presented at the *IAAE Inter-Conference Symposium on Agricultural Productivity, Climate Change and Sustainable Resource Management*, Talca, Chile, October.
- Sills, E. 2017. “Local responses to federal forest policy: the green municipality program in the Brazilian Amazon” presented at the *3<sup>rd</sup> FLARE Meeting*, Stockholm, Sweden, October.
- Masatsugu, L., A.A.D. Putri, E. Sills, and S. Pattanayak. 2017. “Household cooking technologies and REDD+ across the tropics” presented at the *European Association of Environmental and Resource Economics Annual Meeting*, Athens, Greece, June.
- James N, E Sills, T Capitan, F Alpizar, A Salas, and P Rigg. 2016. “How designing PES for efficiency affects equity: participation in Costa Rica's PES System” presented at the *EfD Annual Meeting*, Pucon, Chile, November.
- Luttrell, C., E. Sills, R. Aryani, A.D. Ekaputri, and M.F. Evinke. 2016. “Who will bear the cost of REDD+? Evidence from subnational REDD+ initiatives” presented at the *Association of Tropical Biology and Conservation*, Montpellier, France, June.
- Dwi Putri, AA, A. Khopkar, E Sills, A Duchelle, C de Sassi, D Kweka, and W Sunderlin. 2016. “REDD+ and Household Energy Transitions” presented at *Workshop on Sustainable Energy Transitions in Developing and Emerging Economies*, Durham NC, April.
- Alpizar, Francisco and E. Sills. 2014. “Combining state of the art science with practitioner’s wisdom in the design of PES schemes: Lessons from the Costa Rican experience” presented at the *Environment for Development Annual Meeting*, Dar es Salaam, Tanzania, October.
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- Bauch, S., S. Pattanayak, and E. Sills. 2010. "The road less traveled: Does forest conservation reduce malaria in the Brazilian Amazon?" presented at the *World Congress of Environmental and Resource Economics*, Montreal, July.
- Sills, E., S. Bauch, J. Weber, and S. Pattanayak. 2008. "Forest-based Micro-Enterprise in the Brazilian Amazon: Assessing the Welfare Impacts of Integrated Conservation and Development" presented at the *European Association of Environmental and Resource Economists*, Gothenburg, Sweden, June.
- Sills, E., S. Bauch, J. Weber, and S. Pattanayak. 2008. "Increasing returns to community forestry: Estimating the impacts of micro-enterprise development in the Brazilian Amazon" presented at the *American Agricultural Economics Association Meetings*, Orlando FL, July.
- Sills, E. 2008. "Balancing Costs and Benefits of Slowing the Spread of Gypsy Moths" presented at the *USDA Interagency Research Forum on Invasive Species*, Annapolis MD, January.
- Sills, E., S. Pattanayak, S. Saha, K. Sanglisuwan, J. Yang, and A. Singha 2007. "Mine over matter? Health, wealth, and forests in a mining area of Orissa" presented at *International Conference on Comparative Development*, Delhi India, December.
- Sills, E., S. Pattanayak, P. Ferraro, R. Arriagada, E. Ortiz, and S. Cordero. 2007. "Testing Pigou: Private Provision of Public Goods" presented at the *AERE Workshop on Valuation and Incentives for Ecosystem Services*, Mystic CT, June.
- Sills, E., K. Jones, S. Pattanayak, K. Alger, J. Alvarez, K. Cassingham, J. Krishnaswamy, and N. Phillips. 2006. "Watershed protection by forests: Vital ecosystem service or smoke and mirrors?" presented at *Tercer Congreso Chileno de Ciencias Forestales*, Concepción Chile, November.
- Sills, E., R. Arriagada, S. Pattanayak, P. Ferraro, L. Carrasco, E. Ortiz, S. Cordero, and K. Andam. 2006. "Program Evaluation of Costa Rica's Pago de Servicios Ambientales (PSA): Impacts on Forest Cover" presented at *Ecosystem Services in the Neotropics: State of the Art and Future Challenges*, Valdivia Chile, November.
- Sills, E. 2006. "Payments for Environmental Services in Costa Rica" presented as part of the symposium "How do we know it's working? State of the art program evaluation for conservation science and policy" at the *Society for Conservation Biology Annual Meeting*, San Jose CA, June.
- Shanley, Patricia and E. Sills. 2005. "Market Myths and Forest Livelihoods" presented at *Working Forests in the Tropics*, Gainesville FL, February.
- Pattanayak, Subhrendu, E. Sills, and D. Whittington. 2004. "Cost-recovery for Water Supply: Understanding how time preferences affect financing options in Kathmandu, Nepal" presented at the *Northeastern Universities Development Conference*, Montreal, October.
- Sills, Erin, S. Atmadja, S. Warren, and R. Estevez, 2004. "Sustaining Diversity: Limited-resource Forest Landowners in the Southern United States" presented at the IUFRO Conference on *Human Dimensions Family and Farm Forestry*, Pullman WA, March.
- Sills, Erin and S. Saha. 2004. "Rubber subsidies for extractive reserves: Sign of Failure or Success?" presented at the *ISTF Conference People and Parks*, New Haven CT, March.
- Sills, Erin and S. Pattanayak, 2003. "Markets, modernization, and the Mentawai: Explaining Differences in Forest Dependence," presented at the *Northeastern Universities Development Conference*, New Haven CT, October.
- Arin, Tijen and E. Sills, 2002. "Financing conservation and development with tourism: Park entrance fees in the Republic of Georgia" presented at the *World Congress of Environmental and Resource Economists*, Monterey CA, July.



- Sills, Erin, S. Pattanayak, T. Holmes, and S. Lele, 2002. "Collecting Clues from Limited Data: non-timber forest product collection in labor and land limited situations" presented at the *Southern Forest Economics Workshop*, Virginia Beach VA, March.
- Sills, Erin, S. Pattanayak, C. Mansfield, and K. Cassingham, 2002. "What Drives Voluntary Preservation?" presented at the *World Congress of Environmental and Resource Economists*, Monterey, CA, July.
- Sills, Erin, K. Potter, K. Jones, and D. Wear, 2002. "Assessing Forest Sustainability with Questions and Criteria" presented at the *Society of American Foresters Convention*, Winston-Salem, NC, October.
- Sills, Erin, E. Romero, and W. Sabido, 2002. "Financing Conservation with Certified Timber: the Experience of Programme for Belize" presented at *Working Forests in the Tropics*, Gainesville, FL, March.
- Caviglia, Jill L. and E. Sills, 2000. "Forest Management Practices by Indigenous and Migratory Populations: Diversification and Deforestation" presented at the *Western Agricultural Economics Association Meetings*, Vancouver, Canada, July.
- Kramer, Randall, E. Sills, and S. Pattanayak, 1998. "National Parks as Development Projects: Gauging Local Support" presented at the *World Congress of Environmental and Resource Economists*, Venice, Italy, June.
- Sills, Erin and T.P. Holmes, 1998. "Household Responses to New Opportunities in Non-timber Forest Product Markets" presented at the *American Agricultural Economics Association Meeting*, Salt Lake City, UT, August.
- Sills, Erin and R.A. Kramer, 1998. "Tourism, Conservation, and Development of Siberut National Park, Indonesia" presented at the *Allied Social Science Associations Meeting*, Chicago, IL, January.

### **Selected posters**

- Wu, Y. and E. Sills. 2016. "Drivers of Deforestation in the Western Brazilian Amazon." *3rd Latin American Research Symposium*. NC State University, NC, February.
- Lin, L., E. Sills, S. Pattanayak, S. Atmadja, and J. Streck. 2010. "Sub-national Geography of REDD+ Projects." *ISTF Conference*. Yale University, CT, February.
- Anderson, C. J., M. N. Peterson, E. Sills, D. Cobb, and H. Bondell. 2009. "Assessing willingness of North Carolina hunters and anglers to increase license fees." *16th Annual Conference of the Wildlife Society*, Monterey, CA.
- Bigsby, K. P. Tobin, and E. Sills. 2008. "Anthropogenic Influences on Gypsy Moth Dispersal" *Annual Gypsy Moth Review*, Tacoma, WA November.
- Ambrose, M. S. Bauch, K. Bigsby, Y. Wu, E. Sills, and P. Tobin. 2008. "Estimating the Cost of Gypsy Moth Sex in the City" *USDA Interagency Research Forum on Invasive Species*, Annapolis, MD January.
- Atmadja, S. and E. Sills 2008. "Meta-Analysis of Deforestation & Poverty: What is the Consensus?" *European Association of Environmental and Resource Economists*, Gothenburg, Sweden, June.
- Bauch, S.C., Barroso, M., Sills, E.O. 2008. "Harnessing Rural Radio Networks for Working Forests." *Working Forests in the Tropics*, Gainesville, FL, March.
- Saha, S., E. Sills, J. Caviglia-Harris, and S. Pattanayak. 2008. "Can milk markets reduce deforestation?" *American Agricultural Economics Association Meetings*, Orlando FL, July.
- Shellabarger, R.M., S.T. Warren, E.O. Sills, M.N. Peterson. 2008. "Crossing borders: wildlife conservation and human rights responses to undocumented migration in the Arizona borderlands." *The 15th Annual Meeting of the Wildlife Society*. Miami, FL, November.
- Warren, S., E. Sills, and S. Moore. 2007. "New Forestry Outreach Approaches for Limited-Resource, Underserved, and Beginning Landowners." *Outreach Scholarship Conference: Access through Engagement*. Madison, WI, Oct.

## OUTREACH PUBLICATIONS AND WORKING PAPERS

- “Does certification change the trajectory of tree cover in working forests in the tropics? An application of the synthetic control method of impact evaluation,” 2017, with Rana, CEnREP Working Paper No. 17-018. Raleigh, NC: Center for Environmental and Resource Economics.
- “Commentary on NTFPs,” NWFP Update No. 8, FAO, 2016, Available from: <http://www.fao.org/forestry/nwfp/91920/en/>
- “User Manual for the REDD+ Cost Model,” 2016, with Greenberg, Horudono, and Clement. Available from: <http://www.cifor.org/gcs/publications/toolboxes/>
- “Who will bear the cost of REDD+? Evidence from subnational REDD+ initiatives,” CIFOR Working Paper no. 204, 2016, with Luttrell, Aryani, Ekaputri, and Evnike. DOI: 10.17528/cifor/006169.
- “In Search of Double Dividends from Climate Change Interventions Evidence from Forest Conservation and Household Energy Transitions,” EBA Report 2015:09, 2015, with Köhlin, Pattanayak, Mattsson, Ostwald, Salas, and Ternald. Available from: <http://eba.se/in-search-of-double-dividends-from-climate-change-interventions-evidence-from-forest-conservation-and-household-energy-transitions/>
- “The context of natural forest management and FSC certification in Brazil,” 2015, with Romero, Claudia; Guariguata, Manuel R; Putz, Francis E; Lima, Guilherme R; Papp, Luciana; Voigtlaender, Maureen; Vidal, Edson. CIFOR Occasional Paper No. 148. Available from: <http://www.cifor.org/library/5911/the-context-of-natural-forest-management-and-fsc-certification-in-brazil/>
- “The context of natural forest management and FSC certification In Indonesia,” 2015, with Romero, Claudia; Putz, Francis E; Guariguata, Manuel R; Maryudi, Ahmad. CIFOR Occasional Paper No. 126. Available from: <http://www.cifor.org/library/5653/the-context-of-natural-forest-management-and-fsc-certification-in-indonesia/>
- “A Review of Current Knowledge about the Impacts of Forest Management Certification and a Proposed Framework for its Formal Evaluation,” 2013, with C. Romero, F. E. Putz, M. Guariguata, P.O. Cerutti, and G. Lescuyer. CIFOR Occasional Paper No. 99. Available from: <http://www.cifor.org/online-library/browse/view-publication/publication/4188.html>
- “Energy, Gender and Development: What are the Linkages? Where is the Evidence?,” 2011, with G. Köhlin, S. Pattanayak, and C. Wilfong. World Bank Policy Research Working Paper No. 5800 Available from: <http://go.worldbank.org/BWBRP91A50>
- “A guide to Learning about the Livelihood Impacts of REDD+,” 2010, with P. Jagger, K. Lawlor, and W. Sunderlin. CIFOR Working Paper No. 56. Available from: <http://www.cifor.cgiar.org/nc/online-library/browse/view-publication/publication/3283.html>
- “Technical guidelines for research on REDD+ project sites with survey instruments and code book,” 2010, with W. Sunderlin, A. Larson, A. Duchelle, C. Luttrell, P. Jagger, S. Pattanayak, P. Cronkleton, A. Ekaputri. CIFOR. Available from: [http://www.cifor.cgiar.org/publications/pdf\\_files/Books/BSunderlin1001.pdf](http://www.cifor.cgiar.org/publications/pdf_files/Books/BSunderlin1001.pdf)
- “What is a REDD+ Pilot? A preliminary typology based on early actions in Indonesia,” 2010, with E.M. Madeira, M. Brockhaus, L. Verchot, and M. Kanninen. CIFOR InfoBrief No. 26. Available from: [http://www.cifor.cgiar.org/publications/pdf\\_files/infobrief/3266-infobrief.pdf](http://www.cifor.cgiar.org/publications/pdf_files/infobrief/3266-infobrief.pdf)
- “Policy Impacts on Deforestation: Lessons from Past Experiences to Inform New Initiatives,” 2010, with A. Pfaff, G. Amacher, M. Coren, K. Lawlor, and C. Streck. Nicholas Institute Report 10-02. Available from: <http://www.nicholas.duke.edu/institute/deforestation.06.10.pdf>
- “NCSU’s First Graduate Focuses on Agriculture” Masters International Coordinators Newsletter, Issue 3, Fall 2005: 4.
- “Survey Results from NC State University,” 2004, with R. Estevez, *PineTips: Newsletter of the Eastern NC Christmas Tree Growers Association*, April.
- “Financing Conservation with Certified Timber: Lessons from Belize” *Sylvanet* V 15(1) Spring 2002, pp.7-9.

- "Survey Examines Organic Farmers' Views of Trees on Farms," 2002, with E. Mirrett, *The Temperate Agroforester* V 10 N 4: 8.
- "What explains legislative voting on the environment?" 2002, with C. Ingle, *The Carolina Conservationist* Summer 2002, p. 5.
- "Agroforestry in Paraguay," *Sylvanet* 14(1) 2001: 7-10.
- "World View: Learning Firsthand about World Forestry," *NC State Bulletin*, Mar 24, 2000: 2.
- "Analysis of the Potential for Ecotourism in the Northern Littoral of Paraná, Brazil: Project Summary," Forestry Private Enterprise Initiative Working Paper, 1997, with V.Y. Müller, F.W. Cubbage, T.P. Holmes, J.M. Pye, and J.E. Wagner, L.M. Marques, J.L. Binns, and D.C. Riggsbee.

## INVITED LECTURES

- Local Responses to Federal Forest Policy: The Green Municipality Program in the Brazilian Amazon, Invited lectures in the Duke University Amazon Frontiers Conference, Durham, NC, April 2018, and the Salisbury University Economics and Finance Seminar Series, October 2018.
- Enabling Local Governments to Respond to a Federal Environmental Mandate: Evaluation of the Green Municipality Program in the Brazilian Amazon, Presentations to the CenREP Colloquia, Raleigh, NC, April 2018, and the INRA – CEE Workshop on Measuring the effects of forest policies and interventions, Montpellier, France, March 2018.
- 3E+ Evaluation of REDD+: Findings from a pan-tropical sample of pilot projects, Invited lectures in the Faculty of Forestry, UBC, Vancouver, Canada, November 2017, and the Seminar Series IIES-CIGA, UNAM, Morelia, Mexico, August 2017.
- Formulating policy and management around ecosystem services, Invited Lecture at Policy Day of CESIEP, Talca, Chile, November 2016.
- What works in tropical forest conservation: evaluating impacts on carbon and co-benefits, Invited Lecture at ASU, Tempe, AZ, November 2016.
- Valuation of Forest Ecosystem Services, Invited Lecture at the Launch of CESIEP, Valparaiso, Chile, November 2015.
- An Overview of Current Knowledge about the Impacts of Forest Management Certification, Invited lecture to Duke University Student Chapter of SAF Annual Fall Symposium on "A Closer Look at Forest Certification," October 2015.
- Evaluación de impactos de las políticas sobre la deforestación tropical utilizando el método de control sintético, Environment for Development Seminar Series, CATIE, Costa Rica, February 2015.
- Evaluating local innovations in forest policy: Application of the synthetic control method to tropical deforestation, Department of Economics Seminar Series, University of Gothenburg, November 2014.
- Potential and Pitfalls of Panel Surveys, CIFOR livelihoods retreat, Istanbul, Turkey, June 2014.
- Expanding global markets, Virginia Forestry Summit, Williamsburg VA, April 2014.
- The Xingu Seed Network: How does harvest of tropical tree seeds affect household livelihoods?, Lecture at FAPESP Week North Carolina, NCSU, Raleigh NC, November 2013.
- Understanding REDD: what and how can we learn from pilot projects?, Keynote lecture for the Environment for Development Annual Meeting, CATIE, Costa Rica, October 2012.
- Dynamics of deforestation and development on the Amazon frontier, Department of Economics Seminar Series, University of North Carolina at Greensboro, November 2012.
- How is REDD+ unfolding on the ground? An exploration of social, political & biophysical issues. UNFCCC Side Event, Durban, South Africa, 30 November 2011.
- A Guide to Learning about Livelihood Impacts of REDD+ Projects. UNFCCC Side Event, Cancun, Mexico, 2 December 2010.

Panelist for “Carbon Markets, Forestry & Forest Products: A Briefing for North Carolina Decision-makers,” Raleigh NC, October 2009.

Co-evolution of deforestation and development: evidence from spatial panel data on the Amazon frontier, Development Economics Seminar Series, University of Wisconsin, March 2008.

Trazendo benefícios por meio da comercialização dos PFNMs para as comunidades e a cidade, Café Não-Madeireiro, CIFOR, Belém, Brazil, February 2007.

Bosques, Ambiente, Economía y Sociedad, Public Symposium hosted by Universidad de Concepción, Concepción, Chile, November 2006.

Impact of the PSA Program on Land Use, World Bank Workshop on EcoMarkets, San Jose, Costa Rica, September 2006.

Impacts of Iron Ore Mining on Livelihoods: Evidence from Orissa, Indian Statistical Institute, Delhi, India, August 2006.

Evolução da Fronteira: Valor da Terra em Ouro Preto do Oeste, Rondônia, AMAZON, Belém, Brazil, June 2006.

Evolution of an Amazon Forest Frontier: Determinants of Land Value in Rondônia, Brazil, Department of Geography Colloquia on Human-Environment Interactions, University of North Carolina, March 2006.

A Dinâmica da Agropecuária e do Bem-Estar Familiar em Rondônia, Associação dos Produtores Alternativos, Ouro Preto do Oeste, Brazil, July 2005.

Market Myths and Forest Livelihoods, ESSD Week, Forest Livelihoods and Vulnerability Session, World Bank, Washington, DC, March 2005.

Culture, commerce, and conservation in forest fringe communities, Department of Environmental Sciences, University of California - Riverside, October 2004.

Panelist for Seminar on State of the World’s Natural Resources, Food and Agriculture, NC State University, Oct 2002.

Tropical Deforestation: Causes, Consequences, Responses, ENCORE Continuing Education Program, NC State University, April 2002.

Tropical Deforestation, Athens Drive High School and Enloe High School, NC, September and October, 2001.

Ecotourism and Development in Brazil, Duke University Conference “Can Community Development Protect Biodiversity in the Tropics?” NC, March 2001.

Economics of Forest Resources: An Assessment of Non-Timber Benefits in the Tropics, Institute of Life Sciences, Utkal University, India, November 2000.

## **PROFESSIONAL SERVICE**

### **Affiliations**

CIFOR (Center for International Forestry Research)

Research Associate

Member of Core Research Team for the Global Comparative Study of REDD+

IMAZON (Instituto do Homem e Meio Ambiente da Amazônia)

Associate Researcher, coordinated market research on non-timber forest products

Coordinated and co-taught short course on “Forest Economics: Practical Methods for Policy Analysis,” to 20 students from 13 different environmental agencies, non-profit organizations, and research institutions in the Brazilian Amazon, June 2006

EfD (Environment for Development)

Central American Center, Associate Researcher and co-PI of research on increasing the efficiency of the Costa Rican PES system

Co-coordinator of network for women in environmental economics (WinEED), including inaugural workshop at WCERE in Gothenburg, Sweden (June, 2018), reported here:

<https://efdinitiative.org/news/archive/mentorship-and-networking-tools-empowerment>.

**Sabbatical appointment**

University of Gothenburg, Department of Economics, Malmsten Visiting Professor, Fall 2014

**Editorial boards**

Conservation Letters, Member of Editorial Board, 2015 –  
 Frontiers in Forests and Global Change, Specialty Chief Co-Editor for People, forests and livelihoods, 2018 -  
 Forests, Member of Editorial Board, 2017 -  
 PlosOne, Member of Editorial Board, 2018 -

**Boards of directors**

Tropical Forest Foundation, 2013 – 2014  
 Terra Viva Grants (terravivagrants.org), 2018 -

**Consulting**

Terra Carbon, consultant for impact evaluation of Green Municipalities Program to reduce deforestation in the Brazilian Amazon  
 Research Triangle Institute, consultant on economics of invasive species, impact of severe weather on forest management, and REDD+  
 World Bank, consultant for strategy paper on Energy, Development, and Gender  
 Nicholas Institute (Duke University), consultant for white paper reviewing lessons for REDD+ from previous deforestation policy  
 Inter-American Development Bank, consultant for development of PES system in Acre, Brazil

**Membership in working groups**

Working Group on Impact Evaluation of Forest Certification in the Tropics, coordinated by the University of Florida and funded by World Bank and US AID, 2011 - 2014  
 NCEAS SNAPP Working Group on Sharing vs. Sparing, 2014 – 2017  
 NCEAS Working Group on Effects of Trade Policy on Non-native Forest Pests and Pathogens, 2008 - 2009  
 SESYNC Working Group on Forests, Agriculture and Rivers in the Brazilian Amazon, 2016 - 2018  
 Working Group on Evidence Chains, member of group coordinated by the Nature Conservancy and Duke University, 2016 – 2018  
 Strategic Environmental Research Initiative (SERI) workshop on social equity in resource management, Bren School of Environmental Science & Management at the University of California, Santa Barbara, 2016

**Reviews**

Grant proposals for the National Science Foundation, USDA National Research Initiative, South Asian Network for Development and Environmental Economics, Sustainable Forest Management Network (Canada), the Council for Development Research (Denmark), the International Foundation for Science (Sweden), the World Bank Development Marketplace, Environment for Development, the NORFACE and Belmont Forum research programme Transformations to Sustainability (T2S); Internal Reviewer for NCSU Proposals to USDA ISE  
 Journal articles for *Agroecology and Sustainable Food Systems*, *Agricultural and Resource Economics Review*, *Agroforestry Systems*, *American Journal of Agricultural Economics*, *Biological Conservation*, *Canadian Journal of Agricultural Economics*, *Climate and Development*, *Climatic Change*, *Conservation Biology*, *Conservation Letters*, *Current Opinion in Environmental Sustainability*, *East African Agricultural and Forestry Journal*, *Environmental Research Letters*, *Ecosystems*, *Ecological Economics*, *Environment and Development Economics*, *Environment and Development*, *Environment Development and Sustainability*, *Environmental Management*, *Environmental and Resource Economics*, *Forests*, *Forest Economics*, *Forest Science*, *Forest Ecology and Management*, *Forest Policy and Economics*, *Global Change Biology*, *Injury Prevention*, *International Journal of Biodiversity and Conservation*, *International Journal of Disaster Risk Reduction*, *International Review of Forest Research*, *Journal of Agricultural and Resource Economics*, *Journal of the Association of Environmental and Resource Economists*, *Journal of Environment and Development*, *Journal of Environmental Economics and Management*, *Journal of Forest Economics*, *Journal of Forestry*,

*Journal of Leisure Research, Journal of Sustainable Forestry, Land Economics, Land Use Policy, Nature Communications, Nature Sustainability, Natural Resources Forum, PlosOne, Policy Sciences, Resource and Energy Economics, Resources, Science, Science Advances, Small-scale Forestry, Sustainability and World Development.*

Conference abstracts for AERE and AAEA.

Book chapters for *Forest under Pressure: Local Responses to Global Issues* (IUFRO), *Forest Policy for Private Forestry: Global and Regional Challenges* (CABI), *The Economics of Forest Disturbances: Wildfires, Storms, and Invasive Species* (Dordrecht), UNEP Emissions Gap Report 2015. Proposed book chapters (CIFOR) and book (Routledge) on management of non-timber forest products.

Dissertations for University of British Columbia (Canada), University of Western Australia, Tezpur University (India).

### **Other**

Program committee for AERE sessions at ASSA, Member, 2018 –

Southern Roundtable on Sustainable Forests, Steering Committee Member 2003 – 2005

International Society of Tropical Foresters, Country Vice President 2005 - 2006

### **TEACHING**

Climate Change and Sustainability (undergraduate) 2 semesters 2018 – 2019

Survey Methods (graduate) 1 credit mini-course, 5 semesters 2009 – 2019

World Forestry (undergraduate) 17 semesters 1998 – 2018 (with graduate sections in 2009-2014)

Forest Economics (graduate) 12 semesters 1997 – 2015 and (undergraduate) 3 semesters 2004, 2012 and 2015

### **Special topics**

Sustainable Development Goals (graduate and undergraduate) co-taught 1 semester 2018

Science, Technology, and Global Sustainability (graduate) co-taught 2 semesters 2011 at TERI University (India) and 2012 at NCSU

Impact Evaluation (graduate) 1 credit mini-course, 1 semester 2013

Non-market valuation methods (graduate) 1 credit mini-course, 1 semester 2010

Collaborative Research on REDD+ (graduate), co-taught and offered jointly with Duke and UNC, 1 semester 2010

Conservation and Development (graduate) 1 credit mini-course co-taught with doctoral student, 2008

Economics & Ecology of Invasive Forest Pests (graduate) distributed graduate seminar sponsored by National Center for Ecological Analysis & Synthesis, 1 semester 2007

Global Forest Sustainability and Certification (graduate) co-taught 1 semester 2005

Agroforestry (graduate) 3 semesters 2000 – 2003

Conservation & Sustainable Development (graduate), co-taught and offered jointly with Duke and UNC, 1 semester 1998

Introduction to Natural Resources (undergraduate) 1 semester 1997

### **Study abroad**

Ghana, focus on local forest benefits, May 12- 28, 2004, 12 students

Chile, focus on intensive plantation forestry, March 8 – 16, 2003, 17 students

Costa Rica, focus on environmental service payments, August 6 –17, 2002, 16 students

Paraguay, focus on agroforestry and wood processing, March 9 – 18, 2001, 19 students

Mexico, focus on range of natural resource management systems, March 10 –17, 2000, 10 students

**MEMBERSHIPS** American Agricultural Economics Association (1999 - )  
Association of Environmental and Resource Economists (1998 - )  
Phi Beta Kappa (Honors, 1990 - )  
Sigma Iota Rho (International, 2002 - )  
Sigma Xi (Science, 2002 - )  
Xi Sigma Pi (Forestry, 1999 - )

**LANGUAGES &  
PROGRAMS** Fluent in Portuguese, good Spanish skills, rudimentary Indonesian  
Familiar with STATA, Limdep, R, SAS, MS Access, and IMPLAN