# Christopher L. Crawford

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## Education

**Princeton University**, PhD in Environmental Policy, School of Public and International Affairs *Princeton, NJ | 2016 – 2022*
- Dean's Completion Fellowship 2022; Princeton Energy & Climate Scholar; GPA: 3.95; GRE: 169/170 verbal, 167/170 quantitative

**University of Michigan**, BS (with distinction) in Ecology & Evolutionary Biology, Minor in Physics *Ann Arbor, MI | 2008 – 2012*
- GPA: 3.82; Phi Beta Kappa Society; University Honors for Academic Excellence: 2008-2012; James B. Angell Scholar: 2012

## Research and Professional Experience

**Princeton University** Postgraduate Research Associate *Princeton, NJ | June 2022 - present*
Graduate Researcher & PhD Candidate *Sep. 2016 – May 2022*

- Developed an expertise in biodiversity metrics by showing that commonly used methods for measuring biodiversity produce radically different land-use recommendations for either biodiversity protection or agricultural conversion, resulting in a peer-reviewed article informing how biodiversity is incorporated into spatial land-use prioritization and planning decisions.
- Produced quantitative assessments of the impact of cropland abandonment and recultivation on carbon storage and biodiversity by leveraging a high-resolution land cover time series for 11 sites across 4 continents alongside maps of biodiversity and carbon.
- Developed R and shell scripts to process hundreds of millions of pixels of data on Princeton's computing clusters and quantify the persistence of cropland abandonment through time, producing a high-impact peer-reviewed article.
- Combined high-resolution land cover maps with distribution and habitat data for over 2000 bird and mammal species to analyze how abandonment, secondary succession, and recultivation affected habitat availability for individual species through time.
- Authored 4 publications (3 as first-author) in high-impact journals like *Science Advances* & *Ecological Applications*, along with 2 research reports and 4 additional manuscripts under review or in prep. See full publications on Google Scholar.
- Served as an Assistant in Instruction (TA) for two semesters of SPI/ENV 350 – The Environment: Science and Policy (2019, 2020), leading three weekly discussion sections on environmental policy issues including natural resource management, biodiversity, wildlife trade, climate change, and ecosystem services, contributing to lesson planning, and grading student papers and exams.

**Sustainable Conservation** Project Manager *San Francisco, CA | Jan. – May 2016*
Project Associate *July 2013 – 2015*

- Mapped all restorable areas along California's Mokelumne River and quantified the corresponding costs and ecosystem service benefits of restoration, producing a cost-benefit analysis and report informing watershed-wide conservation planning.
- Managed PlantRight's annual Spring Nursery Survey to track the retail market for invasive plants in California, coordinating and training more than 150 volunteers each year to survey more than 250 stores.
- Led annual process to update PlantRight's list of commonly sold invasive plants, leveraging data on horticultural prevalence (from annual survey), invasion risk, geographic range, and expert recommendations on non-invasive alternatives.
- Developed strong collaborations across diverse sectors and industries in order to solve environmental problems and facilitate restoration projects, including businesses (e.g., retail garden centers recruited as "PlantRight Partners"), landowners, farmers, public utilities, industry groups, volunteer groups, academics, and conservation NGOs.

**Michigan State University** Data Quality Controller *Western Province, Zambia | May – July 2012*

- Trained, supervised, and managed survey teams as part of the 2012 Rural Agricultural Livelihoods Survey, a nationally representative economic survey of 8,500 Zambian farm households.

**University of Michigan Biological Station** NSF Research Experience for Undergraduates *Pellston, MI | June – Aug. 2011*

- Designed and conducted two-month research project studying patterns of song interaction in two migratory populations of birds in northern Michigan, establishing baseline data to inform further science and co-authoring a peer-reviewed journal article.

## Technical Skills

- Geospatial analysis in R, Google Earth Engine, ArcGIS, and QGIS.
- Programming languages: R (advanced), linux/unix/bash (moderate), Python (beginner), JavaScript (beginner),
- Programming skills: cluster computing with SLURM, version control and collaboration with Github, producing reproducible research with Markdown, data visualization with ggplot2.
- R package expertise: tidyverse, data.table, terra, raster, sf, arrow.

## Leadership, Teamwork, and Outreach

- Communicated research findings to academic and public audiences, presenting at 4 academic and industry conferences, giving 2 invited undergraduate course lectures, and getting press coverage from *BioScience*, Bloomberg, and The Hill.
- Reviewed and edited academic articles by policy graduate students, as Associate Editor (2018, 2019) of the student-run Journal of Public and International Affairs, published by the Association of Professional Schools of International Affairs and Princeton's School of Public & International Affairs (SPIA).
- Conducted outreach on environmental issues such as climate change (meeting with congressional staff and providing 2 lectures to local high schoolers) and invasive plants (including 7 presentations to garden groups in California and 6 online webinars).
- Conducted invited peer reviews for academic journals such as *BioScience, International Journal of Ecology*

## Interests

- Perfecting my sourdough technique, looking for birds, listening to Swedish music, taking photos of clouds, & cooking spicy food.