

Michael G. Jacobson

Professor of Forest Resources, Department of Ecosystem Science and Management
Pennsylvania State University, University Park, PA 16802
(814) 865-3994, mgj2@psu.edu
<https://ecosystems.psu.edu/directory/mgj2>

EDUCATION

- 1997** Ph.D. North Carolina State University, Major: Forest Economics (Dept. of Forest Resources)
1990 Master of Environmental Management (M.E.M), Duke University (School of Forestry and Environmental Studies)
1984 B.A. in Economics, University of Connecticut

CURRENT APPOINTMENTS

- 2012-** Professor of Forest Resources, Department of Ecosystem Science and Management, Pennsylvania State University
2020- Honorary Professor, School of Agricultural, Earth and Environmental Sciences, University of Kwazulu-Natal
2018- Affiliate Professor, African Studies, Pennsylvania State University
2018- Co Director, Penn State Water-Energy-Food Nexus Initiative
2018- Global Fellow, College of Agricultural Sciences, Pennsylvania State University
2007- Extraordinary Professor, Department of Forest and Wood Science, Faculty of Agrisciences, Stellenbosch University, South Africa

PREVIOUS APPOINTMENTS

- 2015-18** Chair, Forest Ecosystem Management Program, Department of Ecosystem Science and Management, Pennsylvania State University
2011-15 Affiliate Professor, School of International Affairs, Pennsylvania State University
2007-12 Associate Professor of Forest Resources, School of Forest Resources, Pennsylvania State University
1999-07 Assistant Professor of Forest Resources, Pennsylvania State University
1997-99 Assistant Professor, University of Florida, Gainesville, FL
1993-97 Graduate Assistant, North Carolina State University, Raleigh, NC
1992-93 Director of Information, Tropical Forest Foundation, Alexandria, VA
1990-92 Research Associate, World Bank, Agriculture Department, Washington, DC
1998-90 Graduate Assistant, Duke University, Durham, NC
1986-88 Agroforestry Technician/Extension Agent, U.S. Peace Corps, Lesotho, Africa

SELECTED COUNTRY-BASED FORESTRY EXPERIENCE

- Bangladesh** Nontimber forest products livelihoods. UNDP Project Chittagong Hills (2008)
Costa Rica Protected area study. The Nature Conservancy (2005)
Ethiopia Multiple projects including Forestry Ministry Training (1998) and collaboration with University Gondar and World Vision on water energy food nexus projects (2019-2020)
France Agroforestry demonstration tour of eastern France. INRA (2010)
Ghana MIASA fellowship on rural transformation at the University of Ghana (2020)
Guinea Natural resources curriculum development at Université de Guinée. (OICI) (2006)
Indonesia Multiple projects including Forest certification review for World Bank and IFC (2006)
Forest tree seed supply review for ICRAF and Winrock International (2005)
Kazakhstan Forest sector review. U.S. Agency for International Development (USAID) (1996)

Kenya	Multiple projects including sabbatical (2015), bioenergy development for ICRAF, Ecozoom Ltd. and Gatsby Foundation (2015-2017)
Lesotho	Agroforestry Peace Corps Volunteer (1986-1988)
Liberia	Forest concession assessment for Liberia Environmental Protection Agency (2019)
Malawi	Multiple projects including Fertilizer trees evaluation for soil replenishment, bioenergy and fuelwood. ICRAF (2014) and Rural Livelihoods Consortium to examine forest enterprises. USAID. (2005)
Morocco	Phosphate mine reclamation (with trees and grasses), community development and income opportunities. OCP Foundation (2015 and 2016)
Mozambique	Natural product enterprises development. Ford Foundation (2007–2009)
Nigeria	Co-led workshop on Water-Energy-Food Nexus in sub-Saharan Africa. IITA (2018)
South Africa	Multiple projects including Sabbatical (2007) with Stellenbosch University, Carnegie Diaspora Fellowship (2017 and 2018), and Agroforestry evaluation for German Development Agency (GTZ) (2003 and 2004)
Uganda	Multiple projects including courses for FAO Sawlog Production Grant Scheme (SPGS) (2013) and Borlaug Fellowship to Makerere University (2008 and 2014)
Ukraine	Western Ukraine and Crimea Forest evaluation. USDA Forest Service. (2006-2007)
Zambia	Multiple projects including USAID PEER: Adoption and Scale-Up of Charcoal Alternatives (2019) and Impact of fertilizer tree adoption - CGIAR SPIA (2017)

HONORS, AWARDS AND DISTINCTIONS

2020	W. LaMarr Kopp International Faculty Achievement Award, Penn State
2020	Merian Institute for Advanced Studies (MIASA) fellowship at the University of Ghana
2019-20	LEAD 21- Leadership for the 21-century
2019	Carnegie Diaspora Fellowship Award, South Africa
2019	World Agroforestry Congress. Scientific Panel Co-Chair, France
2017	Carnegie Diaspora Fellowship Award, South Africa
2009-13	President, Association for Temperate Agroforestry (2009-2013)
2005-13	Small Scale Forestry Journal, Board of Editors
2002-05	Society of American Foresters Forest Science and Technology, Board Chair
2001-09	IUFRO Extension and Knowledge Exchange Working Party Co-Chair
2001-02	Northeast Extension Foresters Committee Chair
1996	Gene Namkoong Fellowship Award, North Carolina State University

PEER-REVIEWED JOURNAL ARTICLES

- Naidoo, D., Nhamo, L., Mpandeli, S., Sobratee, N., Senzanje, A., Liphadzi, S., Slotow, R., **Jacobson, M.**, Modi, A. T., & Mabhaudhi, T. 2021. Operationalizing the water-energy-food nexus through the theory of change. *Renewable and Sustainable Energy Reviews*. doi.org/10.1016/j.rser.2021.111416
- Frey, G., J. Chamberlain, **M. Jacobson**. 2021. Producers, production, marketing, and sales of non-timber forest products in the United States: a review and synthesis. *Agroforestry Systems*. doi.org/10.1007/s10457-021-00637-3
- Chahal, A., J. Tripathi, D. Ciolkosz, S. Wurzbacher, and **M. Jacobson**. 2021. Perceptions of Debarking Small Diameter Stems in the Wood Products Community. *Forest Products Journal*. doi:10.13073/FPJ-D-20-00074
- Boleman, P., **Jacobson, M.** 2021. Nitrogen credit trading as an incentive for riparian buffer establishment on Pennsylvania farmland. *Agroforestry Systems*. doi.org/10.1007/s10457-021-00595-w
- Chahal, A., D. Ciolkosz, V. Puri, J. Liu, and **M. Jacobson**. 2021. Mechanical characteristics of wood-bark interface of shrub willow. *Industrial Crops and Products*. doi.org/10.1016/j.indcrop.2020.113236

- Balkas, D., B. Naberezny, **M. Jacobson**. 2021. Comparison of sUAS photogrammetry and TLS for detecting changes in soil surface elevations following deep tillage. *Journal of Surveying Engineering*. doi.org/10.1061/(ASCE)SU.1943-5428.0000346
- Jacobson, M.**, D. Ciolkosz. 2020. Plantation Forestry and Pellet Production in Kenya. *Biomass and Bioenergy*. doi.org/10.1016/j.biombioe.2020.105519
- Chahal, A., D. Ciolkosz, V. Puri, J. Liu, **M. Jacobson**. 2020. Factors affecting wood-bark adhesion for debarking of shrub willow. *Biosystems Engineering*. doi.org/10.1016/j.biosystemseng.2020.05.019
- Jacobson, M.**, Ham, C. 2020. The (un)broken promise of agroforestry: a case study of improved fallows in Zambia. *Environ Dev Sustain*. <https://doi.org/10.1007/s10668-019-00564-5>
- Jiang, W., Zipp, K., Langholtz, **M., Jacobson, M.** 2019. Modeling Spatial Dependence and Economic Hotspots in Landowners' Willingness to Supply Bioenergy Crops in the Northeastern United States. *GCB Bioenergy*. doi.org/10.1111/gcbb.12617
- Jiang, W., Carter, D., Fu, H., **Jacobson, M.**, Zipp, K., Jin, J., Yang, L. 2019. The Impact of the Biomass Crop Assistance Program on the United States Forest Products Market: An Application of the Global Forest Products Model. *Forests*. <https://doi.org/10.3390/fl0030215>
- Toth G, Nair PK, Jacobson M, Widyaningsih Y, Duffy C. 2019. Malawi's Energy Needs and Agroforestry: Impact of Woodlots on Fuelwood Sales. *Energy for Sustainable Development* doi.org/10.1016/j.esd.2019.02.006
- Jiang, W. **Jacobson, M.** Langholtz, M., 2018. A Sustainability Framework for Assessing Studies about Marginal Lands for Planting Perennial Energy Crops. *Biofuels, Bioproducts & Biorefining-Biofpr*. doi.org/10.1002/bbb.1948
- Jiang, W., Zipp, K., **Jacobson, M.**, 2018. Economic Assessments of Landowner's Willingness to Supply Dedicated Energy Crops on Marginal Lands. *Biomass and Bioenergy*. 113:22-30
- Jacobson, M.** Y. Shr, F. Delemans, C. Magaju, R. Ciannella. 2018. Using a choice experiment approach to assess production tradeoffs for developing the croton value chain in Kenya. *Forest Policy and Economics*. doi.org/https://doi.org/10.1016/j.forpol.2017.09.015
- De Stefano A., **M. Jacobson**. 2018. Soil carbon sequestration in agroforestry systems: meta-analysis. *Agroforestry Systems*. 92(2):295-299
- Frey, G.; Blatner, K., **Jacobson, M.** Downes, C., Sills, E., Mercer, D. Alexander, S. Chamberlain, J., Gold, M., Godsey, L., Emery, M., Coffin, A., Barlow, R., Lohr, L. 2018. Economics of nontimber forest products. In: Chamberlain, J.L.; Patel-Weynand, T.; Emery, M. eds. Assessment of nontimber forest products in the United States under changing conditions. Gen. Tech Rep. SRS-232. Asheville, NC: USDA Forest Service, Southern Research Station.
- Woodbury, P., A. Kemanian, **M. Jacobson**, and M. Langholtz. 2017. Improving water quality in the Chesapeake Bay using payments for ecosystem services for perennial bioenergy feedstock production. *Biomass and Bioenergy*. doi.org/https://doi.org/10.1016/j.biombioe.2017.01.024
- Toth G, Nair PK, **Jacobson M**, Y. Widyaningsih and C. Duffy. 2017. Malawi's Energy Needs and Agroforestry: Adoption Potential of Woodlots. *Human Ecology*. 45(6): 735-746
- Ciolkosz, D., **M. Jacobson**, M. Heil, W. Brandau. 2017. An assessment of farm scale biomass pelleting in the Northeast. *Renewable Energy*. doi.org/https://doi.org/10.1016/j.renene.2017.02.025
- Chamberlain, J, Frey, G., Ingram, D., **Jacobson, M**, Downes, M., 2017. Forest Ecosystem Services: Provisioning of Non-Timber Forest Products. In: Sills, E et al, eds. Trees at work: economic accounting for forest ecosystem services in the U.S. South. Gen. Tech. Rep. SRS-226. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 65-93. Chapter 5.
- Bomuhangi A, Nabanoga G, Namaalwa J, **Jacobson M** and Gombya-Ssembajjwe W 2016. Gendered decision making and adaptation to climate change in Mt. Elgon Region, Eastern Uganda, *International Research Journal of Environmental Sciences and Studies*. Vol. 1 (1), pp: 1-23
- Bomuhangi A, Nabanoga G, Namaalwa J, **Jacobson M** and Abwoli B. 2016. Local communities' perceptions of climate variability in the Mt. Elgon region, Eastern Uganda. *Cogent Environmental Science Journal*. doi.org/10.1080/23311843.2016.1168276

- Grebner, D. **M. Jacobson**, and M. Fayvan. 2014. Forest ecosystem services and the scourge of invasive species. *Journal of Forestry*. doi.org/10.5849/jof.14-040
- Jacobson, M.** and S. Kar. 2013. Extent of agroforestry extension programs in United States. *Journal of Extension*. 51 (4)
- Kar, S. and **Jacobson, M.** 2012. Market constraints in NTFP trade: Household perspectives in Bangladesh, *International Forestry Review*. 14(1): 50-61. <http://www.jstor.org/stable/24310538>
- Burkhart, E. **M. Jacobson**, and J. Finley. 2012. A case study of stakeholder perspective and experience with wild American ginseng (*Panax quinquefolius*) conservation efforts in Pennsylvania, U.S.A.: limitations to a CITES driven, top-down regulatory approach. *Biodiversity and Conservation*. 21:3657-3679 doi.org/10.1007/s10531-012-0389-9
- Kar, S., and **M. Jacobson**. 2012. Non-timber forest products (NTFP) income contribution to household economy and related socio-economic factors: Lessons from Bangladesh. *Forest Policy and Economics*. 14(1):136-142 doi.org/10.1016/j.forpol.2011.08.003
- Kelso, A. and **M. Jacobson**. 2011. Community Assessment of Agroforestry Opportunities in GaMothiba, South Africa. *Agroforestry Systems*. doi.org/10.1007/s10457-011-9384-5
- Fortney, K. Arano, **M. Jacobson**, 2011. An Evaluation of West Virginia's Managed Timberland Tax Incentive Program. *Forest Policy and Economics*. 13(1):69-78. doi.org/10.1016/j.forpol.2010.08.002
- Greene, J., S. Daniels, M. Kilgore, T. Straka, and **M. Jacobson**. 2010. Effectiveness of financial incentive programs in promoting sustainable forestry in the West. *Western Journal of Applied Forestry*. 25(4):186-193.
- Daniels, S., M. Kilgore, **M. Jacobson**, J. Greene, and T. Straka. 2010. Examining the compatibility between forestry incentive programs in the US and the Practice of Sustainable Forest Management. *Forests*. 1(1):49-64. doi.org/10.3390/f1010049
- Jacobson, M.**, J. Greene, T. Straka, S. Daniels, and M. Kilgore. 2009. Influence and effectiveness of financial incentive programs in promoting sustainable forestry in the South. *Southern Journal of Applied Forestry*. 33(1):35-41.
- Cooper, E., and **M. Jacobson**. 2009. Establishing conservation easements on forested riparian buffers: Opportunities for long-term streamside protection. *Small-scale Forestry*. 8(3):263-268.
- Jacobson, M.**, T. Straka, J. Greene, M. Kilgore, and S. Daniels. 2009. Financial incentive programs' influence in promoting sustainable forestry in the Northern region. *Northern Journal of Applied Forestry*. 26(2):61-67.
- Kilgore, M., S. Daniels, **M. Jacobson**, J. Greene, and T. Straka. 2009. Financial incentive programs for non-industrial private forest owners web site. *Journal of Extension*. [Online] 47(4).
- Burkhart, E., and **M. Jacobson**. 2009. Transitioning from wild collection to forest cultivation of indigenous medicinal forest plants in eastern North America is constrained by lack of profitability. *Agroforestry Systems*. 76:437-453. doi.org/10.1007/s10457-008-9173-y
- Jacobson, M.**, C. Ham, and P. Ackerman. 2008. Forest management educational needs in South African forestry companies. *Southern Forests: A Journal of Forest Science*. 7(3):269-274.
- Kilgore, M., J. Greene, **M. Jacobson**, T. Straka, and S. Daniels. 2007. The influence of financial incentive programs in promoting sustainable forestry on the national family forests. *Journal of Forestry*. 105(4): 184-191.
- Straka T, M. Kilgore, **M. Jacobson**, J. Greene, and S. Daniels. 2007. Influence of incentive programs in sustainable wildlife values. *Human Dimensions of Wildlife*. doi.org/10.1080/10871200701323173
- Strong, N., and **M. Jacobson**. 2006. A case for consumer-driven extension programming: Agroforestry adoption potential in Pennsylvania. *Agroforestry Systems*. doi.org/10.1007/s10457-006-0002-x
- High, J., and **M. Jacobson**. 2005. Internet-based natural resource education. *Journal of Extension*. 43(3):1-23.
- Linehan, P., and **M. Jacobson**. 2005. Forecasting hardwood stumpage price trends in Pennsylvania. *Forest Products Journal*. 55(12):47-52.

- Strong, N., and **M. Jacobson**. 2005. Utilizing social marketing research methods to assess agroforestry adoption potential in diverse landscapes: A market segmentation case study in Pennsylvania. *Small-scale Forest Economics, Management and Policy*. 4(2):215-228.
- Linehan, P., **M. Jacobson**, and M. McDill. 2003. Hardwood stumpage price trends and regional market differences in Pennsylvania. *Northern Journal of Applied Forestry*. 20:124-130.
- Jacobson, M.** 2003. Wood vs. water: Timber plantations in semiarid South Africa. *Journal of Forestry*. 101:31-35.
- Jacobson, M., and **M. McDill**. 2003. A historical review of forest property taxes in Pennsylvania: Implications for special forestland tax programs. *Northern Journal of Applied Forestry*. 20:53-60.
- Jacobson, M.** 2002. Factors affecting private forest landowner interest in ecosystem management: Linking spatial and survey data. *Environmental Management*. <https://doi.org/10.1007/s00267-002-2605-y>
- Jacobson, M.** 2002. Ecosystem management in the southeast United States: Interest of forest-landowners in joint management across ownerships. *Small-scale Forest Economics, Management and Policy*. 1:57-70.
- Boltz, F., D. Carter, and **M. Jacobson**. 2002. Shadow pricing diversity in US national forests. *Journal of Forest Economics*. 8:185-198.
- Finley, J., and **M. Jacobson**. 2001. Pennsylvania's extension program: A community-based cooperative effort. *Journal of Forestry*. 99:9-11.
- Jones, S., G. Glover, J. Finley, **M. Jacobson**, and A. Reed. 2001. Empowering private forest landowners. *Journal of Forestry*. 99:4-7.
- Jacobson, M.**, R. Abt, and D. Carter. 2000. Attitudes toward joint forest planning among private landowners. *Journal of Sustainable Forestry*. 11:95-112.

PUBLICATIONS: BOOKS AND BOOK CHAPTERS

- Jacobson M.** And G. Pekarcik. 2021. Water-energy-food nexus approaches and initiatives in Africa. Floor Brouwer (Ed.), Handbook on the water-energy-food Nexus, Edward Elgar Publishing. (In press)
- Jacobson, M.** 2021 Upscaling WEF nexus capacity development for transformational change in Africa "Water-Energy-Food nexus narratives and resource securities: a global South perspective." Elsevier. 2021. With Tendai Chibarabada, WaterNet southern Africa, Zimbabwe, and Luxon Nhamo, Water Research Commission, South Africa. (In press)
- McCord, G., D. Kanter, J. Sklarew, G. Wu and **M. Jacobson**. 2020. Accelerating Sustainable Land Use Practices in the U.S. SDSN-USA Deep Decarbonization Action Plan. Zero Carbon Action Plan. New York: Sustainable Development Solutions Network (SDSN). <https://www.unsdsn.org/Zero-Carbon-Action-Plan>.
- Jacobson M.** and D. Ciolkosz (eds). 2013. *Wood-Based Energy in the Northern Forests*. New York: Springer. 245 pp.
- Langholtz, M. and **M. Jacobson**. 2013. The economic availability of woody biomass feedstocks in the Northeast. In Jacobson M and D. Ciolkosz (eds). *Wood-Based Energy in the Northern Forests*. New York: Springer
- Ham, C., **Jacobson, M.** 2012. Financial decision making in forestry projects. In: Van Bredenkamp, B., Upfold, S.J. (Eds.), South African Forestry Handbook (5th ed.). *Southern African Institute for Forestry*, pp. 491-500.
- Ham, C., N. Mander, **M. Jacobson**, M. Falcao, A. Manjoro, T. Dube, M. Howard, and M. Mander. 2009. Increasing the rural livelihood benefits from natural plant product ventures in Southern Africa: Case study analysis and business model. Ford Foundation.
- McKinstry, R., J. McElfish, and **M. Jacobson**. 2006. Coordination and planning tools that can be applied to biodiversity conservation. P. 195-218 in *the biodiversity handbook*. Environmental Law Institute, Washington, DC.

- McKinstry, R., J. McElfish, **M. Jacobson**, and D. Hay. 2006. Legal tools that provide direct protection for elements of biodiversity. P. 219-247 in *the biodiversity handbook*. Environmental Law Institute, Washington, DC.
- McKinstry, R., J. McElfish, and **M. Jacobson**. 2006. Biodiversity protection through acquisition of land or development rights and management to conserve biodiversity: A case study using Pennsylvania. P. 299-351 in *the biodiversity handbook*. Environmental Law Institute, Washington, DC.
- McKinstry, R., J. McElfish, and **M. Jacobson**. 2006. Designing and financing transactions to conserve biodiversity and lands important to biodiversity. P. 353-272 in *the biodiversity handbook*. Environmental Law Institute, Washington, DC.
- Sullivan, K., P. Smallidge, J. Finley, and **M. Jacobson**. 2004. *Forest resource management: A landowner's guide to getting started*. Natural Resource, Agriculture and Engineering Service (NRAES-170), Ithaca, NY.
- Sharma, N., R. Rowe, K. Openshaw, and **M. Jacobson**. 1992. World forests in perspective. P. 17-32 in Sharma, N. (ed.) *Managing the world's forests*. World Bank, Washington, DC.
- Jacobson, M.** 1992. World forestry data—statistical appendix. P. 535-597 in Sharma, N. (ed.) *Managing the world's forests*. World Bank, Washington, DC.
- Sharma, N., R. Rowe, K. Openshaw, and **M. Jacobson** (Lead authors). 1991. The forest sector: A World Bank policy paper. World Bank, Washington, DC.

EXTERNAL GRANTS

- Food Resilience in the Face of Catastrophic Global Events. Open Philanthropy Foundation. \$3,064,660, 2022-24 (Co-PI)
- Theory of Change Observatory on Disaster Resilience. Belmont Forum (NSF funded). \$300,000, 2020-23 (Lead PI)
- From theory to practice: developing a case study and guidelines for water–energy–food (WEF) nexus implementation in southern Africa. Water Research Commission - South Africa, Foreign Governments, and International Agencies. \$140,000.00. 2020-23 (Co-PI with colleagues from University of Kwazulu-Natal)
- Adding value to low-use wood in PA Forests. McIntire-Stennis USDA Forest Service \$14,245. 2020 (-PI)
- Investing in forest and communities: Mapping and managing sustainable supply chain for forest medicinal plants. American Herbal Products Association, \$64,326.00. 2019-22 (Co-PI)
- Adoption and Scale-Up of Charcoal Alternatives in Zambia. USAID Peer. \$199,914 (Collaborator with Stockholm Environment Institute)
- Phytochemistry and economic importance of ramps as a specialty crop. Department of Agriculture, Commonwealth of Pennsylvania. \$40,000. 2019-20 (Co-PI)
- Case Study to Assess the Costs of the Appalachian Regional Reforestation Initiative's (ARRI) Forest Reclamation Approach. UDSDA NIFA. \$87,256. 2018-19 (Lead-PI)
- Analysis of Eucalyptus production as feedstock for pellet production in Kenya. Gatsby Foundation. \$25,000. 2015 (Lead-PI)
- A review of Croton Megalocarpus production with a focus on Eco Fuels Kenya (EFK) operations. World Agroforestry Centre 2015 (Lead-Pi)
- Predicting the Cumulative and Ecological Impacts of Pests and Pathogens in the Forest of Eastern United States. USDA APHIS \$160,341. 2014-15 (Lead-PI)
- NEWBio: Northeast Woody/Warm-season Biomass Consortium. USDA AFRI. \$10 mil. 2012-17 (Co-PI)
- Predicting the Cumulative and Ecological Impacts of Pests and Pathogens in the Forest of Eastern United States. USDA APHIS \$522,298. 2012-15 (Lead-PI)
- Forest stewardship—continuing awareness and knowledge program support (Year 23). USDA Forest Service. \$150,000. 2013-14 (Co-PI)
- Potential and economic impacts of a regional outbreak of the Asian Longhorned Beetle. USDA APHIS \$136,156. 2012-14 (Lead-PI)

- Forest stewardship—continuing awareness and knowledge program support (Year 22). USDA Forest Service. \$150,000. 2012-13 (Co-PI)
- Genetic Improvement for yield and Establishment of Short Rotation Woody Biomass Crops on Marginal Land. USDA Northeast Sun Grant. \$165,000. 2011-13 (Co-PI)
- Forest stewardship—continuing awareness and knowledge program support (Year 21). USDA Forest Service. \$150,000. 2011-12 (Co-PI)
- Determining costs, product recovery factors, and environmental impacts of biomass harvest treatments in Central Appalachian Forests. NE SunGrant Initiative. \$95,925. 2009-11 (Co-PI)
- Forest and Farms: Working landscapes for water and ecology. USDA Forest Service. Chesapeake Bay Program. \$30,000. 2009-11 (Co-PI)
- Across the Supply Chain: Developing Education and Outreach in Forest Bioenergy. NE Sun Grant Initiative. \$30,000. 2010-11 (Co-PI)
- Economic characteristics of forest sector fiscal policy reform in post-conflict countries. PROFOR World Bank, Washington, DC. \$10,000. 2010 (Lead PI)
- Factors and Trends in Pennsylvania’s Logging Industry. Hardwoods Development Council, PA. 2010. \$6,000 (Lead-PI)
- Fiscal and community impacts from Marcellus shale development in Susquehanna and Washington counties. Penn State Social Science Institute. \$25,000. 2009 (Co-PI)
- Forest stewardship—continuing awareness and knowledge program support (year 19). USDA Forest Service. \$151,120. 2010 (Co-PI)
- Examination of Current and Future Costs and Revenues from Forest Products, Oil, Gas and Mineral Extraction on Pennsylvania Game Commission Lands (PGC). Pennsylvania Legislative Budget and Finance Committee. \$95,669. 2010 (Co-PI)
- American chestnut restoration on surface mined sites in the Appalachian Region: Pennsylvania study. American Chestnut Foundation. \$25,000. 2010 (Lead PI)
- Increasing the rural livelihood benefits from natural plant product ventures in Southern Africa: Case study analysis and business model. Ford Foundation. \$180,000. 2007-09 (Co-PI)
- Incentives to promote forest certification in Indonesia. World Bank IFC, Washington, DC. \$10,000. 2007 (PI)
- Forest stewardship—continuing awareness and knowledge program support (year 18). USDA Forest Service. \$163,400. 2009 (Co-PI)
- Determining costs, product recovery factors and environmental impacts for biomass harvest treatments on northeastern forests. NE Sun grant. \$99,925. 2009 (Co-PI)
- Borlaug African Women in Science Program. \$5,000. USDA Foreign Agricultural Service.
- Forest stewardship—continuing awareness and knowledge program support (year 17). USDA Forest Service. \$175,000. 2008 (Co-PI)
- Forest stewardship—continuing awareness and knowledge program support (year 16). USDA Forest Service. \$189,000. 2007 (Co-PI)
- Existing and potential incentives for practicing sustainable forestry on non-industrial private forest lands. National Commission on Science for Sustainable Forestry. \$50,000. 2004-07 (Co-PI)
- Developing field days and workshops in agroforestry. 2006–2007. Rural Action NE SARE. \$5,000.
- Inventory and analysis of municipal forestry ordinances in Pennsylvania. Harrisburg PA Hardwoods Development Council. \$11,000. 2006 (PI)
- Forest stewardship—continuing awareness and knowledge program support (year 15). USDA Forest Service. \$173,946. 2006 (Co-PI)
- The how, when and why of forest farming: Building and using new Internet-based infrastructure to advance learning and practice in the Northeast. USDA Sustainable Agriculture Education and Research (SARE). \$111,613. 2005-07 (Co-PI)
- Pennsylvania ginseng conservation and propagation program. USDA Sustainable Agriculture Education and Research (SARE). \$6,000. 2005 (Co-PI)

- Forest stewardship—continuing awareness and knowledge program support (year 14). USDA Forest Service. \$139,000. 2005 (Co-PI)
- Rural livelihoods consortium for applied research and technology transfer. Sub-contract for consortium of Oregon State University, Washington State University, Michigan State University, Tennessee State University, Pennsylvania State University, University of Fort Hare, University of Pretoria, University of KwaZulu Natal, Bunda College of Agriculture, University of Zambia. The Association Office for University Cooperation in Development. Special Request for Applications U.S.–Southern Africa Partnerships for Agriculture (USSAPA) USAID. \$90,704. 2004 (Co-PI)
- Sustaining rural livelihoods and enhancing land reform in South Africa. College Seed Grant Award, College of Agricultural Sciences. \$8,000. 2004-05 (PI)
- Pennsylvania ginseng conservation and propagation program. USDA Sustainable Agriculture Education and Research (SARE). \$6,000 .2004 (Co-PI)
- Development of a habitat conservation plan for the bog turtle (*Clemmys muhlenbergii*) in Pennsylvania and Delaware, U.S. Fish and Wildlife Service, Division of Endangered Species. \$595,482. 2004 (Co-PI)
- Taking stock of American ginseng in Pennsylvania. Pennsylvania DCNR–Wild Resource Conservation Fund. \$33,000. 2003 (Co-PI)
- Existing and potential incentives for practicing sustainable forestry on non-industrial private forest lands. National Commission on Science for Sustainable Forestry. \$50,000. 2003 (Co-PI)
- Forest stewardship—continuing awareness and knowledge program support (Year 13). USDA Forest Service. \$181,900. 2003 (Co-PI)
- History of Pennsylvania forests (video). Society of American Foresters, Pennsylvania Division. \$7,000. 2003 (PI)
- Northeast sustainable forestry module focus funding. USDA Forest Service. \$49,872. 2002 (Co-PI)
- Making estate planning more accessible to forest landowners. National Web-Based Learning Center. University of Tennessee. 11,000. 2002 (Co-PI)
- Penn’s Woods: An auto tour of Pennsylvania forest demonstration sites. USDA Forest Service, \$15,000. 2002 (Co-PI)
- Assessing impacts of public ownership of land upon local governments and communities in Pennsylvania. Pennsylvania Department of Conservation and Natural Resources, Harrisburg, PA. \$34,836. 2002-03 (Lead PI)
- Compilation of the status of biodiversity protection efforts. Pennsylvania Biodiversity Partnership, Pittsburgh, PA. \$8,000. 2002 (Co-PI)
- Northeast Forest*A*Syst. USDA CREEES, Washington, DC. \$23,000. 2001-02 (Co-PI)
- Analysis of forest property taxes on long-term forest management. USDA Forest Service Southern Research Station, New Orleans, LA. \$38,031. 2001-02 (Co-PI)
- Agroforestry and forest management: Sustaining small farms and creating learning communities in the Northeast. USDA Sustainable Agriculture Education and Research (SARE). \$128,742. 2001-03 (Co-PI)
- Linking goat producers and woodlot owners: A team approach to woodland brush control. USDA SARE. \$118,331. 2001-03 (Co-PI)
- Emphasizing forest stewardship: A direct mail campaign. Pennsylvania Department of Conservation and Natural Resources, Harrisburg, PA. \$49,976. 2001-02 (Co-PI)
- Survey the lessons learned about managing forests for biodiversity and sustainability based on practical experiences. National Commission on Science for Sustainable Forestry. \$249,987. 2001-02 (Co-PI)
- Building sustainable communities in forested regions. USDA Forest Service, Wood Education and Resource Center. \$84,356. 2000-02 (Co-PI)
- Viewing sustainable forestry through virtual tours of demonstration forests. Society of American Foresters. \$50,000. 2000-02 (Co-PI)

Estate planning opportunities and strategies for private forestland owners in the Northeast. USDA Forest Service, Wood Education and Resource Center. \$22,009. 2001 (Co-PI)

Impact of forest property taxes in Pennsylvania. USDA Forest Service Northeastern Area State and Private Forestry, Newtown Square, PA. \$30,000. 2000 (Co-PI)

Assessment of Pennsylvania's forest property tax. Pennsylvania Hardwood Development Council, Harrisburg, PA. \$33,915. 1999-01 (Co-PI)

Forest stewardship—continuing awareness and knowledge program support (year 10). USDA Forest Service. \$122,654. 2000. (Co-PI)

RECENT CONFERENCE PRESENTATIONS (INVITED)

Schreyers Honors College World View Seminar Series. November 17, 2020 and March 25, 2021. Forests, Foraging and Food: linking forests to sustainable and healthy food systems.

SDSN - America's Zero Carbon Action Plan. November 24, 2020. Accelerating Sustainable Land Use Policies in the United States.

Mid-Atlantic Biosolids Association Summer Symposium. July 2, 2020. Sustainable Agroforestry: The Nexus of Food, Water and Energy in Forestry Management.

Maria Sibylla Merian Institute for Advanced Studies in Africa (MIASA). Ghana. May 26-27, 2020. Sustainable Rural Transformation in Africa. Farmer Behavior and Rural Transformation in a Water-Energy-Food (WEF) Nexus Context.

Regional Workshop on Building Synergies in WEF Nexus Research. South Africa. March 5-6, 2020. Keynote: WEF Nexus Africa Initiative

RARSUS Water and Energy Online Summer School, Mali Oct 14, 2019 “Water energy food nexus?”

University of Gondar. Ethiopia. August 12, 2019. “Water energy food nexus for Africa Initiative.”

World Agroforestry Congress. May 2022, 2019. Montpellier, France, the (un)broken promise of agroforestry: case study of improved fallows in Zambia.

Centre for Complex Systems in Transition. Stellenbosch University. South Africa. March 18, 2019. “A Systems Approach for Meeting Local and Global Water-Energy-Food Nexus Challenges.”

Southern African Institute of Forestry. Stellenbosch, South Africa. March 14, 2019. “Linking Forest Systems for meeting Water-Energy-Food Nexus Challenges.”

Dialogue on the status of water-energy-food nexus in South Africa. Water Resources Commission. Pretoria South Africa. February 22, 2019. “Building the Penn State Africa water energy food nexus initiative.”

Workshop on Water-Energy-Food Nexus in sub-Saharan Africa. International Institute for Tropical Agriculture, Ibadan, Nigeria. June 26-27, 2018. “Overview of water energy food nexus” International Institute for Tropical Agriculture, Ibadan, Nigeria.”

European Agroforestry Conference (EURAF), Montpellier France May 22-25, 2016. “State of Agroforestry in United States.”

Poplar/Willow Forum. Portland OR, April 11-13, 2016. “Building Bioenergy Opportunities Through Payments for Ecosystem Services in the Chesapeake Bay Region.”

International Society of Forest Resource Economics. Raleigh NC. March 4-6, 2016. “Economics of Biomass Production on Marginal Lands.”

World of Wood International Conference, State College PA July 19-22, 2015. “Other Biomass Fuel Sources.”

IUFRO World Forestry Congress, Salt Lake City. October 5-10, 2014. “A Sustainable Framework for Assessing Marginal Lands Used for Planting Bioenergy Crops.”

Non-Timber Forest Products (NTFPs) National Assessment Workshop. Raleigh NC Sept 10-11, 2014. “NTFP contribution to Farm/household Finance.”

Short Rotation Woody Crops Working Group. Seattle WA. July 17-19, 2014. “Economics of growing energy crops on margin al lands.”

LACAf/GSB Workshop on Biofuels for Latin America and Africa. Kruger National Park, South Africa April 1-4, 2014. “Socioeconomic and Environmental issues facing biofuel development
Society of American Foresters 2006 National Convention. Charleston, SC. Oct. 23–26. “Economics of planting energy crops on marginal lands.”
9th International Conference on Biomass for Energy. Kyiv, Ukraine, Sept. 24-25, 2013. “Producing energy crops on marginal lands: The NEWBio project.”

TEACHING AT PENN STATE

Ecosystem Economics and Management (online Master of Professional Studies) 2021
Global Agricultural Systems 2018 -2021
Forest Conservation and Economics 2008- 2021
Global Forest Conservation (including embedded course trips to South Africa, Mozambique, and Morocco) 2003-2013
Agroforestry: Science and Practice 2002-2020

LANGUAGE SKILLS

English - Excellent Language Proficiency
French - Medium Language Proficiency (working toward fluency)
Afrikaans - Basic Language Proficiency
Sesotho - Basic Language Proficiency