

Andrew Zimmer

Department of Earth Sciences, Montana State University
106 Traphagen Hall, Bozeman, MT, 59715
zimmermaps.github.io • andrew.zimmer1@montana.edu

EDUCATION

Ph.D. Geography • University of Arizona Dissertation Title: <i>Dynamics of Rural-Urban Food Systems in Southern Africa</i>	2022
MS Environmental Science & Technology • Lancaster University, UK	2017
BA Geography • Lancaster University, UK Study-abroad at Oregon State University (2014-2015)	2016

ACADEMIC POSITIONS

Research Scientist Department of Earth Sciences, Montana State University Geospatial Core Facility, Montana State University	2024 - present
Postdoctoral Researcher Department of Earth Sciences, Montana State University Geospatial Core Facility, Montana State University	2023
Graduate Instructor School of Geography, Development & Environment, University of Arizona	2021-2022
Graduate Research Assistant School of Geography, Development & Environment, University of Arizona	2018-2022

REFEREED JOURNAL ARTICLES

1. Gerlak AK, Guido Z, Owen G, Rodriguez-McGoffin S, Louder E, Davies J, Smith KJ, **Zimmer A**, Murviet A, Meadow A, Shrestha P, Joshi N. (2023). Stakeholder engagement in the co-production of knowledge for environmental decision-making. *World Development*, 170, 106336. [View Here](#).
2. Ross A, Marcantonio R, Miller-Graff L, Pearson A, Bunting E, **Zimmer A**. (2023). Does water insecurity mediate the relationship between climate variability and intimate partner violence in sub-Saharan Africa? *Climate and Development*, 16(2), 134-148. [View Here](#).

3. Mack E, Marcantonio R, Bunting E, Ross A, **Zimmer A**, Zulu L, Gómez-Fernández EL, Herndon J, Heneby G. (2022). A Systematic Literature Review of Quantitative Studies Assessing the Relationship Between Water and Conflict on the African Continent. *Sustainability*, 14(22), 14912. [View Here](#).
4. **Zimmer A**, Guido Z, Davies J, Joshi N, Chilenga A, Evans T. (2022). Food Systems and Rural-Urban Linkages in African Secondary Cities. *Urban Transformations*, 4(1), 1-23. [View Here](#).
5. Davies J, Blekking J, Hannah C, **Zimmer A**, Joshi N, Anderson P, Evans T. (2022). Governance of traditional markets and rural-urban food system in sub-Saharan Africa. *Habitat International*, 127, 102620. [View Here](#).
6. Hannah C, Davies J, Green R, **Zimmer A**, Anderson P, Battersby J, Baylis K, Joshi N, Evans T. (2022). Persistence of open-air markets in the food systems of Africa's secondary cities. *Cities*, 124, 103608. [View Here](#).
7. Guido Z, Lopus S, Waldman K, Hannah C, **Zimmer A**, Krell N, Knudson C, Estes L, Caylor K, Evans T. (2021). Perceived links between climate change and weather forecast accuracy: new barriers to tools for agricultural decision-making. *Climatic Change*, 168, 1-20. [View Here](#).
8. Davies J, Hannah C, Guido Z, **Zimmer A**, McCann L, Battersby J, Evans T. (2021). Barriers to urban agriculture in sub-Saharan Africa. *Food Policy*, 103, 101999. [View Here](#).
9. Mac E, Bunting E, Herndon J, Marcantonio R, Ross A, **Zimmer A**. (2021). Conflict and its relationship to climate variability in sub-Saharan Africa. *Science of the Total Environment*, 775, 145646. [View Here](#).
10. Pearson A, Mack E, Ross A, Marcantonio R, **Zimmer A**, Bunting E, Culver-Smith A, Miller J, Evans T, HWISE-RCN. (2021). Interpersonal Conflict over Water is Associated with Household Demographics, Domains of Water Insecurity and Regional Conflict. Evidence from Nine Sites across Eight Sub-Saharan African Countries. *Water*, 13(9), 1150. [View Here](#).
11. Hannah C, Giroux S, Krell N, Lopus S, McCann L, **Zimmer A**, Caylor K, Evans T. (2021). Has the vision of a gender quota rule been realized for community-based water management committees in Kenya? *World Development*, 137, 105154. [View Here](#).
12. **Zimmer A**, Guido Z, Tuholske C, Pakalniskis A, Lopus S, Caylor K, Evans T. (2020). Dynamics of population growth in secondary cities across southern Africa. *Landscape Ecology*, 25, 2501-2516. [View Here](#).
13. Guido Z, **Zimmer A**, Lopus S, Hannah C, Gower D, Waldman K, Krell N, Sheffield J, Caylor K, Evans T. (2020). Farmer Forecasts: Impacts of seasonal rainfall expectations on agricultural decision-making in Sub-Saharan Africa. *Climate Risk Management*, 30, 100247. [View Here](#).

RESEARCH IN PROGRESS

1. **Zimmer A**, Tuholske C, Gaughan A, Brooks N. Global Urban Demographic Change and Migration Patterns. *In Review*.
2. **Zimmer A**, Guido Z, Baylis K, Anderson P, Wang J, Evans T. Socio-Environmental Determinants of Maize Price Volatility in Southern Africa. *Submitted*.
3. **Zimmer A**, Tuholske C, Hultquist C, Atlas J, Houghton J. Global Patterns of Extreme Heat and Flooding Risk. *In Preparation*.
4. **Zimmer A**, Kerr G, Tuholske C, Kim SY, Anenberg S. Global Urban Demographic Exposure to Extreme Heat and Air Pollution. *In Preparation*.

PRESENTATIONS

* Invited | AGU = American Geophysical Union, AAG = American Association of Geographers

- 2024 Cloud-Based Open Science: Reflections from Integrating Earth and Social Data. Webinar presentation at NASA Socioeconomic Data and Applications Center (SEDAC). Open Science Workshop.
- 2023* Illuminating demographic exposure to extreme heat and flooding. Lightning presentation at AGU. San Francisco, CA.
- 2023 A global comparison of urban demographic change and migration patterns. Presentation at AGU. San Francisco, CA.
- 2023 Demographic exposure to extreme heat and flooding. Poster presentation at the World Climate Research Program. Kigali, Rwanda.
- 2023* Data and Analytical Tools for Studying Heat Stress, Land Cover Change and Health. Webinar for the International Food Policy Research Institute – Nigeria.
- 2023 Demographic exposure to extreme heat and flooding. Presentation at Managed Retreat Conference. Columbia University, NY.
- 2023* Security Technological Advantages II – Human Systems. Presentation at the National Security Innovation Network – Critical Resource Summit. Bozeman, MT.
- 2023* Understanding the rural-urban-climate nexus in Africa. Seminar for the Department of Earth Sciences at Montana State University. Bozeman, MT.
- 2023 Socio-environmental determinants of maize price volatility in southern Africa. Presentation at AAG. Denver, CO.
- 2022 Socio-environmental determinants of maize price volatility. Webinar for the International Institute of Migration and Development.

- 2022 Dynamics of rural-urban food systems in southern Africa. Presentation for the Center for Climate Adaptation Science & Solutions at the University of Arizona. Tucson, AZ.
- 2019 Rural-Urban Linkages of Maize Price in Zambia. Presentation at the Commonwealth Geographic Bureau International Conference on Food Systems. Maputo, Mozambique.
- 2019 Weather Forecasts, Farmer Perceptions and Adaptation to Climate Change in Sub-Saharan Africa. Presentation at AAG. Washington, DC.
- 2019 Patterns of Urban Growth in southern Africa. Poster presentation for the Graduate Interdisciplinary Program at the University of Arizona. Tucson, AZ.
- 2019 Texting the climate: How farmers in southern Africa are meeting the future. Presentation at the Borderlands Brewing Public Lecture Series. Tucson, AZ.
- 2019 Small-scale farmers strategies to mitigate fall armyworm impact in Zambia. Presentation for the Food Security and Social Justice Network at the University of Arizona. Tucson, AZ.

GRANTS

Submitted

- 2024 Goto E (PI), Guido Z (Co-I), **Zimmer A** (Co-I). Feedbacks between perceived climate change and the use of weather forecasts: a multi-country analysis of small-scale farmers. NSF-HEGS. (\$400,000). 2024-2026.

Funded

- 2023 World Climate Research Program Conference Travel Grant.
- 2023 I-GUIDE Summer Workshop Travel Grant.
- 2021 Roots for Resilience Data Science Assistantship, Data Science Institute, U Arizona
- 2021 Summer Research Grant, Graduate Interdisciplinary Program, U Arizona.
- 2019 Carson Scholar Science Communication Program, U Arizona.
- 2019 Sustainable Development Goals Summer Research Grant, U Arizona.

TEACHING AND MENTORING

Instructor of Record

GEOG 230: Our Changing Climate – University of Arizona
Fall 2022, Winter 2021 2022, Summer 2022

Guest Lecturer

GPHY 121D: Human Geography – Montana State University
Fall 2023

Teaching Assistant

GEOG 230: Our Changing Climate – University of Arizona
Fall 2021, Spring 2022

Graduate Student Committees

Dissertation: Eqi Luo, Montana State University (current)

Mentorship

Mentor – Diana Liverman Scholars Program, U Arizona 2021
Peer Mentor – School of Geography, Development & Environment, U Arizona 2020

PROFESSIONAL SERVICE

Professional Memberships: American Association of Geographers (AAG)
American Geophysical Union (AGU)
Population Association of America (PAA)
Population-Environment Research Network (PERN)
Global Land Programme (GLP)

Manuscripts reviewed: Climate Services (1), Cogent Food and Agriculture (1),
Environmental Development (1), International Journal of Agricultural
Sustainability, Environment and Planning B: Urban Analytics and City
Science (1), Weather, Climate & Society (1), World Development
Perspectives (1)

Committees: AAG Population Specialty Group – Student Paper Competition

OTHER INFORMATION

Citizenship: United Kingdom
United States Permanent Resident

Fieldwork Experience: Kenya, Zambia

Computing Skills: R, Python, Google Earth Engine, High-Performance Computing
Systems, Microsoft Azure, ArcGIS, QGIS, Qualtrics

SELECTED PRESS COVERAGE

2023 Researcher maps places and populations who face extreme heat risk. Yale Climate
Connections. [View Here](#).

2021 Texting the climate: How farmers in sub-Saharan Africa are meeting a changing future.
Terrain.org. [View Here](#).