

AAP African Futures Program Faculty Mentor Proposal
Resilient Urban Food Systems in the Growing South and the Shrinking North (Agri-Food Systems)
Laura Schmitt Olabisi, Department of Community Sustainability

Urban food systems have become a major topic of interest in the rapidly urbanizing nations of Africa, and in the post-industrial cities of the United States. As an increasing portion of the global population resides in cities, the question of how to design urban food systems that are ecologically sustainable, equitable, accessible, resilient to climate impacts, and which support human health, grows ever more pressing. Proposed solutions include integrating agriculture into the urban landscape through community gardens, urban livestock rearing, or indoor agriculture; or conceptualizing urban centers as an integral part of a 'foodshed' which includes urban consumers, productive agricultural lands, and the ecosystems which support them^{1,2}. Yet the scientific research behind these potential solutions to the problem of urban food sustainability remains surprisingly sparse when set against the pressing need for policy implementation. Moreover, cities are inherently dynamic, complex, and uncertain environments, which complicates the process of planning around urban food systems. A research approach to urban food systems should therefore emphasize resilience to larger-scale drivers (demographic change, climate change, global economic shifts, etc.) and employ integrative systems methods³.

Should I be chosen as a mentor, the early career researcher who works with me would answer the following research questions: (1) What are the major drivers of food system change and resilience in urban food systems, and do these differ between the rapidly growing and urbanizing cities in Africa, and the shrinking cities of the American Midwest? (2) What are principles and strategies for improving resilience, equitability, accessibility, sustainability, and human health in urban food systems, given these larger-scale drivers? Comparing rapidly growing cities in the Global South to shrinking cities in the Global North will allow us to examine the broadest possible range of urban contexts, to make our findings widely applicable and generalizable.

To answer these questions, the researcher would work with my graduate students to perform a background literature review on urban food systems, and to conduct a systems analysis of the urban food system in Detroit, Michigan and in an African city of their choosing using systems modeling methods such as causal loop diagramming, fuzzy cognitive mapping, and system dynamics modeling (the mentorship year would include training in these methods). My research group is currently using these methods to analyze the food system in Flint, Michigan, through a Foundation for Food and Agriculture Research grant. My ongoing collaborations in the Detroit and Flint food systems will provide the researcher access to data and stakeholders in Michigan, and we should be able to leverage their own connections to the food system in their city/region of origin. I anticipate at least 3 peer reviewed journal articles coming out of this work, and a proposal submitted to the National Science Foundation Convergence program, or the National Institutes of Health Simulation Modeling and Systems Science program. Moreover, this mentorship year could form the basis for an ongoing research consortium around urban food systems that spans the Global South and North, which would be novel and unique.

- 1 Peters, C. J., Bills, N. L., Wilkins, J. L. & Fick, G. W. Foodshed analysis and its relevance to sustainability. *Renewable Agriculture and Food Systems* **24**, 1-7 (2009).
- 2 Bellows, A. C. & Hamm, M. W. Local autonomy and sustainable development: Testing import substitution in more localized food systems. *Agriculture and Human Values* **18**, 271-284 (2001).
- 3 Ericksen, P. J. Conceptualizing food systems for global environmental change research. *Global Environmental Change* **18**, 234-245 (2008).

Curriculum Vitae

Laura Schmitt Olabisi, Ph.D.

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Current Position

Associate Professor
Michigan State University
Department of Community Sustainability
Environmental Science & Policy Program
151 Natural Resources
East Lansing, MI 48824-1222

Professional Preparation

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| Visiting scholar | RAND Corporation, 2016-17 |
| Assistant Professor | Michigan State University Department of Community Sustainability, 2009-2016 |
| Postdoctoral appointment | University of Minnesota Ecosystem Science and Sustainability Initiative, 2007-2008 |
| Ph.D. Systems Ecology | State University of New York College of Environmental Science and Forestry, 2006 |
| Sc.B. Environmental Science | Brown University, 1999 |

Research Agenda

I am a participatory modeler exploring the sustainability of complex systems with human and environmental components. I work directly with stakeholders, using participatory model-building techniques to foster adaptive learning about the dynamics of coupled human-natural systems, and to integrate stakeholder knowledge with academic knowledge. The models I build incorporate feedback and non-linear dynamics, and typically include biophysical, social, and human behavioral components. My work therefore addresses the complexity, interdisciplinarity, and engagement aspects of sustainability research. I work predominantly with agricultural and energy systems, but the modeling tools I use may be applied in a wide range of contexts. My past and present research has addressed soil erosion, population growth, greenhouse gas emissions, water sustainability, energy use, deforestation, farmer technology adoption, climate change, migration, and human health.

Grant and Research Activity: External

- Gray, Steven A. (P.I.), **Laura Schmitt Olabisi**, Jennifer Hodbod, Maria Claudia Lopez, Artina Sadler, Robert Brown, and Richard Pirog. “Finding the Proper Levers: Identifying leverage points for transformation in urban food systems thru participatory modeling.” Foundation for Food and Agriculture Research. 2018-2022 (\$999,089)
- Sidibé, A. (P.I.) “Evaluation study of the use of digital technologies for agriculture and food security in Mali.” NSF Partnerships for Enhanced Engagement in Research. 2018 (**Laura Schmitt Olabisi** NSF-funded collaborator). (\$80,000).
- Liverpool-Tasie, Saweda (P.I.) “Enhancing Knowledge and Capacity to Strengthen Agricultural and Food Security Policy Processes in Nigeria.” USAID/Feed the Future through MSU Food Security Group. 2015-2018 (**Laura Schmitt Olabisi** lead on climate change and food security portion; \$1.2 million).

- **Schmitt Olabisi, Laura (P.I.)**. “Capacitating Science-Policy Exchange Platforms to Mainstream Climate Change into National Agricultural and Food Security Policy Plans.” IDRC, Canada (under Adaptation at Scale in Semi-Arid Regions (ASSAR)). 2014-2018 (\$398,206).
- Ligmann-Zielinska, Arika (P.I.), **Schmitt Olabisi, Laura**, Marquart-Pyatt, Sandra, Rivers, Louie, and Du, Eric Jing (co-P.I.’s). “IBSS: Participatory Ensemble Modeling to Study Multiscale Social and Behavioral Dynamics of Food Security in Dryland West Africa.” NSF-Interdisciplinary Behavioral and Social Science Research. 8/1/2014-7/31/2019 (\$723,170).
- Richardson, Robert and **Schmitt Olabisi, Laura**. “Sustainable Intensification of Landscapes and Livelihoods (SILL), Zambia”. USAID/Africa RISING. 4/1/2014 - 8/31/2015 (\$298,746).
- Raven, Matt, Biernbaum, John, **Schmitt Olabisi, Laura**, Rowntree, Jason, and Cassida, Kimberly, “Establishment of an Entrepreneurial Local Nutrient Dense Food Production Incubator in Michigan’s Upper Peninsula”. USDA-National Institute of Food and Agriculture. 1/1/2014-12/31/2018 (\$499,961).
- Snapp, Sieglinde, Messina, Joseph, Richardson, Robert, Basso, Bruno, and **Schmitt Olabisi, Laura**, “Perennial grain crops for African smallholder farming systems”. Bill and Melinda Gates Foundation. 10/1/2013 - 9/30/2015 (\$1.5 million).

Grant and Research Activity: Internal

- **Schmitt Olabisi, L.**, Osuntade, B., Liverpool-Tasie, L.S.O., and A. O. Olajide. “Climate Change Mitigation and Adaptation in the Nigerian Poultry Sector.” MSU Alliance for African Partnership grant, 2017-18 (\$99,598)
- Meisel, Jessica, Li, Hui, Rothstein, David, Saffron, Chris, **Schmitt Olabisi, Laura**, and Zhang, Wei. “Black Carbon in the Environment.” MSU ESPP Interdisciplinary Team-Building Initiative. 2014-2015 (\$10,000).
- **Schmitt Olabisi, Laura**, Wallace, Renee, and Underwood, Kathryn. “Assessing the Environmental and Public Health Impacts of Urban Livestock Agriculture in Detroit.” Michigan Applied Public Policy Research Grant. 11/2014-10/2015 (\$14,700).
- **Schmitt Olabisi, L.**, Levine, R., Blythe, S., Cameron, L., Beaulac, M. and Wahl, R, “A Modeling Framework for Informing Decision Maker Response to Extreme Heat Events in Michigan Under Climate Change”. Great Lakes Sciences & Assessments Center Climate Assessments Grant. 2011-2012 (\$25,000).
- Suh, S., Chiu, Y-W, and **Schmitt Olabisi, L.** “The Future of Energy and Minnesota’s Water Resources” Funded by Legislative-Citizen Commission on Minnesota Resources. 2010.
- Michigan State University Special Foreign Travel Fund award, 2009 (\$835)
- **Schmitt Olabisi, L.** “A Learning Community for Sustainability in the Philippine Uplands.” Michigan State University Center for Advanced Study of International Development Grant, 2009 (\$4,240)
- U. Minnesota CFANS Diversity and Inclusion Professional Development Grant, 2008 (\$1000).
- U. Minnesota Office of International Programs Travel Grant, 2008 (\$1500).
- **Schmitt Olabisi, L. K.**, Kapuscinski, A. R., Reich, P. B., Johnson, K., "Sustainability Science Forum", University of Minnesota Institute on the Environment, September 1, 2008- September 1, 2009 (\$20,210)
- Johnson, L., Kapuscinski, A., Karkkainen, B., Mulla, D., Neckar, L., Polasky, S., Wilson, E., Abrams, J., Draeger, K., Jordan, N., Manson, S., Pitt, D., Reich, P., Wyse, D., Johnson, K., **Schmitt Olabisi, L. K.**, "Integrating Sustainability Science and Design in Participatory Land Use Planning and Implementation", University of Minnesota Institute on the Environment. March 1, 2008; End: August 1, 2009 (\$97,500)

Journal Articles (* = peer-reviewed; † = graduate student coauthor; ¹ = undergraduate coauthor)

*Sterling, E.J., Zellner, M., Jenni, K.E., Leong, K., Glynn, P.D., BenDor, T.K., Bommel, P., Hubacek, K., Jetter, A.J., Jordan, R., **Schmitt Olabisi, L.**, Paolisso, M., and S. A. Gray. (in press). Try, try again: Lessons learned from success and failure in participatory modeling. *Elementa*

*Grabowski, P., **Schmitt Olabisi, L.**, †Adebiyi, J.A., Waldman, K., Richardson, R. B. R., Rusinamhodzi, L., and S. Snapp. 2019. Assessing adoption potential in a risky environment: The case of perennial pigeonpea. *Agricultural Systems* 171: 89-99.

*†Assan, E., Suvedi, M., **Schmitt Olabisi, L.**, and A. Allen. 2018. Coping with and Adapting to Climate Change: A Gender Perspective from Smallholder Farming in Ghana. *Environments* 5(8).

*Jordan, R., Gray, S. A., Zellner, M., Glynn, P.D., Voinov, A., Hedelin, B., Sterling, E.J., Leong, K., **Schmitt Olabisi, L.**, Hubacek, K., Bommel, P., BenDor, T.K., Jetter, A. J., Laursen, B., Singer, A., Giabbanelli, P. J., Kolagani, N., Basco Carrera, L., Jenni, K., and C. Prell. 2018. Twelve questions for the participatory modeling community. *Earth's Future* 6(8): 1046-1057.

* Voinov, A., Gray, S. A., Jordan, R., Paolisso, M., Le Page, C., Basco-Carrera, L., Sterling, E., Hubacek, K., Bommel, P., Kolagani, N., **Schmitt Olabisi, L.**, Glynn, P., and Zellner, M. 2018. Tools and methods in participatory modeling: selecting the right tool for the job. *Environmental Modeling and Software* 109: 232-255.

*Sidibé, A., Totin, E., Thompson-Hall, M., Traoré, P.C.S., and **Schmitt Olabisi, L.** 2018. Multi-scale governance in agriculture systems: Interplay between national and local institutions around food security in Mali. *NJAS - Wageningen Journal of Life Sciences* 84:94-102.
<https://doi.org/10.1016/j.njas.2017.09.001>

*Nazir, N., **Schmitt Olabisi, L.**, and S. Ahmad. 2018. Forest Wood Consumption and Wood Shortage in Pakistan: Estimation and Projection through System Dynamics. *The Pakistan Development Review* 57(1): 73-98.

*Rivers III, L. R., †Sanga, U., Sidibé, A., Wood, A., †Paudel, R., Marquart-Pyatt, S.T., Ligmann-Zielinska, A., **Schmitt Olabisi, L.**, Du, E.J., and Liverpool-Tasie, L.S.O. 2017. Mental Models of Food Security in Rural Mali. *Environment Systems & Decisions* 2017: 1-19.

***Schmitt Olabisi, L.**, Liverpool-Tasie, L.S.O., Rivers III, L., Ligmann-Zielinska, A., Du, J., Denny, R., Marquart-Pyatt, S., and Sidibé, A. 2017. Using Participatory Modeling Processes to Identify Sources of Climate Risk in West Africa. *Environment, Systems & Decisions* 2017: 1-10.

*Denny, R.C.H., Marquart-Pyatt, S.T., Ligmann-Zielinska, A., **Schmitt Olabisi, L.**, Rivers III, L., Du, J., Liverpool-Tasie, L.S.O. 2017. Food security in Africa: a cross-scale, empirical investigation using structural equation modeling. *Environment, Systems & Decisions* 2017: 1-17.

*Whitely, C. T., Rivers, L., Bryant, S., Ligmann-Zielinska, A., **Schmitt Olabisi, L.**, and Marquart-Pyatt, S. 2017. Climate-induced Migration: Using Mental Models to Explore Aggregate and Individual Decisions. *Journal of Risk Research* 2017:1-17.

*Gray, S. A., Voinov, A., Paolisso, M., Jordan, R., BenDor, T., Bommel, P., Glynn, P., Hedelin, B., Hubacek, K., Introne, J., Kolagani, N., Laurson, B., Prell, C., **Schmitt Olabisi, L.**, Singer, A., Sterling,

E., and Zellner, M. 2017. Purpose, Processes, Partnerships, and Products: 4Ps to advance Participatory Socio-Environmental Modeling. *Ecological Applications* 2017: DOI: 10.1002/eap.1627.

*Gray, S., Sadler, A., **Schmitt Olabisi, L.**, †Metta, K., Wallace, R., Lopez, M.C., Introne, J., ¹Gorman, M., and Henderson, J. 2017. Translating community narratives into semi-quantitative models to understand the dynamics of socio-environmental crises. *Environmental Modeling and Software* 97 (2017): 46-55.

* Gray, S. A., Singer, A., **Schmitt Olabisi, L.**, Introne, J., and ¹Henderson, J. 2017. Collaborative Modeling approaches to understand community perceptions about the causes, consequences and solutions to the Flint Water Crisis. *Environmental Justice* 10(5): DOI: 10.1089/env.2017.00161

Nazir, N., and **Schmitt Olabisi, L.** 2017. Illegal Logging and Wood Consumption: Estimation and Projection of Illegal Wood Harvesting in Pakistan through System Dynamics. *Pakistan Journal of Commerce & Social Sciences* 11(2): 406-427.

*†McKay, P., Vogt, C., and **Schmitt Olabisi, L.** 2017. Development and Testing of a Diagnostic Capacity Tool for Improving Socio-Ecological System Governance. *Environment Systems & Decisions* 37(2): 156-183.

***Schmitt Olabisi, L.**, †Adebiyi, J.A., Traoré, P. C. S., and Kakwera, M. 2016. Does Participatory Scenario Visioning Promote Learning? Evidence from Three African Countries. *Elementa* published online 21 July 2016. DOI 10.12952/journal.elementa.000113.

***Schmitt Olabisi, L.**, Wang, R. Q., and A. Ligmann-Zielinska. 2015. Why don't more farmers go organic? Using an agent-based model to represent complex decision-making. *Land* published online 22 October 2015.

*†Adebiyi, J. A., **Schmitt Olabisi, L.**, and Snapp, S. 2015. Understanding Perennial Wheat Adoption as a Transformative Technology: Evidence from the literature and farmers. *Renewable Agriculture & Food Systems* published online 22 June 2015.

*Johnson, K. A., Dana, G., Jordan, N. R., Draeger, K. J., Kapuscinski, A. R., **Schmitt Olabisi, L. K.**, and Reich, P. B.. 2012. Participatory Scenarios and Social Learning for Sustainability. *Ecology and Society* 17(2): 9.

***Schmitt Olabisi, L.** 2012. Uncovering the root causes of soil erosion in the Philippines. *Society & Natural Resources* 25: 37-51.

*Jordan, N., Schively Slotterback, S., Kim, J., Cadieux, V., **Schmitt Olabisi, L.**, Pitt, D., and Mulla, D. 2011. TMDL planning in agricultural landscapes: A communicative and systemic approach. *Environmental Management* 48(1): 1-12.

***Schmitt Olabisi, L.**, Johnson, K., Kapuscinski, A. R., Reich, P.B., Stenquist, B., and K. Draeger. 2010. Using Scenario Visioning and Participatory System Dynamics Modeling to Investigate the Future: Lessons from Minnesota 2050. *Sustainability* 2(8): 2686-2706.

***Schmitt Olabisi, L.** 2010. The System Dynamics of Forest Cover in the Developing World: Researcher vs. Community Perspectives. *Sustainability* 2(6): 1523-1535.

***Schmitt Olabisi, L.**, P. Reich, K. Johnson, A. Kapuscinski, S. Suh, and E. Wilson. 2009. Reducing greenhouse gas emissions for climate stabilization: framing regional options. *Environmental Science & Technology* 43(6): 1696-1703.

***Schmitt, L.** 2009. Developing and Applying a Soil Erosion Model in a Data-Poor Context to an Island in the Rural Philippines. *Environment, Development and Sustainability* 11(1): 19.

Submitted

Metta, K., **Schmitt Olabisi, L.** and R. Wallace. Modeling food security of Detroit households. Under review in *Agriculture & Human Values*.

McKay, P.A., **Schmitt Olabisi, L.** and C. Vogt. Assessing improvements in socio-ecological system governance using the Quality Governance Framework and its Diagnostic Capacity Tool. Under review in *Environment Systems & Decisions*.

Metta, K., Lawlor, J., **Schmitt Olabisi, L.**, and R. Wallace. Modeling to solve community problems. Under review in *Community Psychology*.

Other Publications (*= *peer-reviewed*)

Books and Book Chapters

Schmitt Olabisi, L., McNall, M., Porter, W., and Zhao, J (*in press*) (eds). *Innovations in Collaborative Modeling*. MSU Press.

Ligmann-Zielinska, A., Du, J., Rivers III, L., **Schmitt Olabisi, L.**, Marquart-Pyatt, S., Liverpool Tasié, S., Sanga, U., and Paudel, R. Principles of Participatory Ensemble Modeling to Study Complex Socioecological Systems. (*in press*). *Chapter in: Schmitt Olabisi, L., McNall, M., Porter, W., and Zhao, J* (eds). *Innovations in Collaborative Modeling*. MSU Press.

Richardson, R.B., and **Schmitt Olabisi, L.** Using Participatory System Dynamics Modeling of Agricultural-Environmental Systems in a Developing Country Context. (*in press*). *Chapter in: Schmitt Olabisi, L., McNall, M., Porter, W., and Zhao, J* (eds). *Innovations in Collaborative Modeling*. MSU Press.

***Schmitt Olabisi, L.**, Blythe, S., Levine, R., Cameron, L., and M. Beaulac. 2016. Participatory, Dynamic Models: A Tool for Dialogue. *Chapter In: Climate in Context*, G. Garfin & A. Parris, eds. Wiley.

***Schmitt Olabisi, L.**, S. Blythe, A. Ligmann-Zielinska, and S. Marquart-Pyatt. 2013. Modeling as a Tool for Cross-Disciplinary Communication in Solving Environmental Problems. *In: Enhancing Communication & Collaboration in Interdisciplinary Research*, M. O'Rourke, S. Crowley, S. D. Eigenbrode, and J. D. Wulfhorst (*eds.*). SAGE Publications, Thousand Oaks, CA.

Guzman, A. and **L. Schmitt** (2007). Putting (Under)Development in Perspective: Colonial and Neocolonial Dynamics in the Philippines, in C. Hall and G. LeClerc (eds.) *Making World Development Work: Scientific Alternatives to Neoclassical Economic Theory*, University of New Mexico Press, Albuquerque, NM.

Reports

Schmitt Olabisi, L., Azhar, G., Abbott, M., and R. Lempert. RAND Conference Proceeding Report: Modeling Climate Change Impacts on Public Health in Long Beach. Long Beach, CA: March 20, 2017.

Schmitt Olabisi, L., S. Liverpool-Tasie, and A. O. Olajide. 2017. Exploring Maize Production in Nigeria Under Climate Change Using System Dynamics. Nigeria Agricultural Policy Project Research Brief 46, Feed the Future Innovation Lab for Food Security Policy, East Lansing, MI.

Schmitt Olabisi, L., S. Liverpool-Tasie, and A. O. Olajide. 2016. Towards a Systemic Analysis of the Impacts of Climate Change on Agricultural Production in Nigeria. Nigeria Agricultural Policy Project Research Paper 25, Feed the Future Innovation Lab for Food Security Policy, East Lansing, MI.

Schmitt Olabisi, L., Metta, K., and R. Wallace. 2016. Urban Livestock Adoption: Policy Analysis for Detroit, Michigan. Michigan State University Institute for Public Policy and Social Research, East Lansing, MI. https://www.ippsr.msu.edu/sites/default/files/MAPPR/Urban_Livestock.pdf

Rogé, P., Snapp, S., Richardson, R. B., **Schmitt Olabisi, L.**, Basso, B., Messina, J., Weltzein, E., Cox, S., and P. Grabowski. 2015. Perennial Grain Crops for African Smallholder Farming Systems. Report to the Bill and Melinda Gates Foundation. <http://pgrainsforafrica.psm.msu.edu/wp-content/uploads/2015/11/gates-executive-summary-150dpi.pdf>

Richardson, R.B., **Schmitt Olabisi, L.**, Sakana, N., Waldman, K., and P. Grabowski. 2015. Impact of sustainable intensification on landscapes and livelihoods (SILL). International Institute of Tropical Agriculture and USAID Feed the Future, Washington D.C. Submitted 8/31/15.

Schmitt Olabisi, L., R. Levine, L. Cameron, M. Beaulac, R. Wahl, and S. Blythe. 2012: A Modeling Framework for Informing Decision Maker Response to Extreme Heat Events in Michigan Under Climate Change. *In: 2011 Project Reports*, D. Brown, D. Bidwell, and L. Briley (eds). Available from the Great Lakes Integrated Sciences and Assessments (GLISA) Center.

Suh, S., Chiu, Y.-W., and **Schmitt Olabisi, L.** 2010. The Future of Energy and Minnesota's Water Resources. Report to Legislative Citizen's Commission on Minnesota Resources, Saint Paul, Minnesota.

Institute on the Environment, CR Planning, & Bonestroo (Schmitt Olabisi member and co-author, Energy & Mercury Team; Cost Benefit Assessment Team) (2008). Minnesota Statewide Conservation and Preservation Plan: Final Plan. Available at: www.lccmr.leg.mn/statewideconservationplan/SCPP_FinalPlan.html (peer-reviewed)

Reich, P., E. Nater, S. Hobbie, J. Espeleta, C. Fissore, **L. Schmitt Olabisi** and A. Ek (2008). Comments on the Minnesota Climate Change Advisory Group Recommendations. In: Appendix L of Minnesota Climate Change Advisory Group Final Report to the Minnesota Legislature. Available at: <http://www.mnclimatechange.us/MCCAG.cfm>.

Conference Proceedings

***Schmitt Olabisi, L.** 2013. Participatory modeling in environmental systems. Proceedings of the 31st International Conference of the System Dynamics Society. Cambridge, MA: July 21-25, 2013.

***Schmitt Olabisi, L.** 2009. Difficult choices, limited land: Land use tradeoffs in the Philippine context. Proceedings of the 5th Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems. Dubrovnik, Croatia: Sept. 29-Oct. 3, 2009.

Letters

Selin, N.E., Kenney, M.A., Jefferson, A. J., Dukes, J. S., Hill, T. M., **Schmitt Olabisi, L.** and M. A. Duffy. 2018. Call for new AAAS Harrassment Policy. *Science* 361 (6406): 984.

Blog Posts and Popular Articles

Schmitt Olabisi, L. and L.S.O. Liverpool-Tasie. 2018. Building Resilience in Nigerian Agriculture. *Agrilinks*, December 6, 2018. <https://www.agrilinks.org/post/building-resilience-nigerian-agriculture>

Schmitt Olabisi, L. and Liverpool-Tasie, L.S.O. 2018. Climate Change and Food Security: The Threats and Hopes for Nigeria. *The Republic*, June 4, 2018. <https://www.republic.com.ng/junejuly-2018/climate-change-and-food-security/>

Schmitt Olabisi, L. 2017. Dealing with Deep Uncertainty: Scenarios. G. Bammer (*ed.*), *Integration and Implementation Insights*. <https://i2insights.org/2017/01/05/deep-uncertainty-and-scenarios/>

Schmitt Olabisi, L. 2017. Systems Thinking 101. Posts in the System. <http://mommywithaphd.blogspot.com/2017/01/systems-thinking-101.html>

Schmitt Olabisi, L. 2016. Modeling as Empowerment. G. Bammer (*ed.*), *Integration and Implementation Insights*. <https://i2insights.org/2016/04/21/modeling-as-empowerment/>

Selected Presentations

(* indicates peer review) († indicates invited)

* “Participatory, simulation-driven scenario analysis for long-term decision-making.” Presentation at 2018 Meeting of the Society for Decision Making Under Deep Uncertainty, Culver City, CA, November 15, 2018.

† “Participatory modeling: partnering with stakeholders for sustainability.” Presentation at the University of Iowa, October 5, 2018.

† “Méthodes participatives pour le développement agricole.” Presentation at Institute Polytechnique Rural, Koulikoro, Mali, July 18, 2018.

* “Using and evaluating participatory scenario tools for adaptation.” Presentation at Adaptation Futures 2018 with Karen Goldberg, Edmond Totin, Saskia Werners, Jeremy Richardson, Dorothy Tembo, Graeme Riddell, Torsten Grothmann, Teresa Perez. Capetown, June 19, 2018.

* “Understanding social-ecological systems through best practices in Participatory Modeling.” Presentation at Resilience 2017, Stockholm, 8/21/17 (with S. Gray, A. Voinov & P. Bommel).

“Climate Change Mitigation and Adaptation in the Nigerian Poultry Sector.” Poster Presentation at Alliance for African Partnership Launch, Dar es Salaam, Tanzania, 7/18/17 (with B. Osuntade & L.S.O. Liverpool-Tasie).

* “Explaining Agricultural Technology Adoption Using Choice Experiments and System Dynamics.” International Society for Ecological Economics, Washington DC, June 29, 2016.

* “Modeling farmer adoption of transformative technologies with Choice Experiments and System Dynamics.” Canadian/U.S. Society for Ecological Economics Joint Biennial Conference, Vancouver, BC, Oct. 3, 2015.

* “Participation and scale: stories of resilience and development.” Panel organized at Resilience 2014, Montpellier, France, May 6, 2014.

*“Models for adaptation planning.” AAAS 2014 Annual Meeting. Chicago, IL, February 13-17, 2014.

Media Appearances

Cimons, Marlene. 2019. “Helping Flint Cope With Lead Pollution.” *Nexus Media* published April 18, 2019: <https://nexusmedianews.com/helping-flint-cope-with-lead-pollution-4b039808f421>

“Everything is Connected: an Interview with Laura Schmitt Olabisi.” *Intervarsity: Women in the Academy and Professions* with Jasmine Obeyesekere, Fernando, May 31, 2018.

Hurley, Amanda K. 2016. “Detroit is designing a city with space for everyone, including goats.” *Next City* published June 6, 2016: <https://nextcity.org/features/view/detroit-comprehensive-urban-agriculture-proposal>

“Models help communities plan for climate change.” WKAR *Current State* with Emmanuelle Berry. March 11, 2014.

Selected Teaching Experience

- Foundations of Community Sustainability (MSU CSUS 800)
- Short Course on Participatory Modeling at RAND Corporation, February-March 2017
- History of Environmental Thought and Sustainability (MSU CSUS 310)
- Introduction to Modeling Environmental and Social Systems (MSU ESP 850)
- Modeling Natural Resource Systems (MSU CSUS 836)
- Introduction to Environmental Science and Policy (MSU ESP 800)
- Foundations of Community, Agriculture, Recreation and Resource Studies (MSU ACR 800)
- Geographic Modeling (SUNY-ESF; teaching/lab assistant, 2003-2004))
- The Global Environment and the Evolution of Human Culture (SUNY-ESF teaching assistant, 2002)
- Ecosystems (SUNY-ESF teaching assistant, 2003)
- Ecology (SUNY-ESF lab section instructor, 2001; 2 sections of 10-15 students).
- “ESF in the High School”: Introduction to Environmental Issues (Corcoran High, Syracuse, NY):
- Various elementary and high school STEM courses (substitute teacher and tutor)

Selected Honors and Awards

- MSU Distinguished Partnership Award for Community Engaged Teaching, 2019
- Leshner Leadership Institute Public Engagement Fellow, AAAS, 2018
- Global Fellow, Michigan State University, 2013-2014
- Environmental Faculty Fellow, Michigan State University, 2010-2012
- Invited participant, DISCCRS IV (NSF-sponsored symposium for early career scientists working on climate change), November 2-9, 2008.

Selected Facilitation Experience

- Participatory Modeling workshop in Iowa City, Iowa, October 5, 2018
- Participatory Modeling exercise around Climate Change Impacts on the Poultry Sector in Abeokuta, Kaduna, and Lagos, Nigeria, October 2017, January 2018, and June 2018.
- Participatory Modeling exercise around Climate Change Impacts on Human Health in Long Beach, CA, March 20, 2017

- Introduction to Systems Thinking & Modeling (community class), Detroit, November 29, 2016.
- Participatory modeling exercise around food security and urban livestock in Detroit. Innovations in Collaborative Modeling Conference, East Lansing, MI, June 14-15, 2016.
- Participatory modeling exercise around climate change and agriculture. Ibadan, Nigeria, June 1, 2016.
- Participatory modeling exercise around food security in Detroit. Innovations in Collaborative Modeling Conference, East Lansing, MI, June 5, 2015.
- Participatory causal loop diagramming around food security in Detroit. Detroit, May 6, 2015.
- Participatory modeling workshops around deforestation and agriculture in Zambia. August, 2014 and June, 2015.
- Scenario visioning workshop on the future of the agricultural sector, Senga Bay, Malawi, November 2014.

Selected Service and Outreach

- MSU Department of Community Sustainability Faculty Affairs Committee, 2014-2016; 2018-present
- Department of Community Sustainability Kerr Fellowship Award Committee, 2018
- Reviewer, California Climate Assessment, 2018
- NSF EPSCOR review panel member, 2016, 2017, 2018
- Conference Chair, United States Society for Ecological Economics Biennial Conference 2017
- Board member, Academy for Systems Change, 2017-2020
- Invited participant, Food Systems Modeling Workshop, Oxford, UK, 2016
- Reviewer, North Central Region Sustainable Agriculture Research & Education grants, 2016
- Invited participant, Socio-Environmental Synthesis Center workshop on *Synergizing public participation and participatory modeling methods for action oriented outcomes*, 2016-2018
- Invited participant, Socio-Environmental Synthesis Center workshop on Socio-Environmental Data Explorer, June 2015
- Reviewer, Wisconsin Sea Grant, 2015
- Reviewer, Great Lakes Integrated Sciences & Assessments Center, 2014
- College Graduate Committee, CANR, MSU, 2017-2020

Graduate Students and Postdoctoral Mentoring

- Udit Sanga (Ph.D. Student, MSU), Major advisor
- Pat McKay (Ph.D. Student, MSU), Major advisor
- Kyle Metta (Ph.D. Student, MSU), Major advisor
- Obafemi Elegbede (Ph.D. Student, MSU), Major advisor/guidance committee chairperson. Graduated 2019. Dissertation title: Off-Grid Solar Electricity Adoption in Nigeria.
- Jelili Adebisi (Ph.D. Student, MSU), Major advisor/guidance committee chairperson. Graduated 2019. Dissertation title: A Livelihood and Systems-Based Approach for Understanding Drivers of Adoption and Disadoption of Organic Farming in Ibadan, Nigeria.
- Nahid Sattar (Ph.D. Student, MSU), Major advisor/guidance committee chairperson. Graduated 2019. Dissertation title: The Freshwater Aquaculture Revolution in Bangladesh: Impacts on Land, Water and Livelihoods.
- Onyinye Choko, visiting student under Nigeria Agricultural Policy Project, faculty advisor 2018-19

- Stella Chude-Chimela, visiting student under Nigeria Agricultural Policy Project, faculty advisor 2017-18
- Charity Ekerebi, visiting student under Nigeria Agricultural Policy Project, faculty advisor 2016-17.
- Dr. Naila Nazir (Fulbright faculty scholar, 2015, University of Peshawar, Pakistan), faculty advisor
- Kyle Metta (M.S. Student, MSU), Major advisor/guidance committee chairperson. Graduated 2016. Thesis title: Time Famine in an Age of convenience: A Systems Perspective on Food Insecurity in Detroit.
- Tum Nhim (USAID BHEARD M.S. Student, MSU), Major advisor/guidance committee chairperson. Graduated 2015. Thesis title: Towards Building Drought Resilience of Rice Production in Cambodia From a System Dynamics Perspective.
- Sarah Herbst (M.S. Student, Michigan State University), Major advisor/guidance committee chairperson. Graduated 2011. Thesis title: Mining in the Caraga Region, Philippines: Insiders' Perspectives on Emergent Social and Environmental Problems

Professional Memberships

International Society for Ecological Economics, System Dynamics Society, Ecological Society of America, Sigma Xi, AAAS

Journal Reviews

Years served as a reviewer indicated in parentheses.

Agronomy for Sustainable Development (2017)

Bioinformatics (2018)

Biomass and Bioenergy (2010)

Climatic Change (2010, 2012)

Computer Engineering (2018)

Ecological Economics (2009, 2012)

Ecology & Society (2015)

Elementa (2016)

Energy Policy (2010, 2013, 2017)

Environment, Development and Sustainability (2009)

Environmental Management (2012)

Environmental Modeling & Software (2015, 2017, 2018)

Environmental Science & Policy (2017)

Environmental Science & Technology (2008, 2009, 2010, 2012, 2013, 2014, 2017)

Futures (2015)

International Journal of Climate Change Strategies & Management (2016)

International Journal of Life Cycle Assessment (2011, 2014)

International Journal of Sustainable Transportation (2013)

Journal of the American Water Resources Association (2012)

Journal of Great Lakes Research (2014)

Land Use Policy (2017, 2018)

Paddy and Water Environment (2014)

Risk Analysis (2017)

Society & Natural Resources (2008, 2009, 2012)

Systems (2018)

Weather, Climate and Society (2016)