

Colleen P. Henegan

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EDUCATION **Ph.D. Environment and Resources**, University of Wisconsin-Madison, 2026.
 Minor: Physical Geography
 Certificate: Culture, History, and the Environment (CHE)
 Advisor: Christopher Kucharik
 Committee: Matthew Turner, Holly Gibbs, K.D. Thompson, and Brian Mulenga

 M.S. Environment and Resources, University of Wisconsin-Madison; 2021

 B.A. Environmental Studies, Minor in English Literature, Concentration in Cultural Ecology; Denison University, 2012

RESEARCH AND TEACHING INTERESTS

I am a mixed-methods environmental scientist, specializing in physical geography and agroecosystem adaptation to climate change. My dissertation integrates predictive crop yield models with thematically analyzed farmer-focused qualitative data and geospatial land suitability assessments across Zambia's diverse agroecological regions. By combining these methodologies, my work bridges biophysical and social perspectives to identify pathways for agricultural resilience under climate change.

As an experienced educator with 15 years of experience, I encourage my students to use their knowledge in ways that both strengthen communities and contribute to a more resilient world. I look forward to offering courses on climate change adaptation, agroecosystem vulnerability and resilience, planetary health, community-engaged research, and mixed-methods approaches to environmental challenges.

RESEARCH

Publications **Henegan, C.P.**, Walsh, J., Myzcee, L., Peters, B.G., Mbulwe, L., Mulenga, B., and Kucharik, C. (2026, Pre-Submission) Climate Drivers of Historical and Future Maize Yield Change in Zambia: A District-Level Analysis Across Agroecological Regions. *Global Food Security*.

 Peter, B.G., Nabuwembo, M.G., **Henegan, C.P.**, Masiyakurima, B., Kucharik, C., Sonder, K., and Snapp, S. (2026, Pre-Submission). Grains and legumes of Sub-Saharan Africa: Novel prospects and potential pitfalls in the intersection of suitability and presence. *Nature Food*.

Henegan, C. (2022). "When the River Runs Dry in Lusitu, Zambia. *Pulitzer Center for International Reporting*, Washington D.C.

 Mailloux, N. A., **Henegan, C. P.**, Lsoto, D., Patterson, K. P., West, P. C., Foley, J. A., & Patz, J. A. (2021). Climate Solutions Double as Health Interventions. *International Journal of Environmental Research and Public Health*, 18(24), 13339.
 <https://doi.org/10.3390/ijerph182413339>

 Bernard, R., & **Henegan, C.** (2018). A Polarizing View. *Science Teacher*, 85(1), 33–41. https://doi.org/10.2505/4/tst18_085_01_33

Assistantships

Designed a campus-wide survey to assess how knowledge, values, awareness, locus of control, and context influence pro-environmental behaviors amongst UW-Madison students. PI: Asligul Gocmen, 2018-19, 2022-23.

Evaluated the health co-benefits of Project Drawdown solutions within the Food, Agriculture, and Land Use sector and the Land, Coastal, and Ocean Sink sector. PI: Jonathan Patz, 2020-21

Conducted 140 food security surveys with Zambian cricket farming participants and used these responses to evaluate the program's effectiveness as a food security intervention. PI: Valerie Stull, 2019-2021

Conducted a Health Impact Assessment (HIA) of the Campus Master Plan by evaluating energy use, access to green spaces, food waste, healthy buildings, and transportation. PI: Jonathan Patz, 2019

Grants and Fellowships	Society for Women Geographers' Evelyn Pruitt Fellowship 2025	\$9,180
	Holtz Science and Technology Studies Mini-Grant 2025	\$1,500
	Charlotte Zieve Scholarship 2025	\$3,000
	John and Margo Hansen Scholarship on Climate Change 2025	\$4,500
	Culture, History, and the Environment Travel Award 2025	\$2,800
	4W Emerging Scholar Grant 2025	\$2,500
	Graduate Student Scholarship for Research and Training on Cooperatives, UW Center for Cooperatives 2025	\$5,000
	Environment and Resources Research Award 2024	\$1,500
	Linda Wernecke Marshall Graduate Award 2024	\$1,000
	Morgridge Center Fellowship for Community-Engaged Scholarship 2024	\$1,500
	Pulitzer Center International Reporting Fellowship 2022	\$5,000
	Center for Integrated Agricultural Studies (CIAS) Mini Grant 2022	\$1,500
	Institute for Regional and International Studies (IRIS) Award 2019	\$3,000
	Culture, History and the Environment (CHE) Travel Award 2019	\$500
	Graduate School Student Research Travel Grant 2019	\$1,500
	Whole Kids Sustainable Agriculture Grant 2016-2017	\$3,500
		Total: \$47,480

Awards

Advanced Achievement in Teaching Award Nominee | 2026

Society for Women Geographers' Evelyn Pruitt Fellowship | 2025

Morgridge Center Fellowship for Community-Engaged Scholarship | 2024

Pulitzer Center's Top Photojournalism Projects of the Year | 2022

Pulitzer Center International Reporting Fellowship | 2022

UW-Madison University Housing Honored Instructor Award | 2019-2020

Sue Lehmann Excellence in Teacher Leadership Nominee | 2013-2014

Claes Nobel Educator of Distinction Award | 2012-2013

Louis Kussmaul Community Friendship Award | 2012

Denison University Environmental Studies Fellow | 2011-2012

Skills

Geospatial: RStudio, ArcGIS Pro, QGIS, Google Earth Engine

Coding: R, Python, Javascript

Qualitative: nVivo, Qualtrics, PhotoVoice, ArcGIS StoryMaps

Languages	English: Fluent, Spanish: Professional Working Proficiency Chewa, Tonga, Bemba (Zambia) and Luganda (Uganda): Elementary Proficiency
Methodologies	Quantitative: Predictive agricultural models, geospatial land suitability analyses, machine learning (RF, ExtraTrees, XGBoost), multiple linear regression, generalized additive models, Gaussian process models, uncertainty and sensitivity analyses. Qualitative: Thematic analysis, grounded theory, participatory modeling, (auto) ethnography, focus group facilitation, in-depth interviews, survey development, community-engaged research (CER), participatory action research (PAR)
Conferences	Nabuwembo, M., Henegan, C., & Mungai, L. “Integrated Frameworks, Geospatial Advances and Methodologies to Address Agricultural Interventions in the Global South and Beyond.” Session organizers, American Association of Geographers (AAG), San Francisco, CA. March, 2026. Peter, B. Nabuwembo, M., Henegan, C., Sonder, K., & Snapp, S. “Where Indigenous Crops Could Grow and Where They Actually Do: A Spatial Analysis of Southeastern Africa.” Oral paper presentation, American Association of Geographers (AAG), San Francisco, CA. March, 2026. Henegan, C., Peter, B. Fumbelo, J., Mulenga, B., Kabwe, S., Matokwani, M. Myzece, L., & C.J. Kucharik. “Integrating Farmer Experience and Climate Data: A Mixed-Methods Approach to Crop Modeling in Zambia.” Oral paper presentation, American Association of Geographers (AAG), San Francisco, CA. March, 2026. Henegan, C., Peter, B., Myzece, L., & C.J. Kucharik. “Modeling Subnational Crop Yields in Data-Sparse Contexts: A Case Study from Zambia.” Poster presentation at the American Geophysical Union (AGU) Conference, New Orleans, LA., December 2025. Henegan, C., Fumbelo, J., Kabwe, S., Myzece, L., Mudenda, L., Matokwani, M., Mulenga, B., & C.J Kucharik. “Navigating Climate Stressors: Social, Gendered, and Mobility-Based Responses in Zambia.” Poster presentation at the American Geophysical Union (AGU) Conference, New Orleans, LA., December 2025. Henegan, C., Peter, B., Matokwani, M., Mulenga, B., & C.J. Kucharik. “Impacts of Climate Change on Zambian Agriculture Using a Mixed Methods Approach.” Oral paper presentation, American Association of Geographers (AAG). March 2025. Henegan, C., Peter, B., Matokwani, M., Mulenga, B., & C.J. Kucharik. “Impacts of Climate Change on Zambian Agriculture Using a Mixed Methods Approach.” Poster presentation at the American Geophysical Union (AGU) Conference, Washington D.C., December 2024. Henegan, C. “When the Rains Don’t Come: A Mixed Methods Approach to Assess the Impact of Climate Change on Agriculture in Zambia. Oral paper presentation, American Association of Geographers (AAG), Denver, CO., March 2023. Henegan, C. “‘But those are real bugs!’ Perceptions of Farmed Edible Insects in Lusaka, Zambia.” Paper presentation at the Nelson Institute of Environmental Science Earth Day Conference, Madison, WI., April 2020.

Henegan, C. “Social, Economic, and Structural Barriers to Edible Insect Agriculture in Zambia.” Paper presentation at the Nelson Institute of Environmental Science Earth Day Conference, Madison, WI., April 2019.

Invited Talks

Panel Discussion (Invited), *Food for Thought* community dinner and food access discussion, hosted by SlowFoodUW and the Wisconsin Student Alumni Association. UW-Madison, April 9, 2026.

Guest Lecture, “How Colonial-era Projects and Climate Change Impact Zambian Food Security.” Prof. Jeremy Foltz, *World Hunger and Malnutrition*. UW-Madison, March 25, 2026.

Guest Lecture, “Maize in Southern Africa: Historical Context and Future Predictions .” Prof. Holly Gibbs, *People, Land and Food*. UW-Madison, March 24, 2026.

Opening Student Address (Invited). Nelson Institute Scholarship Reception. UW-Madison, October 8, 2025.

Guest Lecture, “Assessing the Impact of Climate Change on Zambian Agriculture Using a Mixed Methods Approach.” Mount Makulu Central Research Station, Chisamba, Zambia. August 15, 2025.

Guest Lecture, “Managing Climate Anxiety through a Yoga Practice.” Nelson Institute for Environmental Studies Earth Week Programming. UW-Madison, April 27th and 28th, 2025.

Panel Discussion, “Community-Based Research Experiences as a Graduate Student.” Prof. Ben Fischer, *Community-Based Research: Theory and Practice*. UW-Madison, April 21, 2025

Guest Lecture, “Assessing and Adapting to Climate Change: A Case Study in Zambia.” Prof. Holly Gibbs, *People, Land and Food*. UW-Madison, March 13, 2025.

Paper Presentation, “When the Rains Don’t Come: A Mixed Methods Approach to Assess the Impact of Climate Change on Agriculture in Zambia.” Indaba Agricultural Policy and Research Institute (IAPRI), Lusaka, Zambia, July 2023.

Research Presentation, “When the River Runs Dry in Lusitu, Zambia.” Pulitzer Center Washington Weekend. Washington, D.C., October 2022.

Podcast Guest, “*Bugs, Bugs, Bugs!* Chef Joseph Yoon and Colleen Henegan in The SustainUW Podcast.” Hosts: Lindley, E., & Diekelman, G. University of Wisconsin-Madison Office of Sustainability. March 2021.

Community Talk, “Insect Farming and Other Smart Ways to Grow Food in a Changing Climate.” The People’s Farm. Neighborhood House, Madison, WI., February 2022.

Guest Lecture, “Reality and Perceptions of Climate Change.” Dr. Francisco Santiago-Avila. *Introductory Ecology*. UW-Madison, December 2021.

TEACHING

Assistantships	Community Environmental Scholars Program (CESP) Spring 2022 to Spring 2026 Introductory Ecology Fall 2021 Health Impacts of Global Environmental Change Spring 2021 and Fall 2019 Climate Change Governance Spring 2021 Environmental Studies, The Social Perspective Fall 2020 and Fall 2019 Green Urbanism Fall 2018 and Spring 2019
Lead Instructor	Community Environmental Scholars Program (CESP) Fall 2026 KIPP Austin Collegiate High School (Founding Teacher) AP Environmental Science, 9-10th Grade Boys Soccer Coach 2015-2018 Arkansas State University, College Preparatory Academy of the Delta 2013-2015 Arkansas Northeastern Community College 2013-2015 Blytheville High School, Teach for America (Mississippi Delta) Pre-AP Biology, Biology, Environmental Science, and Zoology Teacher 2012-2015

SERVICE

University	Wisconsin Idea Conference Marketing Committee 2025-2026 Meet Morgridge Center teammates monthly to identify key groups, stakeholders, and individuals to recruit for the conference, draft marketing content, and design/develop content for printed conference materials. Nelson Institute Graduate Student Representative 2018-Present Attend monthly governance meetings, share updates with students, and organize monthly social events. Nelson Institute Graduate Student Representative Liaison 2019-2021 Facilitated communication between faculty, staff, and graduate students, connected students to important resources during the COVID-19 pandemic, led the annual graduate student winter retreat.
Community	Rooted Educational Volunteer 2025-Present Assist Rooted staff with the development and implementation of weekly gardening lesson plans for Badger Rock Middle School. AVID (Advancement via Individual Determination) Mentor 2025-Present Review resumes and lead mock interviews with 11 th -12 th grade students at Madison West High School Maluwa Foundation Board Member 2019-2023 Raised over \$3,000 in donations for the Maluwa Foundation, a women's educational and job training non-profit in Siavonga, Zambia. Garden Club Faculty Advisor 2016-2018 Collaborated with students at KIPP Austin Collegiate High School to apply for a Whole Kids Sustainable Agriculture Grant (\$3,500) to build a community garden and aquaponics system on campus.

Professional	HarvestStat Research Team Member 2025-Present Attend monthly meetings to share updates from individual working groups, which meet biweekly. Member of the quality control the HarvestStat Africa working group. Currently harmonizing crop yield data and co-developing Zambia's country book. AGU Outstanding Student Poster Competition (OPSA) 2024-2026 Annually review three student posters at the AGU conference
Memberships and Certifications	Culture History and the Environment (CHE) Graduate Associate 2024-Present Tri-Society (SSA, CSA, ASA) 2024-Present American Association of Geographers (AAG) Member 2023-Present American Geophysical Union (AGU) Member 2023-Present Certified Yoga Teacher (CYT-275) 2016-Present Certified Teacher: Life Sciences, grades 7-12, Wisconsin Department of Education, and Earth/Life Sciences, grades 7-12, Arkansas Department of Education 2014-2024