

## **JOSHUA J. WAYLAND**

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### **EDUCATION**

Ph.D. Candidate, Geographical Sciences, University of Maryland College Park, 2018 (Expected)

Dissertation: "Natural Resources, Civil Conflict, and the Political Ecology of Scale"

Committee: Martha Geores (Chair, Dept. of Geographical Sciences), Mathew Hansen (Dept. of Geographical Sciences), Laixiang Sun (Dept. of Geographical Sciences), David Cunningham (Dept. of Government and Politics)

M.A. Global Environmental Policy, American University, 2013

B.A. Double Major in Economics and Environmental Science and Policy, 2008

### **PROFESSIONAL EXPERIENCE**

#### **U.S. SURFACE TRANSPORTATION BOARD**

##### **Office of Environmental Analysis**

Environmental Protection Specialist

Washington, D.C.

July, 2012 – present

- Oversaw environmental impact analyses of transportation projects throughout the United States under the National Environmental Policy Act (NEPA) and historic review under Section 106 of the National Historic Preservation Act
- Conducted analyses of potential impacts related to transportation systems, public safety, noise and vibration, geological resources, land use, water resources, wetlands, air quality, socioeconomics and environmental justice, threatened and endangered species, hazardous materials, and cultural and historical resources supporting preparation of Environmental Impact Statements (EISs) and Environmental Assessments (EAs) under NEPA and Section 106
- Served as project manager or co-project manager for environmental review of three rail construction proposals, including one EIS-level and two EA-level projects
- Independently prepared 40 EAs related to railroad abandonment projects
- Project manager for expanded cultural resources impact assessment of railroad abandonment and redevelopment project
- Directed teams of technical consultants in data collection, data analysis, document preparation, and public outreach for environmental review of transportation projects
- Developed, implemented, and managed agency-wide Geographic Information System (GIS) and public interactive mapping website
- Developed and oversaw Office of Environmental Analysis summer internship program
- Represented federal agency at the NEPA Contacts Working Group of the President's Council on Environmental Quality

#### **U.S. PEACE CORPS**

Coastal Resource Management Volunteer

Gonzaga, Cagayan, Philippines

August, 2008 – May, 2011

- Drafted and implemented resource management, forestry, waste management, disaster response, and eco-tourism plans
- Developed and implemented project monitoring and evaluation programs
- Performed terrestrial and aquatic habitat assessments

- Conducted socioeconomic assessment through interview, survey, and focus group methods
- Interfaced with local, provincial, and national, government agencies; non-governmental organizations; businesses; and the public
- Organized and participated in public meetings regarding natural resource management programs
- Oversaw fundraising projects and disbursement of three development grants funded by Peace Corps and the U.S. Agency for International Development
- Developed volunteer training materials

**COLLEGE OF WILLIAM AND MARY**  
**Committee on Sustainability**  
 Steering Committee Member

Williamsburg, VA  
 August, 2007 – May, 2008

- Advised on the development of university environmental policy
- Led campus environmental advocacy organization
- Conducted university greenhouse gas inventory

**PROJECT LEVEL AID (PLAID)**  
 Undergraduate Research Assistant

Williamsburg, VA  
 May, 2005 – January, 2006

- Assisted with data collection, management, and analysis
- Worked with faculty to develop and perform statistical models
- Conducted original academic research

### TEACHING EXPERIENCE

**UNIVERSITY OF MARYLAND, COLLEGE PARK**  
**Department of Geographical Sciences**  
*Graduate Teaching Assistant and Instructor*

College Park, MD  
 August, 2014 – present

- Instructor, Economic Geography (GEOG 332), Fall 2017
- Instructor, Geography of Environmental Systems Laboratory (GEOG 211), Fall 2017
- Teaching Assistant, Introduction to Human Geography (GEOG 202), Spring 2017
- Teaching Assistant, Economic Geography (GEOG 332), Fall 2016
- Teaching Assistant, Introduction to Quantitative Methods (GEOG 306), Spring 2016
- Teaching Assistant, Introduction to Quantitative Methods (GEOG 306), Fall 2015
- Instructor, Geography of Environmental Systems Laboratory (GEOG 211), Spring 2015
- Teaching Assistant, Geography of Environmental Systems (GEOG 201), Spring 2015
- Teaching Assistant, Introduction to Quantitative Methods (GEOG 306), Fall 2014

**PRINCE WILLIAM COUNTY**  
**Department of Parks and Recreation**  
 Specialty Instructor, Environmental Education

Prince William County, VA  
 January, 2012 – May, 2014

- Designed and implemented environmental educational programming for elementary, middle, and high school students

### PUBLICATIONS

Wayland, J. Black Sand and the Red Court: Lessons from a Mining Conflict in the Philippines. In review.

- Wayland, J. Constraints on Foreign Aid Effectiveness in the Water, Sanitation, and Hygiene (WaSH) Sector. In review.
- Wayland, J. 2017. Constraints on Foreign Aid Effectiveness in the Water, Sanitation, and Hygiene (WASH) Sector: Evidence from Malawi. *African Geographical Review* (forthcoming).
- Wayland, J. & Kuniholm, M. 2016. Legacies of Conflict and Natural Resource Resistance in Guatemala” *The Extractive Industries and Society* 3(2), 395-403.
- Siripurapu, K. K., Wayland, J., Sahoo, H. K., & Geores, M. E. 2016. The Role of Meso-level Facilitating Conditions in the Emergence of Community-based Forest Management in Boudh District of Odisha. *Environment and Ecology Research* 4(2), 50-62.
- Wayland, J. 2014. *A Drop in the Bucket? Foreign Aid Effectiveness in the Water, Sanitation, and Hygiene (WASH) Sector*. Masters Thesis. American University, Washington, D.C.
- Wayland, J. 2008. *Ecology of Scale: Re-evaluating the Role of Small and Medium-Sized Enterprises in a Sustainable Economy*. Senior Honors Thesis. The College of William and Mary, Williamsburg, Virginia.

### **PRESENTATIONS**

- Wayland, J. 2016. “Mapping Natural Resource-Based Conflicts in the Philippines.” Oral presentation at the 2016 National Peace Corps Association—Peace Corps Connect Conference, George Washington University, Washington, D.C., September 21-25.
- Wayland, J. 2016. “Black Sand and the Red Court: The Anatomy of a Mining Conflict in the Northern Philippines.” Oral paper presentation at the 2016 Race, Ethnicity, and Place Conference, Kent State University, September 21-23.
- Wayland, J. 2016. “Mining and Insurgency in the Philippines: A Subnational Analysis of Natural Resource Conflict Using Spatial Regression Analysis of Remotely Sensed Data.” Oral paper presentation at the 2016 International Studies Association Asia Pacific Conference, City University of Hong Kong, Hong Kong, June 25-27.
- Wayland, J. 2016. “Constraints on Foreign Aid Effectiveness in the Water, Sanitation, and Hygiene (WASH) Sector.” Oral paper presentation at the 2016 Central East European International Studies Association-International Studies Association Joint International Conference, University of Ljubljana, Slovenia, June 22-25.
- Wayland, J. 2016. “Interaction Effects of Natural Resource Dependence, Environmental Degradation, and Economic Inequality on Civil Conflict and Terrorism: A Spatial Econometric Approach.” Oral paper presentation at the 2016 Central East European International Studies Association-International Studies Association Joint International Conference, University of Ljubljana, Slovenia, June 22-25.
- Wayland, J. & Assenza, A. 2016. “Railroad Abandonments in the Twenty-First Century: Mapping the loss of U.S. Freight Rail Capacity.” Oral paper presentation at the 2016 Association of American Geographer Annual Meeting, Hotel Nikko, San Francisco, CA, March 29-April 2.

- Kuniholm, M. & Wayland, J. 2015. "Legacies of Conflict and Natural Resource Resistance in Guatemala." Oral paper presentation at the 2015 Association of American Geographers Annual Meeting, Hyatt Regency Hotel, Chicago, IL. April 21-25.
- Wayland, J. 2014. "Trickle Down Aid? Evaluating the Local Impact of Water, Sanitation, and Hygiene (WASH) Sector Aid in Malawi." Oral paper presentation at the 2014 International Studies Association Northeast Conference, Tremont Plaza Hotel, Baltimore, MD, November 7-8.
- Wayland, J. 2014. "Natural Resource Extraction and Civil Conflict: Opening the Black Box." Oral paper presentation at the 2014 International Studies Association Northeast Conference, Tremont Plaza Hotel, Baltimore, MD, November 7-8.
- Wayland, J. & Caspersen, S. 2014. "Using the Fractional Logit Model to Assess the Impact of Transportation-Related Particulate Matter Pollution on the Abundance of Epiphytic Communities: What's Not to Lichen?" Oral paper presentation at the 2014 Robyn Rafferty Mathias Student Research Conference, American University, Washington, DC, March 29.
- Wayland, J. 2013. "Why WASH Works: A Framework for Evaluating Foreign Aid Effectiveness in the Water, Sanitation, and Hygiene Sector." Oral paper presentation at the 2013 International Studies Association Northeast Conference. Providence Biltmore Hotel, Providence, RI, November 8-10.
- Wayland, J. 2012. "A Drop in the Bucket? Examining the Effectiveness of Official Development Assistance in the Water, Sanitation, and Hygiene (WASH) Sector." Oral paper presentation at the 2012 International Studies Association Northeast Conference. Tremont Plaza Hotel, Baltimore, MD. November 2-4.

### SCHOLARSHIPS, AWARDS AND DISTINCTIONS

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| 2014-2018 | University of Maryland Flagship Fellow  |
| 2014      | Best Oral Presentation in the Sciences by a Graduate Student Award Recipient, Robyn Rafferty Mathias Student Research Conference, American University |
| 2008      | William and Mary Campus Sustainability Project Proposal Competition Winner  |
| 2008      | Lauren Burns Environmental Outreach and Service Award Recipient, The College of William and Mary  |
| 2007      | Honors Fellowship Recipient, The College of William and Mary  |
| 2007      | Roy R. Charles Center Scholarship for Undergraduate Research Recipient, The College of William and Mary   |
| 2005      | Andrew W. Mellon Foundation Grant Recipient   |

### OTHER INFORMATION

**Technical skills:** Statistical analysis (Stata, R, Excel), Geographical Information Systems (ArcGIS, GoogleEarth), remote sensing (ENVI, PCI Geomatica), environmental design (LEED trained), ecological field methods (species identification, monitoring, sampling techniques), social scientific field methods (survey design, community-based assessment, interviewing)

**Languages spoken:** English (native), Tagalog/Filipino (advanced), Iluko/Ilocano (advanced), French (intermediate)