MARISA LYN HENRY

Interdisciplinary analyst merging environmental engineering and behavioral sciences.
Interested in experimental and quasi-experimental methods to estimate effects of policies and programs on social & environmental outcomes.

EDUCATION

MSE Applied Mathematics & Statistics Johns Hopkins University — Dec 2018
MPhil Engineering for Sustainable Development University of Cambridge — 2017
BS Environmental & Ecological Engineering Purdue University — 2015

EXPERIENCE

Thermal Cooking to Reduce Household Air Pollution in Peru — 2018
Student Investigator, Johns Hopkins University
- Traveled to Puno, Peru to assess technical and economic feasibility of local insulating materials for use in a thermal cooker to improve sustainability and health equity of cooking practices in Puno, Peru
- Co-author of grant funded for 250,000 USD for project implementation

Behavioral Interventions in Household Electricity Consumption — 2017
MPhil thesis research, University of Cambridge
- Used R and Stata to clean and analyze panel data of electricity use from ~9000 households in an RCT
- Created econometrics models to quantify the effect home energy reports on attrition from a retail electricity provider and electricity consumption over 1-year

Compost Pedallers — 2016
Operations Intern, Austin, TX
- Created and managed dynamic Google Sheets and custom objects, reports, and dashboards in Salesforce to improve visibility and analysis of KPIs for directors of 100% bike-powered compost recycling network

Global Development Team: WATER Tanzania — 2014-2015
Student Project Leader, Purdue University
- Managed interdisciplinary team of ~5 students at Purdue and in Tanzania to improve community-scale water access in Endallah, Tanzania using participatory methods
- Authored grant funded for 10,000 USD to conduct a survey of 25 households on water needs and use
- Used ArcGIS with HEC-geoRAS & HEC-RAS to model inundation and impacts of a small-scale dam

MENTORSHIP & TEACHING

Engineers Without Borders Project Advisor — October 2017 – Present
- Provide guidance to team of 8 undergraduate Johns Hopkins students working on a project to design and implement a bridge in Comunidad San Pablo de Amali, Ecuador
- Prepare and deliver monthly lectures to team on topics related to engineering design, international development, and sustainable engineering

Peer Teaching Assistant for Engineering Environmental Sustainability — 2014-2015
- Designed and presented 8 lectures to 300 students to encourage critical thinking of sustainability topics
- Ran over 10 facilitations to explore dimensions of sustainability in food, water, and energy

WRITING

Henry, M. L. (2015). How big data is impacting more than you know. Purdue University Dawn or Doom2 Writing Contest. Unanimous winner selected by Jennifer Bogo (executive editor, Popular Science), Ben Gruber (science and technology reporter, Reuters), Torie Bosch (technology editor, Slate). Available here

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*. Available here.

PRESENTATIONS

Encarnacion, M., **Henry, M. L.**, Diaz, B. Williams, K. Checkley, W. Harvey, S. A. (2018). Piloting a Thermal Cooker Prototype in Puno, Peru. Poster presented at the 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 in Endallah, Tanzania. Poster presented at Engineering Education Festival (E^2Festa), 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 (I^2D) Lab exposition, West Lafayette, IN.

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 Dawn or Doom 2 writing contest on big data (2015).

TECHNICAL SKILLS

Proficient: R. Stata. Excel Solver. **Beginner:** Python. Git. MATLAB.
Previous experience, but rusty: C/C++. ArcGIS. HEC-RAS. KYPipe. StormCAD. Excel VBA.