

MARISA L. HENRY | MPhil

marisaLyn.com • researcher & analyst for social / environmental good

EDUCATION

- PhD** Environmental Health & Engineering, **Johns Hopkins University** 2022
Advised by Dr. Paul Ferraro
- MSE** Applied Mathematics & Statistics, **Johns Hopkins University** 2018
- MPhil** Engineering for Sustainable Development, **University of Cambridge** 2017
Advised by Dr. Andreas Kontoleon
- BS** Environmental & Ecological Engineering, **Purdue University** 2015

HONORS & AWARDS

Behavior, Energy, and Climate Change Conference Precourt Fellow (2018). Natalie M. Lorenz Givans Fellow (2017 & 2018). Lee and Albert H. Halff Doctoral Student Award (2017). Gates Cambridge Scholar (2016). Unanimous winner of Purdue University “Dawn or Doom 2” writing contest (2015).

PROJECTS

- Social Comparisons of Polluters** 2018 – Present
Research Assistant (PI: Dr. Paul Ferraro)
- Collaborating with economists on the design of a field experiment to estimate the causal effect of social (peer) comparisons on compliance behavior of NPDES permitted dischargers
 - Created Shiny App to simulate power analyses using baseline compliance data
- Thermal Cooking to Reduce Household Air Pollution in Peru** Jan 2018 – June 2018
Research Assistant (PI: Dr. Steve Harvey)
- Designed and tested a prototype “thermal cooker” using local Peruvian materials to improve sustainability and health equity of cooking practices in Puno, Peru
 - Co-author of Johns Hopkins Alliance for a Healthier World grant funded for 250,000 USD for project scale up (RCT of 180 households) in 2019-2020
- Behavioral Interventions in Household Electricity Consumption** May 2017 – Aug 2017
MPhil Thesis Research
- Built panel data econometrics models in R and Stata to estimate the causal effect of electronic home energy reports on residential electricity consumption of 9000 households over 1-year
 - Conducted a systematic literature review of behavioral interventions in residential electricity consumption to situate results in the current literature
- WATER Tanzania Purdue Global Development Team** Aug 2014 – Dec 2015
Student Project Manager (PI: Dr. Venkatesh Merwade)
- Managed interdisciplinary team of 6 students at Purdue University and in Tanzania to improve community-scale water access in Endallah, Tanzania

- Sole author of grant funded for 10,000 USD to conduct IRB approved semi-structured interviews of 25 households in Endallah on current water use
- Estimated water needs and identified optimal locations for the siting of a hydram pump and sand dam using qualitative survey results, rainfall data, and HEC-RAS inundation models

TEACHING

Project Advisor (2017-2018) to Johns Hopkins Engineers Without Borders team, presenting lectures and providing guidance on international development projects during bi-weekly team meetings.

Peer Teaching Assistant (2014-2015) for course on Engineering Environmental Sustainability, creating and delivering 8 lectures to 300 students and facilitating 12+ small group discussions on sustainability topics.

Co-facilitator of 4 workshops (2013-2015) on developing empathic and inclusive leadership as part of the DiversiKey Certificate Program at Purdue University.

PUBLICATIONS

Hutchins, Margot J., Richter, J.S., **Henry, M. L.** & Sutherland, John. (2018). Development of indicators for the social dimension of sustainability in a U.S. business context. *Journal of Cleaner Production*. 10.1016/j.jclepro.2018.11.199.

Henry, M. L., Baldwin, G., & Quathamer, G., (2015). Designing a Community-Based Water Harvesting System: Understanding Water Use in Endallah, Tanzania, *The Journal of Purdue Undergraduate Research*, Vol 5.

INVITED SPEAKER

Engineering Sustainability (2019). Plenary Panel. Sustainability: Where Engineering Meets Behavioral Science.

POSTERS

Encarnacion, M., et al. (2018). Piloting a Thermal Cooker Prototype in Peru. Poster presented at 2018 Global Noncommunicable Disease Symposium. Baltimore, MD.

Henry, M. L.(2017). Behavioral Interventions in Massachusetts Electricity Provision. Poster presented at Engineering for Sustainable Development annual conference. Cambridge, U.K.

Henry, M. L. (2015). Designing a Community-Based Water Harvesting System: Water Access in Endallah, Tanzania. Poster presented at Engineering Education Festival, Daegu, South Korea.

Henry, M. L., Baldwin, G., & Lee, C. (2015). Designing a Community-Based Water Harvesting System. Poster presented at Innovation for International Development (I2D) Lab exposition, West Lafayette, IN.

TECHNICAL SKILLS

Programming: Proficient in R (tidyverse, Shiny, Rmarkdown) and TeX. Beginner understanding of Python, Stata, Git, and MATLAB. Previous experience, but rusty in C/C++. **Other Software:** Proficient in MS Office and Google Drive products. Previous experience, but rusty in ArcGIS, HEC-RAS, KYPipe, StormCAD, Excel VBA, and AutoCAD & Fusion 360. **Other:** IRB Certified. Beginner Spanish.