

## Masha Vernik

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### **Education**

#### **University of Washington, PhD**

September 2025 – Present

School of Environmental and Forest Sciences

#### **University of Washington, M.S.**

September 2023 – August 2025

School of Environmental and Forest Sciences

GPA: 4.0

*Thesis Title:* Resilience and Adaptation to Climate Change Among Organic Farmers in the United States: A Mixed Methods Investigation

*Description:* Qualitative methodologies are used to understand the use of crop diversification as an adaptation strategy among organic vegetable farmers in western Washington. Bayesian statistical methodologies are used to model perceived adaptive capacity to climate change among organic farmers, using on survey data collected by the Organic Seed Alliance and Organic Farming Research Foundation integrated with meteorological data measuring drought, temperature extremes, and climatic variability.

*Committee:* Professor Sameer H. Shah, Professor Brittany Johnson, Professor Eli Wheat

#### **Boston University, B.A.**

September 2015 – May 2019

Major: International Relations; Minor: Biology

GPA: 3.95, *Summa Cum Laude*

*Thesis title:* Agroecology on Kichwa terms: Indigenous leaders and institutions negotiating cacao's role in the chakras of Santa Rita, Ecuador

*Description:* Investigation of the relationship between indigenous agriculture & cash crop production using participatory interview methods in the field

*Advisor:* Professor Julie Klinger

### **Academic and Practitioner Meetings**

#### **Academic Conference Presentations**

Vernik, M. 2025. Resilience in diversity: the role of crop diversity in climate adaptation among organic vegetable farmers in western Washington. American Association of Geographers Annual Meeting. American of Association of Geographers.

#### **Academic Panels**

MacManus, K., Pistolesi, L., Yetman, G., Brinks, J., **Vernik, M.**, Adhikari, S., Najafzadeh, F., Dzwonczyk, E., Vecellio, D., Boyer, A. ScienceCore Heuristics for Open science Outcomes in Learning (SCHOOL): Climate and Agriculture Module Development. American Association of Geographers Annual Meeting. American of Association of Geographers.

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### Practitioner Presentations

Vernik, M., Mandonado, S., McCluskey, C. 2025. Organic Seed Alliance Quarterly Call: Responding to Climate Shifts Through Seed. Virtual. Organic Seed Alliance.

Vernik, M., Galvis, A. 2024. Organic Seed Selection and Plant Breeding for Climate Resilience in the Western US. Tilth Conference 2024. Washington Tilth Alliance.

Vernik, M. 2024. Using satellite imagery to determine the impact of biosolids fertilizer on productivity in dryland wheat farms in Douglas County, WA. Biofest 2024: Giving Carbon Credit. Northwest Biosolids.

Greene, K., Vernik, M., Brin, S., Goldberg, Z. Diving Deep into Cucurbits. 2023. Northeast Community Seed Conference & Celebration. Northeast Organic Farming Association – New York.

Goldberg, Z., Rice, A., Vernik, M. 2022. Vision Jewish Seedkeeping: A Participatory Workshop on The Jewish Seed Project. Cultivating Culture 2022: A Virtual Gathering of Jewish Farmers. Jewish Farmer Network.

### Organized Meetings

D4 Hack Week: Disasters, Demography, Disparities, and Decisions January - September 2024  
University of Washington

*Description:* Lead coordinator for the [2024 D4 Hack Week](#), which brings together interdisciplinary researchers to create improved data products that integrate social and weather data to investigate human behavior and adaptive responses to flooding and other severe weather events. The D4 Hack Week is funded by a grant provided by the National Oceanic and Atmospheric Administration (NOAA) to the NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (AI2ES).

*Organizing Team:* Dr. Sara Curran, Dr. Ann Bostrom, Dr. Sameer Shah, Dr. Jorge Celis, Dr. David John Gagne, Dr. Amy McGovern, Dr. Andrea Schumacher, Dr. Julie Demuth

### Academic Publications

Brown, S., Griffin La Hue, D., Vernik, M., Finlinson, J., Butman, D. (2026). Quantifying the environmental and economic impact of municipal biosolids use in dryland wheat in Washington State. *Urban Agriculture & Regional Food Systems*, 11(1). <https://doi.org/10.1002/uar2.70038>

Vernik, M., Shah, S.H., Wheat, E., Johnson, B. Resilience in diversity: The role of crop diversity in climate adaptation among organic vegetable farmers in western Washington. [Under review in *Ecology and Society*]

Vernik, M., Atkisson, C., Shah, S.H. 2025. The role of land access on perceived adaptive capacity to climate change among U.S. organic farmers: A Bayesian modeling approach. [For submission to *Climate Risk Management*; 75% complete, not submitted]

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Bostrom, A. Curran, S., Shah, S.H., Allen, C., Salais, D., Vernik, M. Mobility, migration, and displacement in environmental hazards: Integrating demography, population health, and hazards research practices. [For submission to *Global Environmental Change*; 75% complete, not submitted].

### **Selected Non-Refereed Works**

Vernik, M., Roberts, S. 2024. [What is Jewish Seed?](#) The Natural Farmer, Northeast Organic Farming Association.

Vernik, M. 2020. [Create Space for Indigenous Leadership to Preserve Agricultural Biodiversity](#). Land Use & Livelihoods Initiative, Boston University Global Development Policy Center.

Vernik, M., Lamond., A. 2020. [Common Roots Film](#). Youtube.

### **Teaching Experience**

Teaching Assistant September 2025 – December 2025  
University of Washington Program on Environment  
The Urban Farm

Teaching Assistant September 2023 – December 2023  
University of Washington School of Environmental and Forest Sciences  
Society and Sustainable Environments

### **Guest Lectures**

Vernik, M. (October, 2025) *Resilient and Sustainable Livelihoods*. [Guest Lecture]. Society and Sustainable Environments. School of Environmental and Forestry Sciences. University of Washington, Seattle, WA.

Vernik, M. (October, 2025) *Resilience in diversity: Seed selection and climate adaptation among organic farmers in Western Washington*. [Guest Lecture]. Seeds & Society Seminar, Food Systems, Nutrition, and Health, University of Washington, Seattle, WA.

Vernik, M. (September, 2025) *Bayesian Modeling to Understand Climate Adaptation Among Organic Farmers in the U.S.* [Guest Lecture]. UW Data Science Seminar, eScience Institute, University of Washington, Seattle, WA.

Vernik, M. (May, 2025) *Bayesian Modeling to Understand Climate Adaptation Among Organic Farmers in the U.S.* [Guest Lecture]. UW Data Science Seminar, eScience Institute, University of Washington, Seattle, WA.

### **Professional Development**

Data Science Accelerator Program January 2025 – May 2025  
eScience Institute, University of Washington

*Description:* [Participant](#) in eScience program which pairs data scientists with researchers to collaborate on data-intensive research projects.

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### **Research Grants and Scholarships**

National Science Foundation Graduate Research Fellowship September 2023 – June 2028  
Amount: \$111,000

University of Washington Program on Climate Change, Climate Solutions Project Fund  
Amount: \$5,000 May 2024 – June 2025

Boston University Presidential Scholarship September 2015 – May 2019  
Amount: \$80,000

Boston University Undergraduate Research Opportunities Program September 2018 – May 2019  
Amount: \$2,400

Boston University Latin American Studies Travel Grant June 2018 – August 2018  
Amount: \$500

### **Honors & Awards**

*Summa Cum Laude* May 2019  
Boston University Student Sustainability Award May 2019  
College of Arts and Sciences Prize for Undergraduate Excellence at the Pardee School May 2019  
Phi Beta Kappa Honor Society December 2018  
Truman Scholarship Finalist January 2018  
Dean's List December 2015 – May 2019

### **Professional Experience**

Agronomy and Data Science Intern November 2024 - Present  
American Prime Sustainable Solutions  
Product development of satellite-based crop monitoring technology CropMap by conducting farmer interviews, analyzing climate datasets, and data integration to predict yields for oilseed farmers

Communications and Organizing Coordinator October 2020 – July 2023  
FarmSTAND (FKA Public Justice Food Project)  
Creative storytelling and relationship-building to promote legal advocacy organization and its aims to reform industrial animal agriculture and protect workers, the environment, consumers, and rural communities

Farm Crew June – August 2019, June – October 2024  
Local Roots Farm  
Organic vegetable production in Snohomish valley of Washington through planting seeds, transplanting seedlings, harvesting vegetables, laying irrigation, and more.

Food Policy Advisor January 2020 – September 2020  
Center for Environmental Peacebuilding  
Advocacy for use of city land for public gardening in collaboration with city officials and grassroots groups using geospatial analysis to determine viable locations

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Seed Networks Intern June 2018 – August 2018

German Agency for International Cooperation (GIZ)

Scoping for sustainable development project in Santa Rita, Ecuador to prepare small subsistence farms for climate change by identifying key community members with ancestral seed knowledge through participant-observation, interviews, and focus groups

### **Service & Outreach**

Seed Project Coordinator

January 2021 – Present

Jewish Farmer Network

Distribution of culturally relevant seeds, data collection and analysis of regional trials experiment, facilitation of group meetings and workshops, blog curation

Board Member

June 2022 – Present

Land Clinic, Sustainable Law Group

Strategic advisor to the Land Clinic, which uses legal tools to promote models of land tenure that support ecological land stewardship

Earth House Resident Assistant

August 2018 – May 2019

Boston University Residence Life

Led a sustainability-focused living-learning community through coordination of group projects like synchronizing electricity to green moments on the grid

### **Skills**

Software: R, Google Earth Engine, Python, ArcGIS, QGIS, Nvivo, Canva

Skills: Qualitative data collection and analysis, geospatial data analysis, multivariate data analysis, project management, written communication, meeting facilitation

### **Languages**

Russian – Fluent

Spanish – Advanced

French – Beginner

Portuguese – Beginner