

# BENJAMIN DUBE, PHD

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## EDUCATION

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### University of Vermont

Jan 2022

PhD in Natural Resources,

Rubenstein School of Environment and Natural Resources

Economics for the Anthropocene Fellow, Gund Institute for Environment

Dissertation: *Embracing Uncertainty, Ambiguity, And Complexity In Agriculture, Science, And Policy*

### Green Mountain College

May 2012

BA in Sustainable Agriculture

*Summa Cum Laude, College Honors*

## RESEARCH INTERESTS

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Soil Carbon Accounting, Ecosystem Services, Ecological Economics, Agroecology

## OCCUPATIONAL EXPERIENCE

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### Self-Employed

Feb 2025-present

*Independent Consultant: Soil Carbon Programs*

- Assisted a major Agricultural Carbon MRV company in revising and expanding their Model Validation under Verra's VM0042/VMD0053 standards and the CAR Soil Enrichment Protocol.

### Perennial Climate, Inc

May 2024–Oct 2024

*Applied Scientist, Regenerative Agriculture Programs*

*Remote*

- Co-lead author of a methodological "Tool" regulating use of Digital Soil Mapping in agricultural carbon projects under the Verified Carbon Standard.
- Research and Development on methods for accurately quantifying uncertainty of field and project-level carbon stocks predicted using Digital Soil Mapping.

### Anew Climate, LLC

June 2022–May 2024

*Agri-Carbon Analyst*

*Remote*

- Built workflows with spatial & farm-mgmt data for designing & quantifying carbon projects.
- Led statistical design and power analysis for agricultural carbon projects.
- Worked with a small team to write project design documents for two carbon projects under VCS.
- Evaluated and designed methods for bulk density corrections in soil carbon stock accounting.

### University of Vermont

Mar 2022–May 2022

*Field Research Leader*

*Burlington, VT*

- Prepared a report for the State of Vermont valuing ecosystem services from improved soil health.
- Built custom analysis software linking various agriculture-environment models including USLE, the NRCS curve number, DayCent and components of SWAT.

### Green Mountain College

Jan 2012–Dec 2013

*Farm Research and Production Assistant*

*Poultney, VT*

- Led data collection, management and analysis for Low-Energy Farming systems research project.
- Served as interim farm co-manager during farm manager's 7 week leave during the growing season.

## PUBLICATIONS

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### Peer Reviewed Journal Articles

- **Dube, B & Erickson, JD (2023)** Probabilistic Simulation of Phosphorus Loss Using the Vermont P-Index: A Bottom-Up Field to Watershed Approach. *Renewable Agriculture and Food Systems*. 38, E41. doi:10.1017/S1742170523000327
- **Dube, B (2021)** Why Cross and Mix Disciplines and Methodologies?: Multiple Meanings of Interdisciplinarity and Pluralism in EE. *Ecological Economics*. 179. doi.org/10.1016/j.ecolecon.2020.106827
- **Mulder KP & Dube B (2014)** Long-Term Ecological Assessment of Farming Systems (LEAFS): Comparing Human, Animal and Small Machine Power for Fresh-Market Horticulture. *Agroecology and Sustainable Food Systems*. 38:6 doi.org/10.1080/21683565.2014.884034
- **Dube B & Mulder KP (2014)** Energetic Analysis of Draft Animal Hay Harvest: An Alternative Look at Cellulosic Biomass. *Outlook on Agriculture*. 43:4 doi.org/10.5367/oa.2014.0181

### Book Chapters

- **Dube, B (2020)** Assessing Ecological Economics at 30: Results from a Survey of ISEE members. in Costanza, Erickson, Farley and Kubiskewski (eds). *Sustainable Wellbeing Futures: A Research Agenda for Ecological Economics*. Edward Elgar, Cheltenham, U.K., pp. 427-444.
- **Brevik K, Adams J, Dube B, Barbieri L & Yahya Haage G. (2020)** Well-being in the More-Than-Human World. in Costanza, Erickson, Farley and Kubiskewski (eds). *Sustainable Wellbeing Futures: A Research Agenda for Ecological Economics*. Edward Elgar, Cheltenham, U.K., pp. 156-166.

### Technical Reports

- **Dube B, White A, Ricketts T & Darby H (2022)** Economic Valuation of Ecosystem Services from Improved Soil Health in Vermont. Report to Vermont Payment for Ecosystem Services and Soil Health Working Group.

## SELECTED CONFERENCE PRESENTATIONS

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- **Dube, B & Potash, E: (Poster)** Mass Adjustments for Estimating Soil Organic Carbon Stocks: Evaluating Sample-Depth Strategies and Calculation Techniques. *Fall Meeting of the American Geophysical Union, December 15, 2023. San Francisco, CA*
- **Dube, B:** Order Beyond Discipline and Methodology? Contrasting Intellectual Goals of Transdisciplinary Ecological Economics *Biennial Meeting of the Canadian Society for Ecological Economics, May 25 2019, Waterloo, Ontario*
- **Dube, B** “Agro-ecology as Adaptive Management: Is a ‘Bottom-Up’ Paradigm for Eco-Friendly Agriculture Feasible?” *Biennial Meeting of the Canadian Society for Ecological Economics, October 19 2017, Montreal, Canada*
- **Dube B, Bliss S, Middleman M, Clithero G, Karas A, Farley J & Schmitt A** “Agroecology and the Global Environmental Crisis: Lessons from Santa Catarina, Brazil” *Biennial Meeting of the US Society for Ecological Economics June 26 2017, St. Paul, Minnesota.*
- **Dube B, Schmitt A, Fantini A & Farley J** “Forest Restoration, Farmer Livelihoods, and Environmental Regularization: A PAR Approach to Ecosystem Services in the Atlantic Rainforest, Southern Brazil.” *Biennial Meeting of the International Society for Ecological Economics. June 27 2016 Washington, DC.*

## TEACHING EXPERIENCE

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### Courses Taught

- University of Vermont. "Principles of Community Development Economics." Summer 2021
- Prescott College. "The Economics of Sustainable Organizations and Communities" (Master's Level) Fall 2019 –Summer 2021
- Green Mountain College. "Sustainable Community Development Economics." (Master's Level) Summer 2017, Spring 2017, 2018, 2019
- University of Vermont. "Principles of Community Development Economics." Summer 2021 (Co-instructor)
- University of Vermont. "Agroecology, Farmer Livelihoods and Ecosystem Restoration: Field Course in Santa Catarina, Brazil." Spring 2017 (Co-instructor)

### Academic Committees, Advising & Mentorship

- Masters Thesis Advisor: Steven Woods Sail Freight Revival: Methods Of Calculating Fleet, Labor, And Cargo Needs For Supplying Cities By Sail. Masters of Sustainable and Resilient Communities. Prescott College May, 2021

## OPEN-SOURCE SOFTWARE TOOLS

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### Flood Control Demand

Python

A tool for quantifying the relative amount of flood risk downstream from each location in a watershed.  
[Link](#)

### DEM Surface Area

Python

A tool for calculating by-cell surface area of land from a digital elevation model.  
[Link](#)

## TECHNICAL SKILLS

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- Python
- R
- GIS (Arc, Q and scripting)
- Git
- MS Office Suite
- Editing & writing for clarity & brevity
- Public oral presentation

## ET. CETERA

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- Holistic Management Planned Grazing Certification: Holistic Management International
- Permaculture Design Certificate: Lost Valley Ecological Education Center
- Garden Educator and Coordinator: The Homeward Bound Collective, Burlington VT (2018-2022)