Srabashi Ray

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Professional Experience

Research Scientist, Luxembourg Center for Socio-Environmental Systems (LCSES), University of Luxembourg, Luxembourg	2026 -
Post-Doctoral Research Fellow, Global to Local Analysis of System Sustainability (GLASS), GLASS-NET, Department of Agricultural Economics, Purdue University	2020-2025
Consultant, International Food Policy Research Institute (IFPRI), New Delhi, India	2015
Research Associate, International Maize and Wheat Improvement Center (CIMMYT), New Delhi, India	2013-2015
Research Associate, Institute for Human Development (IHD), New Delhi, India	2011-2013

Education

PhD, Applied Economics, Oregon State University *Research: Joint Agricultural Input Adoption and Food Security in Tanzania; Committee: John Antle (Chair), Kassahun Melesse, Jeff Reimer, Steph Bernell and Stephanie Grutzmacher*	2015-2020
MA in Development Studies, Tata Institute of Social Sciences, Mumbai, India	2011
BA Economics (Hons), University of Delhi, New Delhi, India	2009

Research Fields

Environmental, Agricultural and Resource Economics, Integrated Systems Modeling, Applied Microeconomics, and Applied Econometrics

Research

Working Papers

1. *Farm Labor Scarcity and Its Uneven Impacts on U.S. Crop Producers (Lead author)*. GTAP Working Paper WP/25/97. GTAP Working Paper. CGTAP. Currently preparing response to Revise & Resubmit for AJAE. https://www.gtap.agecon.purdue.edu/uploads/resources/download/12941.pdf.
2. *Maps Show Where—Theory Explains How: Spatially explicit structural analysis of sustainability policies.* (Lead author, Manuscript under preparation)
3. *Getting US Agricultural Labor Markets Right: Implications for Data, Modeling, and Policy Analysis* (Co-author, manuscript under preparation)

Ongoing Research

1. Evaluate the impacts of immigration policies for agricultural workers in the US *with Iman Haqiqi, Alexandra E Hill, J Edward Taylor, and Thomas W Hertel*
2. Exploring solutions to environmental challenges within the Food-Energy-Water nexus in South Asia using SIMPLE-G and GTAP **(Lead)** with *Danielle Grogan (University of New Hampshire), Iman Haqiqi and Thomas W Hertel*

3. Resource implications of dietary transitions with *Emiliano Lopez Barrera and Dominic Vieira (Texas A&M)*

Publications

1. **Ray, Srabashi.** 2025. "Joint Agricultural Input Use and Food Security: Evidence from Tanzania." *Food Policy* 136 (October): 102948. https://doi.org/10.1016/j.foodpol.2025.102948.
2. **Ray, Srabashi.** 2025. "Labor Markets Mediate Welfare Impacts of Conservation Policies on Society: Case of Groundwater." *Environmental Research Letters* 20 (7): 071001. https://doi.org/10.1088/1748-9326/addb67.
3. **Ray, Srabashi,** and Thomas W. Hertel. 2025. "Effectiveness and Distributional Impacts of Conservation Policies: The Role of Labor Markets." *Environmental and Resource Economics* 88 (May 2025): 1147–93. https://doi.org/10.1007/s10640-024-00950-2.
4. **Ray, Srabashi**, Iman Haqiqi, Alexandra E. Hill, J. Edward Taylor, and Thomas W. Hertel. 2023. "Labor Markets: A Critical Link between Global-Local Shocks and Their Impact on Agriculture." *Environmental Research Letters (ERL)* 18 (3): 035007. https://doi.org/10.1088/1748-9326/acb1c9.
5. Fuglie, Keith, **Srabashi Ray**, Uris Lantz C. Baldos, and Thomas W. Hertel. 2022. "The R&D Cost of Climate Mitigation in Agriculture." *Applied Economic Perspectives and Policy* 44 (4): 1955–74. https://doi.org/10.1002/aepp.13245.
6. Aryal, Jeetendra Prakash, Cathy R. Farnworth, Ritika Khurana, **Srabashi Ray**, Tek B. Sapkota, and Dil Bahadur Rahut. 2020. "Does Women's Participation in Agricultural Technology Adoption Decisions Affect the Adoption of Climate-smart Agriculture? Insights from Indo-Gangetic Plains of India." *Review of Development Economics*. https://doi.org/10.1111/rode.12670.
7. Mittal, Surabhi, and **Srabashi Ray**. 2015. "What's the Missing Link? - Reviewing Climate Change Polices in Context of Indian Agricultural Sector." *Asian Social Science* 11 (24): 268. https://doi.org/10.5539/ass.v11n24p268.

Books and Chapters

1. **Ray, Srabashi**, and Thomas W. Hertel. "Grid-Level Analysis Using SIMPLE-G." In *SIMPLE-G: A Gridded Economic Approach to Sustainability Analysis of the Earth's Land and Water Resources*, edited by Iman Haqiqi and Thomas W. Hertel, 23–31. Cham: Springer Nature Switzerland, 2025. https://doi.org/10.1007/978-3-031-68054-0_3.
2. **Ray, Srabashi**, Iman Haqiqi, Alexandra E. Hill, J. Edward Taylor, and Thomas W. Hertel. "The Role of Labor Markets in Determining the Efficacy and Distributional Impact of Sustainability Policies." In *SIMPLE-G: A Gridded Economic Approach to Sustainability Analysis of the Earth's Land and Water Resources*, edited by Iman Haqiqi and Thomas W. Hertel, 199–216. Cham: Springer Nature Switzerland, 2025. https://doi.org/10.1007/978-3-031-68054-0_13.
3. Fraysse, Elizabeth A., Thomas W. Hertel, and **Srabashi Ray**. "Gridded Implications of Total Factor Productivity Growth." In *SIMPLE-G: A Gridded Economic Approach to Sustainability Analysis of the Earth's Land and Water Resources*, edited by Iman Haqiqi and Thomas W. Hertel, 159–171. Cham: Springer Nature Switzerland, 2025. https://doi.org/10.1007/978-3-031-68054-0_11.
4. Fuglie, Keith, **Srabashi Ray**, Uris Lantz C. Baldos, and Thomas W. Hertel. "The R&D Cost of Climate Mitigation in Agriculture." In *SIMPLE-G: A Gridded Economic Approach to Sustainability Analysis of the Earth's Land and Water Resources*, edited by Iman Haqiqi and Thomas W. Hertel, 135–58. Cham: Springer Nature Switzerland, 2025. https://doi.org/10.1007/978-3-031-68054-0_10.

5. Antle, John M., and **Srabashi Ray**. 2020. *Sustainable Agricultural Development: An Economic Perspective*. Palgrave Studies in Agricultural Economics and Food Policy 2662–3889. Palgrave Macmillan. https://www.palgrave.com/us/book/9783030345983.

Grants and Awards

1. Co-PI, USDA-AFRI, "Labor Markets and the Impacts of Environmental Stresses and Conservation Policies on US Agriculture", grant number NIFA-2022-67023-36403; 2. USDA-AFRI, "Economic Foundations of Long Run Agricultural Sustainability", grant number 2019-67023-29679 (USD 650,000), 2022-2025
2. Postdoctoral Travel Award (USD 600), Spring 2025.
3. Research Assistant, Co-operative Research Agreement for project titled "The R&D Cost Mitigating GHG Emissions from Agriculture" with USDA-ERS, 2021-2022
4. D. Barton DeLoach Distinguished Graduate Fellowship, OSU (USD 20,000), 2018-2019
5. Graduate Sylff Fellowship for International Research ($14,000), 2018-2019
6. Emery Castle Graduate Scholarship in Economics, OSU ($2,000), 2017-2018
7. Graduate Teaching/Research Assistantship with full tuition waiver and stipend, OSU, 2015-2020

Teaching Experience

1. Co-Instructor*, AGEC528: Global Change & the Challenge of Sustainably Feeding a Growing Planet*, Purdue University, (2021 - present)
2. Instructor, for Short Course on *Multi-Scale Analysis of Sustainability with SIMPLE-G,* Purdue University (2024) https://mygeohub.org/groups/glassnet/learning-hub/courses_page/2024simple-gcourse
3. Instructor (E-campus), *AEC 250: Introduction to Environmental Economics*, Oregon State University, Winter & Spring 2020
4. Teaching Assistant & Guest Lecturer (In class and e-campus), *AEC 251: Introduction to Agricultural and Food Economics* (BACC Core Course), Oregon State University, Fall 2019 & Fall 2017
5. Instructor, *Math Camp* for incoming Masters and PhD students, Oregon State University, Summer 2018
6. Lab Instructor & Teaching Assistant, AEC 626: *Applied Econometrics II*, Oregon State University, Spring 2018
7. Lab Instructor & Teaching Assistant, AEC 525: *Applied Econometrics I*, Oregon State University, Fall 2016
8. Lab Instructor & Teaching Assistant, *AEC 447: Agricultural Price and Market Analysis*, Oregon State University, Spring 2016

Conferences and Seminars

Invited Presentations

1. "Impacts of policy changes and climate stressors on agricultural labor markets in the US", at the Post-Conference workshop *Reducing the Labor of Beginning Agricultural Labor Economics Research: An Introduction to the AAEA Labor Economics Section* at the Annual Meeting for the Agricultural & Applied Economics Association (AAEA), Denver CO, 2025.
2. Co-chair of group on "Labor Markets, Human and Social Capital" at GLASSNET Biennial meeting, Washington DC, 2025

3. "Modelling Sustainability Challenges in the SIMPLE-G Framework: Groundwater scarcity in South Asia", Food and Agriculture Organization (FAO), 2024.
4. Theoretical foundations and applications of *Multi-Scale Analysis of Sustainability with SIMPLE-G,* Purdue University (2024).

Conference Presentations

"Maps are not enough: Spatially explicit analysis of conservation policies needs theoretical grounding for improved ex-ante evaluation", accepted Paper for Summer Conference for Standard Sessions at the upcoming 2025 Summer Conference for the Association of Environmental and Resource Economics, New Mexico, 2025.

"Leveraging economic theory for spatially explicit analysis of sustainability policies", 27th Annual Conference on Global Economic Analysis (Fort Collins, CO) 2024. https://www.gtap.agecon.purdue.edu/uploads/resources/download/12508.pdf

"Implications of Current Groundwater Usage in Agricultural Production in South Asia" presented at the Organized Symposium on "Integrated Simulation Modelling Approaches for India to Address the Food-Agriculture-Energy", at the 32nd International Conference for Agricultural Economics, New Delhi, 2024. https://iaae.confex.com/iaae/icae32/meetingapp.cgi/Paper/21886

"Equity and Effectiveness of Conservation Policies: The Role of Labor Markets", Mid-west Economic Association, Chicago, 2024.

Institute for Geospatial Understanding through Integrative Discovery Environment (I-Guide) Forum 2023 on "Harnessing the Geospatial Data Revolution for Sustainability Solutions", Columbia University, 2023.

Agricultural and Applied Economics Association (AAEA) Annual Meeting, Washington DC, 2023

Organized session titled "Multi-scale Sustainability Analysis of the Earth's Land and Water Resources using SIMPLE-G" at the 26th Annual Conference on Global Economic Analysis (GTAP), 2022

Agricultural and Resource Economics Seminar (OARES), 2022

Annual Conference on Global Economic Analysis (GTAP), 2021, 2022

Agricultural and Applied Economics Association (AAEA) Annual Meeting, Atlanta, Georgia, 2019

Northwest Development Workshop at University of Washington, Seattle, 2019

Sustainable Development Conference at University of Michigan, Ann Arbor, Michigan, 2018

Applied Economics Working Group Sessions, Oregon State University (Invited presentation, 2018

Conference on 'Innovations in Indian Agriculture: Ways Forward' in New Delhi, 12th Asian Maize Conference, Bangkok, 2014

Professional Training

Short Course on Global Trade Analysis Project (GTAP), 2025

Short Course on SIMPLE-G, 2020

Short Course in ORANIG, 2020

Planning and Creating a Winning Grant Proposal, AAEA Annual Meeting, 2019

Training Series – Tuesday Teaching Talks, Center for Teaching and Learning, OSU, Completed certified series including topics on teaching philosophies, lesson planning, student assessment, equitable & inclusive class environment and culturally responsive teaching, 2017-2018

Brownbag Pedagogy Series - Taking time for teaching, Department of Applied Economics, OSU, Completed sessions on best practices and tools for teaching and their application, 2017

Professional Services and membership

Referee for journals: World Development, Scientific Reports, Resource and Energy Economics, Environmental Management, Applied Economics and Clean Technologies and Environmental Policy

Referee for conferences: Annual Conference by Agricultural and Applied Economics Association (AAEA), Annual Conference by Association of Environmental and Research Economics (AERE), Sustainable Development Conference (SDC) and Annual Global Trade Analysis Project (GTAP) Meetings

Vice-President, Applied Economics Students' Club, OSU, Volunteer Mentor for PhD Students, 2017-2019

Skills

GEMPACK, STATA, MATLAB, RStudio, ArcGIS, SAS.

(Updated September, 2025)