

## THERESA NG'ANDU

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## EDUCATION

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**Ph.D. Candidate, Agricultural and Applied Economics,** University of Wisconsin – Madison, August 2022 – Present

*Includes microeconomics, macroeconomics, and econometrics sequence with the Economics department*

**Certificate in Higher Education Teaching and Learning,** University of Wisconsin – Madison, September 2025

**MS in Agricultural and Applied Economics,** University of Wisconsin – Madison, June 2024.

**B.A. with Honors Major in Economics, and Honors Minor in French,** Swarthmore College, May 2019

## RESEARCH FIELDS

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Development economics, Environmental and health economics, Economics of Education

## RESEARCH IN PROGRESS

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### **Flooding and Health Outcomes in Zambia**

I examine the impact of flooding on the incidence of diseases such as malaria, cholera, typhoid, dysentery, and non-typhoid non-dysentery diarrhea from 2012 to 2024 in Zambia. I use health data from the Zambian Ministry of Health, Health Management Information System (HMIS), and satellite flood data from the NASA MODIS Water Product in a pseudo maximum likelihood with high-dimensional fixed effects (ppmlhdfe) model, which relies on changes of flood events at the ward level, to estimate this impact. The outcome variable is the number of cases of each type of disease, corrected for population counts in each ward that can be attributed to floods. I find that floods increase the incidence of malaria and cholera, but not typhoid. In the case of dysentery and non-typhoid non-dysentery diarrhea, floods have a mitigating effect on the incidence of these two diseases.

### **Development and Flooding in Zambia**

I study how rapid development, as measured by deforestation and the appearance of impervious surfaces in Zambia, affects the prevalence of floods from 2012 to 2019. I use deforestation data from Global Forest Change (Hansen et al 2013) and dynamic impervious surfaces data (Huang et al 2021) to examine the impact, leveraging the year-to-year changes in deforestation and impervious surfaces as a source of variation. Preliminary results show that deforestation has a larger effect on increasing floods than increasing total impervious surface area or even increasing marginal impervious surface area.

### **Automatic Grade Progression Policy, Education Attainment, and Child Labor**

I examine the impact of the automatic grade progression policy implemented by the Zambian government from 2013 to 2022 on educational attainment and child labor for affected individuals of school-going age. I use the annual 2012 to 2022 Labor Force Participation Surveys compiled by the Zambia Statistics Office (Zamstats), and school-level grade 7 and grade 9 national examinations data from the Examinations Council of Zambia (ECZ). I leverage the fact that while the policy was introduced in 2013, it was only in 2018 that it was emphasized, and therefore, school supply constraints were removed to define the treated cohorts. I use a difference-in-difference estimation strategy. I define eligibility post 2018 as an individual of school-going age (can enroll in grade 7) residing in a district with grade 7 examination failure rates above 50%, and compare outcomes with similar individuals residing in districts with schools that have lower grade 7 examination failure rates.

## **PRESENTATIONS**

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(Upcoming) Association of Environmental and Resource Economists (AERE) at the Southern Economics Association (SEA) Conference, 2026

*Work to be presented: Flooding and Health Outcomes in Zambia*

CSAE Conference 2026 Economic Development in Africa, 2026

*Work to be presented: Flooding and Health Outcomes in Zambia*

Interdisciplinary Ph.D. Workshop on Sustainable Development, Columbia University, 2025

*Work presented: Development and Flooding in Zambia*

Association of Environmental and Resource Economists (AERE) at the Western Economic Association International (WEAI) Conference, 2025

*Work presented: Flooding and Child Health Outcomes in Zambia*

## **RESEARCH EXPERIENCE**

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Research assistant for Professor Jeremy Foltz, May 2023 – December 2024

*Projects: Climate change and conflict in Mali*

Research Analyst, Compass Lexecon – London, UK, and Chicago, IL, October 2019 – July 2022

## TEACHING EXPERIENCE

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Teaching Assistant for Professor Dustin Frye, AAE 101: Introduction to Agricultural and Applied Economics, Spring 2026

Teaching Assistant for Professor Tessa Conroy, AAE 101: Introduction to Agricultural and Applied Economics, Fall 2025

Teaching Assistant for Professor Jeremy Foltz, AAE 350: World Hunger and Malnutrition, Spring 2025, Summer 2025

## SKILLS AND LANGUAGES

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**Language mastery:** Fluent in Bemba (native), English, French, and Nyanja; working proficiency in Spanish, and elementary proficiency in Kaonde.

**Technical:** STATA, SAS, L<sup>A</sup>T<sub>E</sub>X, Python, Julia, GitHub, Matlab, MS Word, Excel, PowerPoint, QGIS, ArcGIS

## FELLOWSHIPS, AWARDS, and GRANTS

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**AAEA Teaching Academy Travel Grant (\$500)**, AAEA, 2026

**Barbara Forest Travel Award (\$1000)**, Agricultural and Applied Economics, University of Wisconsin – Madison, 2026

**Zambia Evidence Lab (ZEL) Ph.D. Fellow**, International Growth Centre and Zambian Ministry of Finance and Planning, 2025

**Student Research Grants Competition (\$600)**, University of Wisconsin – Madison, 2025

**International Growth Centre (IGC) Exploratory/Pilot Work Research Grant (\$36,000)**, 2023

**Travel award for the Berkeley/Sloan summer school in Environmental and Energy Economics (\$900)**, 2023

**Two-year Academic Graduate School Fellowship**, University of Wisconsin-Madison,  
Agricultural and Applied Economics Department, 2022  
**Swarthmore College Hannah A. Leedom Fellowship Award (\$5,000)**, 2022

## **PROFESSIONAL SERVICE**

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Association of Environmental and Resource Economists (AERE) @ Western Economic  
Association International (WEAI) 2026 Abstract Reviewer

Association of Environmental and Resource Economists (AERE) 2025 Conference Abstract  
Reviewer

Agricultural and Applied Economics Association (AAEA) 2025 Conference Abstract  
Reviewer

## **GRADUATE SCHOOL SERVICE**

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Student Research Colloquium (SRC) Coordinator, Agricultural and Applied Economics  
Department, University of Wisconsin – Madison, 2024 – 2025

Justice, Equity, Diversity, and Inclusion (JEDI) Committee Co-Chair, Agricultural and  
Applied Economics Department, 2023 – 2024

Mentor, GRADLINK, University of Wisconsin – Madison, 2025

## **DISSERTATION COMMITTEE AND REFERENCES**

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**Professor Jeremy Foltz, Ph.D. (Advisor)**, Agricultural and Applied Economics  
Email: [jdfoltz@wisc.edu](mailto:jdfoltz@wisc.edu)

**Professor Priya Mukherjee, Ph.D.**, Agricultural and Applied Economics  
Email: [priya.mukherjee@wisc.edu](mailto:priya.mukherjee@wisc.edu)

**Professor Rhiannon Jerch, Ph.D.**, Agricultural and Applied Economics  
Email: [rhiannon.jerch@wisc.edu](mailto:rhiannon.jerch@wisc.edu)

**Professor Dustin Frye, Ph.D.**, Agricultural and Applied Economics  
Email: [dustin.frye@wisc.edu](mailto:dustin.frye@wisc.edu)