

## MARIO REINALDO MACHADO, PhD

Visiting Lecturer, Department of Latin American, Latino & Caribbean Studies, Dartmouth College  
Research Affiliate, Gund Institute for Environment, University of Vermont

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## EDUCATION

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**Clark University**, Worcester, MA, August 2016 - April 2021.

*Doctor of Philosophy* in Geography.

*Dissertation*: Sustainable landscapes, sustainable communities: Landscapes, livelihoods and ecology through Cuba's agrarian transition

**Pennsylvania State University**, University Park, PA, September 2014 - May 2016.

*Master of Science* in Geography.

*Thesis*: Politics all the way down: Navigating the food security and food sovereignty nexus in the Afram Plains, Ghana

**Pennsylvania State University**, University Park, PA, September 2007 - May 2011.

*Bachelor of Science* in Biological Anthropology, Minor in Geography

Summa Cum Laude, GPA: 3.86

## PUBLICATIONS

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### *Scholarly*

Machado, M.R. & Healy, M. (2024). Landscape multifunctionality, agroecology and smallholders: A socio-ecological case study of the Cuban agroecological transition. *Landscape Research*.

Sands, B., **Machado, M. R.**, White, A., Zent, E., & Gould, R. (2023). Moving towards an anti-colonial definition for regenerative agriculture. *Agriculture and Human Values*, 40(4), 1697-1716.

Machado, M. R., & Coleman, A. F. (2023). Incentivizing the production of ecosystem services on working lands: The opportunities and challenges of funding "nature's contributions to people" in the US Northeast. *Agricultural and Resource Economics Review*, 1-28.

Machado, M. R. (2022). Smallholder farming for sustainable development: lessons on public policy from the Cuban agroecological transition. *The Journal of Peasant Studies*, 1-21.

Moulton, A. & **Machado, M.R.** (2019). Bouncing forward after Irma and Maria: Acknowledging colonialism, problematizing resilience and thinking climate

- justice. *Journal of Extreme Events*, 6(1), 1940003.
- Fernández, M., Williams, J., Figueroa, G., Graddy-Lovelace, G., **Machado, M. R.**, Vásquez, L., Pérez, N., Casimiro, L., Romero, G., & Funes Aguilar, F. (2018). New Opportunities, New Challenges: Harnessing Cuba's Advances in Sustainable Agriculture under Normalizing Relations. *Elementa Science of the Anthropocene*, 6(1), 76.
- Machado, M. R. (2018) What's going on with land-use in Cuba?: Disparate data sets and the Cuban agricultural transition. *Journal of Land Use Science*, 13(4), 439-446.
- Machado, M. R. (2018). Emergent livelihoods: A case study in emergent ecologies, diverse economies and the co-production of livelihoods from the Afram Plains, Ghana. *Geoforum*, 94, 53-62.
- Machado, M. R. (2017). Alternative to what?: Agroecology, food sovereignty and Cuba's agricultural revolution. *Human Geography*, 10(3), 7-21.
- Tschakert, P., Das, P. J., Pradhan, N.S., **Machado, M.R.**, Lamadrid, A., Buragohain, M., & Hazarika, M.A. (2016). Micropolitics in collective learning spaces for adaptive decision making. *Global Environmental Change*, 40, 182-194.
- Tschakert, P., Ricciardi, V., Smithwick, E., **Machado, M.R.**, Ferring, D., Hausermann, H. & Bug, L. (2016) Situated knowledge of pathogenic landscapes in Ghana: Understanding the emergence of Buruli ulcer through qualitative analysis. *Social Science and Medicine*, 150, 160-171.
- Tschakert, P., & **Machado, M.R.** (2015). Gender justice and rights in climate change adaptation: opportunities and pitfalls. In C. M. Koggel & C. Bisman (Eds.), *Gender justice and development: Local and global*. London: Routledge.
- Tschakert, P., & **Machado, M.R.** (2012). Gender justice and rights in climate change adaptation: opportunities and pitfalls. *Ethics and Social Welfare*, 6(3), 275-289.

### **Reports & White Papers**

- Coleman, A., & **Machado, M. R.** (2022). Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension. *Extension Foundation*.

### **Book Reviews**

- Machado, M. R. (2016) [Review of book *Just Food: Philosophy, food and justice*, by J. M. Dieterle]. *Agriculture and Human Values*, 1-2.
- Machado, M. R. (2015). [Review of the book *The politics of land and food scarcity*, by P. de Castro]. *Agriculture and Human Values*, 33(1), 229-230.
- Machado, M. R. (2015). [Review of the book *Trade, food security, and human rights: the rules for international trade in agriculture products and the evolving world food crises*, by Y. Chen]. *Agriculture and Human Values*, Vol. 32.4.

### **Popular**

- M. R. Machado (2023, June 5th). A USDA Pilot Project Funds Vermont Farmers Who Practice Sustainable Grazing. *Barn Raiser Media*. Retrieved from: <https://barnraisingmedia.com/a-usda-pilot-project-funds-vermont-farmers-who-practice-sustainable-grazing/>
- M. R. Machado (2023, February 22) When crisis strikes, get to planting: Lessons on resilience from the Cuban agroecological transition. *The Preserve Journal*. Issue 8, print.
- M. R. Machado (2022, September 21) Can death metal save the Amazon? Gojira - a huge

- French death metal band are fusing music and activism to help protect the Amazon rainforest. *EcoHustler*. Retrieved from: <https://ecohustler.com/culture/can-death-metal-help-save-the-amazon>
- M. R. Machado & M. Fernandez (2022, September 7). The view from La Picadora: Cuba, agroecology and a landscape in flux. *Orion Magazine*. Retrieved from: <https://orionmagazine.org/article/cuba-la-picadora-agroecology-sustainability/>
- M. R. Machado (2020, March 25). Death Metal for a Dying Planet. *In These Times*. 44(3). Retrieved from: <https://inthesetimes.com/article/metal-band-music-cattle-decapitation-climate-change-travis-ryan-death-atlas>
- M. R. Machado (2020, February 5). Mapping the End of the World: A polar scientist and a heavy-metal band depict global climatic dystopia. *Guernica*. Retrieved from: <https://www.guernicamag.com/mapping-the-end-of-the-world/>
- M. R. Machado (2019, August 23). Anthems for the Anthropocene: In hardcore music, environmental activism has found an unlikely partner. *Guernica*. Retrieved from: <https://www.guernicamag.com/anthems-for-the-anthropocene/>
- M. R. Machado (2018, April 2). Fish Out of Water. *Uneven Earth*. Retrieved from: <http://unevenearth.org/2018/04/fish-out-of-water/>
- M. R. Machado. (2016, December 2). Dreams and Reality in la Habana. *National Geographic Explorers Journal*. Retrieved from: <https://blog.nationalgeographic.org/2016/12/02/dreams-and-reality-in-la-habana/>
- M. R. Machado. (2016, December 14). Change, Struggle and What’s Under the Hood of a Cuban Taxi. *National Geographic Explorers Journal*. Retrieved from: <https://blog.nationalgeographic.org/2016/12/07/change-struggle-and-whats-under-the-hood-of-a-cuban-taxi/>
- M. R. Machado. Contributing blogger for *Huffington Post* online, July 2013 – December 2017. Retrieved from: <https://www.huffingtonpost.com/author/mario-machado>
- M. R. Machado. Contributing blogger for *Organic Gardening* magazine, September 2011 – January 2014.

## EMPLOYMENT HISTORY

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**Visiting Lecturer**, *Department of Latin American, Latino & Caribbean Studies, Dartmouth College*, Hanover, NH, June 2024 - present

- Full-time lecturer on a variety of classes including: Food History, Complexities of Latino Identities, Foreign Policy in Latin America, and Speculative Fiction in Latin America.
- Participated in faculty meetings, conferences and other departmental-sponsored events.

**Co-founder/Researcher**, *SocioTerra Consulting LLC*

Franklin, NH, March 2024-present

- Founding member/co-owner of [SocioTerra Consulting LLC](#)

**Research Manager**, *Bio-Logical Capital*

Denver, CO, May 2023 - March 2024

- Social and economic research lead on USDA Conservation Innovation Grant “Managing Pasture for Healthy Farms and Soils Across Vermont”
- Management of an on-farm, farmer-driven research program on regenerative agriculture practices at Philo Ridge Farm in Charlotte, Vermont
- Development of a long-term, longitudinal research study of land-change conversion from conventional dairy and annuals to perennial, grazed pasture.
- Helped build and facilitate professional research networks between a variety of public and private partners including: UVM Extension, the Gund Institute, the Vermont Land Trust, Stonybrook farm, the Vermont Agency of Agriculture, Food and Markets, the American Farmland trust, among others.
- Quantitative data collection and analysis of data related to soil health, forage quality, species diversity, etc.
- Qualitative data collection (including group facilitation) and analysis of semi-structured interviews, focus groups, and surveys

**Postdoctoral researcher**, *Gund Institute for Environment, University of Vermont*  
Burlington, VT, January 2022 - May 2023.

- Supported socio-economic data collection and analysis on USDA Conservation Innovation Grant “Managing Pasture for Healthy Farms and Soils Across Vermont”
- Developed proposal for Sustainable Agricultural Research and Education Partnership grant analyzing farmer perspectives of the Vermont Pay for Phosphorus PES program
- Wrote and published various academic articles related to the themes of payments for ecosystem services, regenerative agriculture, food systems and landscape multifunctionality

**Research Fellow**, *Northeast Ecosystem Services Assessment Fellowship, Extension Foundation*  
Kansas City, MO. June 2021 - March 2022.

- Conducted regional assessment of payments, incentive structures, and institutions related to ecosystem service delivery in the Northeast
- Coded and analyzed data from over 1300 programs from the federal- and state-level
- Produced a written report and academic paper on analysis and results..
- Planned and conducted a stakeholder symposium to disseminate results.

**External Research Consultant**, *Caribbean Agroecology Institute, University of Vermont*  
Burlington, VT. May 2017 - present.

- Conducted analysis and produced graphics on agricultural data from the FAO
- Researched, synthesized, produced reports on various topics related to Cuban agroecology and tropical agriculture.
- Wrote monthly news summaries for CUSAN (Cuban-US Agroecological Network) on Cuban agriculture and relevant issues.
- Wrote for academic and non-academic publications, including peer-reviewed journal articles and blogs for the VCI website.
- Translated Spanish language academic and non-academic articles for publication.

**Research Consultant**, *Adaptation Agriculture to Climate Today (ACToday), International Research Institute for Climate and Society, Earth Institute, Columbia University*  
New York, NY. January 2021 - September 2021.

- Helped to develop a monitoring and evaluation plan for ACToday programming in six partner countries.
- Conducted qualitative analysis of monitoring and evaluation data
- Participated in writing and disseminating findings both within IRI, Columbia World Projects and beyond.

**Research Consultant, Kenya & East Africa/Trade and Resilience Analysis, United States Agency of International Development**

Washington DC. September 2019 - February 2020.

- Conducted qualitative analysis and literature review pertaining to livelihood resilience, market impacts and climate shocks in East Africa.

**Agricultural Extension Volunteer, United States Peace Corps**

Asuncion, Paraguay. September 2011 - December 2013.

- Integrated and lived in the rural community of Guido Almada for 2 years.
- Gained linguistic proficiency in both Spanish and Guarani.
- Conducted agricultural/horticultural development work including organic gardening, low-input agriculture, soil conservation practices, demonstration plots, among others
- Secondary projects included: health education, HIV/AIDS outreach and awareness, literacy and educational initiatives, introduction of eco-friendly, income-generating technologies.

**Production Garden Assistant, Rodale Institute**

Kutztown, PA. May 2011 - August 2011.

- Assisted with general crop management at all stages of the production process.
- Learned and implemented a variety of organic techniques throughout the growing season.
- Worked directly with personnel researching different aspects of organic production.

## RESEARCH EXPERIENCE

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**Assistant researcher, USDA NRCS Conservation Innovation Grant Managing Pasture for Healthy Farms and Soils across Vermont.** Burlington, VT. January 2022 - May 2023.

- Provided input on the socioeconomic, financial and ecological components of the research
- Carried out social science research including interviews, surveys and focus groups
- Carried out ecological fieldwork and quantitative data collection on pasture biodiversity and soil health.
- Conducted qualitative data analysis
- Developed baseline socioeconomic report entitled *USDA NRCS Conservation Innovation Grant Managing Pasture for Healthy Farms and Soils across Vermont: Summary of baseline socio-economic survey, May - June 2022*

**Research Fellow, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Nexus Assessment**

Bonn, DE. January 2022 - present.

- Conducted expert-level review, analysis and synthesis of latest scientific research on policy

response options that address the nexus of food, water, biodiversity and climate.

- Co-authored parts of “Chapter 4: Policy and sociopolitical options across the nexus that could facilitate and accelerate the transition to a range of sustainable futures” along with an international, interdisciplinary research team.
- Participated in-person in three annual author meetings in Germany, South Africa, and Nepal, respectfully, and the plenary sessions in Namibia.

**Research Assistant, Humanitarian Response and Development Lab, Clark University, Department of International Development and Community Engagement**  
Worcester, MA. May 2017-August 2017.

- Transcribed interviews collected through qualitative fieldwork using Microsoft Word.
- Coded qualitative interview data on livelihoods, household and community vulnerability and adaptation using MAXQDA.

**Research Assistant, Himalayan Climate Change Adaptation Programme, Pennsylvania State University, Department of Geography**  
University Park, PA. October 2014 - January 2016.

- Conducted analysis of qualitative data on flooding adaptation in rural communities from the Assam region of India.
- Participated in synthesizing and writing for co-publication in *Climate and Development*.

**Research Assistant, ReBUild, Pennsylvania State University, Department of Geography**  
University Park, PA. June 2014-December 2015.

- Participated in field work, sample collection, educational outreach and teaching workshops in communities in eastern Ghana, June 2014.
- Developed a website, teaching modules, education manual, and other publications for the project.
- Conducted follow-up field visit to eastern Ghana, July, 2015
- Data analysis and writing for co-publication in *Social Science and Medicine*.

**Research Assistant, NSF PIRE proposal, Pennsylvania State University, Department of Geography**  
University Park, PA. May 2011- August 2011.

- Conducted review of scientific literature relevant to the proposal “Sustainable Biofuel Production: Africa's Position in a Teleconnected World” (Tschakert PI).
- Synthesized and summarized material for inclusion in the final proposal.
- Used satellite imagery, literature and online sources to locate potential field sites.

## PRESENTATIONS

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“NRCS Conservation Innovation Grant: Managing Pasture for Healthy Farms & Soils Across Vermont.” 2024 Northeast Grazing and Livestock Conference. January 25th, 2024.

“Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast:

- Successes, Challenges, and Opportunities for Producers and Extension” Vermont State Senate Committee on Agriculture, Food Resiliency, and Forestry. February 21st, 2023.
- “Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension” Vermont State House Committee on Agriculture, Food Resiliency, and Forestry. February 21st, 2023.
- “Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension” Northeast Agricultural and Resource Economics Association (NAREA) annual meeting and workshop. June, 14<sup>th</sup>, 2022.
- “Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension” Association of Northeast Extension Directors (NEED) spring meeting; Virtual. April, 14<sup>th</sup>, 2022.
- “Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension.” Northeastern Regional Association of State Agricultural Experiment Station Directors (NERA) spring meeting; Virtual. March, 15<sup>th</sup>, 2022.
- “What’s going on with land-use in Cuba?: Disparate data sets and the Cuban agricultural transition.” American Association of Geographers annual meeting; Washington DC, USA. April, 8<sup>th</sup>, 2019.
- “Sustainable landscapes, Sustainable communities: Landscapes, livelihoods and ecology through Cuba’s agricultural transition.” Land Use and Livelihoods: Evidence-based solutions to complex socio-ecological problems, conference; Boston, MA, USA. December 7<sup>th</sup>, 2018.
- “Machines to Make Machines: Chasing the post-human specter in eco-hardcore music” Minding Animals annual meeting; Mexico City, MX. January, 18<sup>th</sup>, 2018.
- “Field Research Experiences in Cuba” American Association of Geographers Annual meeting; Boston, MA, USA. April, 8<sup>th</sup>, 2017.
- “Resilience in the Anthropocene: The political ecology of assemblage co-production in the Afram Plains, Ghana.” American Association of Geographers Annual meeting; Boston, MA, USA. April, 8<sup>th</sup>, 2017.
- “Politics all the way down: Navigating the food security and food sovereignty nexus in the Afram Plains, Ghana.” American Association of Geographers Annual meeting; San Francisco, CA, USA. March, 29<sup>th</sup>, 2016.
- “Politics all the way down: Navigating the food security and food sovereignty nexus in the Afram Plains, Ghana.” DEE Talks, University of Western Australia. Crawley, WA. March 4<sup>th</sup>, 2016
- “Isolation as Opportunity?: Bartering Economies and Alternative Food Systems in the Afram Plains, Ghana.” New Political Science conference; Havana, Cuba. November 17<sup>th</sup>, 2015.
- “Renegotiating spaces of food production: The geography of food sovereignty in Holguín, Cuba.” American Association of Geographers Annual meeting; Chicago, IL, USA. April, 21<sup>st</sup>, 2015.

## TEACHING

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- **Worcester Polytechnic Institute, Dept. of Social Sciences and Policy Studies,** Worcester, MA. Instructor for ENV 1500: Introduction to GIS. March 2021 - May 2021.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 293: Introduction to Remote Sensing. August 2020 - November 2020.
- **Clark University, Department of Geography,** Worcester, MA. Co-Instructor for Geography 104: Earth Systems Science, First Year Intensive seminar. January 2020 - May 2020.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 136: Gender and the Environment, August 2019-December 2019.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 126: Living in the Material World, January 2019-May 2019.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 116: Forest Ecology, August 2018 - December 2018.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 101: Food Justice and Food Movements, January 2018-May 2018.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 127: The Political Economy of Development, August 2017-December 2017.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 101: Food Justice and Food Movements, January 2017-May 2017.
- **Clark University, Department of Geography,** Worcester, MA. Teaching Assistant for Geography 104: Earth Systems Science, August 2016-December 2016.
- **Pennsylvania State University, Department of Geography,** University Park, PA. Teaching Assistant for Geography 001: Parks and Sustainability, Online Course, January 2016-May 2016.
- **Pennsylvania State University, Department of Geography,** University Park, PA. Teaching Assistant for Geography 020: Introduction to Human Geography, August 2015-December 2015.

## HONORS, AWARDS AND GRANTS

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- Co-PI, Food System Research Center, Planning grant for measuring food system sustainability, UVM College of Agriculture and Life Sciences, PI: Travis Reynolds, 2022 (\$50,000)
- Co-PI, Northeast Sustainable Agriculture Research and Education (SARE) partnership



- grant, PI: Travis Reynolds, 2022 (\$30,000)
- Field Research Grant, The Christopher Reynolds Foundation, 2019 (\$4000)
- Lewis and Clark Fund for Exploration and Field Research, American Philosophical Society, 2019 (\$5000)
- The McIntyre Teaching Assistant Scholarship, Clark University, 2018.
- Geller Student Research Award, Clark University, 2018. (\$2500)
- Graduate Research Fellowship Program, National Science Foundation, Honorable Mention, 2016.
- Graduate Research Fellowship Program, National Science Foundation, Honorable Mention, 2015.
- National Geographic Young Explorers Grant, National Geographic, 2015. (\$6000)
- Master of Science Proposal E. Willard Miller Award, Pennsylvania State University, 2015.
- Anne C. Wilson Fellowship, Pennsylvania State University, 2014.
- University Graduate Fellowship, Pennsylvania State University, 2014
- Dean's List, 8 consecutive semesters, Pennsylvania State University, 2007 – 2011.
- Eagle Scout Award, Boy Scouts of America, 2007.

## LANGUAGES

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*English*—fluent (native speaker)

*Spanish*—*Advanced mid* proficiency, certified by the United States Peace Corps Paraguay, 2013.

*Guarani*—*Intermediate High* proficiency, certified by the United States Peace Corps Paraguay, 2013.

## SERVICE

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- **Reviewer**, *Reparative Fiscal Justice for Caribbean Climate Action, Climate and Community Project*, 2024
- **Board Member**, *Vermont Grass Farmers Association*, April 2024 - present
- **Board Member**, *Granite State Graziers*, November 2023 - present
- **Referee/Reviewer**: *Elements: Science of the Anthropocene*, 2023
- **Referee/Reviewer**: *Agricultural and Resource Economics Review*, 2022
- **Referee/Reviewer**: *The Extractive Industries and Society*, 2022
- **Referee/Reviewer**: *The Journal of Peasant Studies*, 2021
- **Referee/Reviewer**: *The Journal of Land Use Science*, 2020
- **Referee/Reviewer**: *The Journal of Extreme Events*, 2019
- **Referee/Reviewer**: *Geoforum*, 2019

## COMPUTER SKILLS

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- Microsoft Office (Word, Powerpoint, Excel)
- ESRI ArcMap/ArcGIS
- Google Earth Engine
- TerrSet/IDRISI
- MAXQDA
- NVIVO
- R Programming/Coding