Xianru Han

E-mail: xhan1236@umd.edu **Website**: https://xianru-han.netlify.app

EDUCATION

University of Maryland, College Park, MD   **08/2020 - present**
Ph.D. in Agricultural and Resource Economics

Columbia University, New York, NY   **09/2018 - 02/2020**
M.A. in Statistics

University of Maryland, College Park, MD   **08/2016 - 05/2018**
B.S. in Agricultural and Resource Economics & Statistics

China Agricultural University, Beijing, China   **09/2014 - 06/2016**
B.A. in Economics

FIELDS OF SPECIALIZATION

Environmental & Energy Economics, Applied Econometrics

RESEARCH EXPERIENCE

Research Assistant for Anna Alberini, University of Maryland	**06/2024 - 08/2025**
Research Assistant for Rebecca Epanchin-Niell, University of Maryland	**07/2022 - 01/2024**
Research Assistant for Kenneth L. Leonard, University of Maryland	**01/2021 - 08/2021**
Research Assistant for Jack Willis, Columbia University	**05/2019 - 12/2019**
Research Assistant for Martin Rotemberg, New York University	**05/2019 - 12/2019**

WORKING PAPERS

The Distributional Effects of Tighter Regulations: New Evidence from the Sugarcane Burning in Florida

Abstract: Environmental regulations shape the spatial distribution of pollution, influencing the burden on different communities. In South Florida, wind-based sugarcane burning regulations have historically favored wealthier, densely populated areas by limiting burning during specific wind conditions. In 2019, additional restrictions were introduced to limit burning on days with low air quality. By using satellite fire data and Aerosol Optical Depth (AOD) data, I assess the impact of these stringent restrictions on burning and air pollution. Results reveal a 41% decrease in burning on restricted days within the main cultivation area, potentially leading to increased burning on days without restrictions. This unintended consequence exacerbates air quality issues for the region's most vulnerable populations. The study reveals regulatory enhancements inadvertently worsen environmental inequities, highlighting the need for environmental justice policies that address historical and systemic discrimination affecting pollution distribution.

Coastal agricultural land use adaptation to sea level rise and saltwater intrusion (joint with Rebecca Epanchin-Niell, Alexandra Thompson, Jessica Post, Jarrod Miller, Dave Newburn, Keryn Gedan and Kate Tully)

Abstract: Coastal areas face increasing risks from sea level rise and storm surge, including agricultural lands susceptible to inundation and saltwater intrusion. This study examines how farmers adapt to these impacts in a low-lying, ecologically important region of the Mid-Atlantic USA. Using fine-scale land use data, we analyze shifts in agricultural lands, such as transitions away from salt-sensitive crops (e.g., corn) and conversion to wetlands. We relate field-level crop rotation and land cover to local sea level and soil conditions using multinomial logit models with bootstrapped sampling of fields across years. We find that lower elevation fields – likely to be affected by more frequent inundation and coastal influences – are more likely to have transitioned out of agriculture to woody or herbaceous wetlands and, if remaining in agriculture, are less likely to be planted in corn than in other grain crops. Our predictions suggest that by 2050, 10.5% of fields will convert to wetlands, with a decline in agricultural area. Understanding these land use changes aids in climate adaptation planning and resource management to support regional goals.

PUBLICATIONS

- Xianru Han, Wenying Li, Haoluan Wang (2024). A Burning Issue: Wildfire Smoke Exposure, Retail Sales, and Demand for Adaptation in Healthcare. *Environmental and Resource Economics*, 1-29.
- Xianru Han, Haoluan Wang, Jiaao Yu (2024). Navigate through the haze: Wildfire smoke exposure and Metrorail ridership. *Transportation Research Part D: Transport and Environment*, *133*, 104309.

WORKS IN PROGRESS

- Diesel Bans and Environmental Trade-Offs
- Diesel Bans and International Trade

CONFERENCE & SEMINAR PRESENTATION

- 2025: RWI Brown Bag Seminar, Giving an Effective Job Talk: An IHS Graduate Workshop, Institute for Humane Studies (IHS), 16th International Workshop on Empirical Methods in Energy Economics (EMEE)
- 2024: Nordic Annual Environmental and Resource Economics (NAERE) Workshop, Harvard Climate Economics Pipeline Workshop, AERE Summer Conference
- 2023: Heartland Environmental & Resource Economics Workshop, The Race, Ethnicity and Place Conference, 24th CU Environmental & Resource Economics Workshop, AAEA Annual Meeting, AERE Summer Conference, Interdisciplinary Ph.D. Workshop in Sustainable Development (IPWSD)
- 2022: UMD AREC Egg Timer
- 2021: Berkeley/Sloan Summer School in Environmental and Energy Economics

TEACHING EXPERIENCE

- Teaching Assistant, Applied Microeconomics (graduate), University of Maryland, Spring 2022, Spring 2024
- Teaching Assistant, Gender in Economics and Development (undergraduate), University of Maryland, Fall 2021
- Teaching Assistant, Applied Machine Learning for Financial Modeling (graduate), Columbia University, Spring 2020
- Academic Math Tutor, ASCDU, University of Maryland, Spring 2017, Fall 2017, Spring 2018

PROFESSIONAL SERVICE

- Exchange Researcher, Environment & Resources, RWI – Leibniz-Institute for Economic Research, Essen (2025)
- Referee for Energy Economics (2024)
- UMD AREC First Year PhD Student Mentor (2023-2024)
- UMD AREC Search Committee for Assistant Director for the PhD Program (2023)

HONORS & SCHOLARSHIPS

The Institute for Humane Studies
- Residency Funding   **2025**
- Humane Studies Fellowship   **2024**

University of Maryland, College Park
- Dean's fellowship   **2020, 2023, 2024**
- Jacob K. Goldhaber Travel Grant   **2023**
- Magna Cum Laude Honor Graduate   **2018**
- Ray A. Murray Scholarship   **2016 - 2018**

China Agricultural University
- China Merited Undergraduate Student Scholarship   **2014 - 2016**
- China National Scholarship   **2014 - 2015**

SKILLS

R, Stata, Matlab, Python, SQL, JavaScript