

Vincent Ricciardi, PhD

Data Scientist for Public Good

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EDUCATION

PhD in Resource Management & Environmental Studies, University of British Columbia	2019
MSc in Geography, Pennsylvania State University	2014
BA in Psychology, Kalamazoo College	2009

SKILLS

Coding	R (9 years), Python (5 years), Bash/Unix (4 years)
Skillsets	Inferential Statistics, Geographic Information Systems (GIS) and Spatial Analysis, Machine Learning, Natural Language Processing (NLP), Network Analysis

EMPLOYMENT

Jr Data Scientist, World Bank 2019 – Present

Data scientist for high-impact data communication publications and open-datasets

Lead author for chapter in flagship report with over 1 million downloads per year (WDR)

Automated time series outlier detection for database with over 500k visitors a year (WDI)

Lead environmental scientist for data journalism and visualization project (SDG Atlas)

PhD Student & Research Assistant, University of British Columbia 2015 – 2019

10 publications in 4 years. 3 are in the top 5% of most discussed out of 14 million ranked

Collaborations included:

Gates Foundation	Built NLP models to automate meta-analysis with 97% accuracy
United Nations FAO	Built mixed models to test UN's method to monitor farmer poverty
CGIAR Big Data Platform	Created global map of farm sizes with machine learning at 10km ²
Canada Research Grant	Led research team to harmonize agricultural data from 55 countries

Independent Consultant, Cambodia, Ghana, Thailand, Vietnam 2010 – 2015

Led field research teams. Communicated project impacts to ministries and funders.

Clients included:

USAID Subcontract	Value chain assessment for sweet potatoes
iDE	Spatial analyses for program assessments and donor reports
ECHO Asia	Led field biodiversity surveys and crop trials

Research Assistant

5 publications in 3 years

Pennsylvania State University	Modeled land-use and disease outbreak, Ghana	2012 – 2014
Massachusetts Institute of Technology	Collated material for neuroscience study	2007

SELECTED PUBLICATIONS (Full list available in Google Scholar)

15 academic publications – 4 in publishing pipeline

20 conference and workshop presentations

Ricciardi, V. et al. Evidence synthesis: Identifying funding priorities for water stressed smallholder farming systems using machine learning. *Nature Sustainability*. In Review.

Ricciardi, V., Ramankutty, N., Mehrabi, Z., Wittman, H., James, D. Smaller farms are consistently higher yielding and more biodiverse than large farms: A meta-analysis. *Nature Sustainability*. *In Review*.

Mehrabi, Z., **Ricciardi, V.**, et al. The global digital divide in data-driven agriculture. *Science Advances*. *In Press*.

Khoury, D., Kisel, Y., Kantar, M., Barber, E., **Ricciardi, V.**, Klirs, C., Kucera, L., Mehrabi, Z., Johnson, N., Klabin, S. and Valiño, Á., 2019. Science-graphic art partnerships to increase research impact. *Nature Communications Biology*, 2(1): 1–5.

McDowell, G., Huggle, C., Frey, H., Wang, F., **Ricciardi, V.**, Cramer, K. 2018. Adaptation action and research in glaciated mountain systems: Are they enough to meet the challenge of climate change? *Global Environmental Change*. 54: 19–30.

Ricciardi, V., Ramankutty, N., Mehrabi, Z., Jarvis, L., Chookolingo, B. 2018. How much of our world's food do smallholders produce? *Global Food Security*, 17: 64–72.