Elinor Benami

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Appointments

Assistant Professor, Virginia Tech *Aug. 2020 - present*
Agricultural and Applied Economics Department

Faculty Affiliate *Summer 2020 - present*
Stanford Regulation, Evaluation, and Governance Lab

Faculty Affiliate *Spring 2021 - present*
VT Remote Sensing & Global Change Center Interdisciplinary Graduate Education Programs; Center for Advanced Innovation in Agriculture

Education & Training

Postdoctoral Scholar, University of California Davis *Nov. 2018 - Aug. 2020*
Agricultural and Resource Economics Department
Mentor: Michael Carter

Ph.D., Stanford University *Fall 2018*
Emmett Interdisciplinary Program in Environment & Resources
Co-Advisors: Marshall Burke and Eric Lambin
Fields: Production Economics and Land System Science

B.A., The University of North Carolina at Chapel Hill *May 2010*
Economics, minor Environmental Studies & Sciences
Honors and Distinction, Phi Beta Kappa

Publications & Presentations

Academic Manuscripts

Benami, E., Anderson, B., La, V., Lin, H., D.E. Ho. *in prep.* "Drop a Line, Submit on Time? Evidence from a Randomized Control Trial on the Effect of Pre-Deadline Reminders on Pollution Discharge Reporting."

Benami, E., Zhenong J., Carter M.R., Hobbs, A.W. *in prep.* "Get in the Zone: The Risk-Adjusted Welfare Effects of Using Machine Learning vs. Administrative Borders to Define Agricultural Index Insurance Zones."

Benami, E., Carter, M. R. 2021. *Applied Economic Perspectives and Policy.* "Can Digital Technologies Reshape Rural Finance? Implications for Credit, Insurance, and Saving"

Benami, E.*, Zhenong J.*, Carter M.R., Kenduiywo, B., Ghosh A., Hobbs, A.W., Hijmans R., and Lobell, D. 2021. *Nature Reviews Earth & Environment* "Uniting Advances in Remote Sensing, Crop Modeling, & Economics for Agricultural Risk Management." *Joint first authors.

Benami, E., Whitaker, R., Anderson, B., Ho D.E., La, V., Lin, H. *Peer-reviewed proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT).* "The Distributive Effects of Risk Prediction in Environmental Compliance: Algorithmic Design, Environmental Justice, and Public Policy."

Hino, M.*, Benami, E.*, Brooks, N. October 2018. "Machine learning for environmental monitoring." *Nature Sustainability.* *Joint first authors

Benami, E., Curran, L.M., Cochrane, M., Venturieri, A., Swartos, A., Moraes Franco R., Kneipp, J.. March 2018. "Oil palm land conversion in Pará, Brazil, 2006-2014: Evaluating the 2010 Brazilian Sustainable Palm Oil Production Program." *Environmental Research Letters.* 13(3): 1-12

Reports & Other Publications

Benami, E., Ho, D.E., McDonough, A. Feb 2020. *Stanford Institute for Economic Policy Research: Policy Brief.* Innovations for environmental compliance: emerging evidence and opportunities.

J. Zuckerman, J. Deason, E. Benami. 2013. "Targeting Proposition 39 to Help California's Schools Save Energy and Money" Climate Policy Initiative report

E. Benami, J. Wilkinson. 2013. "Using Data Tools to Optimize Indonesia's Land Resources: An Overview of Natural Capital Assessment" Climate Policy Initiative report

B. Pierpont, U. Varadarajan, A. Hobbs, E. Benami. 2013. "Improving Solar Policy: Lessons from the solar leasing boom in California" Climate Policy Initiative report

Selected Presentations

"Sense and Sustainability: Applications of remote sensing for environmental risk management" for VT Remote Sensing Interdisciplinary Graduate Education Program *Feb '21*

"AI for Clean Water: Modernizing Environmental Enforcement" ECOS Webinar For Practitioners *July '20*

"Quality Standards & the Role of Earth Observation in Improving Index Insurance" at AGU *Dec '19*

"Certifications, certainty, & satellites: evaluating programs to enhance farmer welfare & manage risk" at the University of Maryland, College Park *Dec '19*

"Applications of Machine Learning to Public Problems: The Clean Water Act and beyond." Invited Talk at UC Berkeley Course on Data, Environment and Society *Nov '19*

"Machine Learning for Environmental Monitoring - from Model to Field Trial" The Workshop on Environmental Economics and Data Science *(March 2019)* & CA Water Data Science Symposium *July '19*

"Prospects for Oil Palm Expansion in Latin America" at the University of Leicester *July '18*

"Recent Oil Palm Development in Brazil: Evaluating Expansion Dynamics and Constraints." Association of Tropical Biology and Conservation Annual Meeting in Kuching, Malaysia. *July '18*

"Market Based Mechanisms for Environmental Governance: Opportunities & Limits." At Stanford. *May '18*

"Towards Zero Deforestation Oil Palm? Evaluating the 2010 Sustainable Oil Palm Production Program & Brazilian Oil Palm Development (2006-2014)." *In Portuguese.* At EMBRAPA in Belém, Brazil. *Jan '18*

"Studies in Supply Chain Governance in Tropical Agriculture: the Case of Oil Palm in Pará." *In Portuguese.* At the Brazilian National Institute for Space Research (INPE) in Belém do Pará, Brazil. *Dec '16*

Selected Grants, Fellowships, & Honors

NASA Land-Cover and Land-Use Change (LCLUC) Early Career Scientist Grant, Co-Lead PI ($449,560)	*2020*
Stanford Impact Labs Grant for Modernizing Environmental Compliance, Co-PI ($500,000)	*2020*
Rising Environmental Leaders Program, Stanford University	*2018*
Preparing Future Professors Program, Stanford University & Foothill College	*2018*
NSF Dissertation Improvement Grant ($15,945)	*2017*
E-IPER Summer Graduate Research Grant, Stanford University (total $12,000)	*2014 - 2017*
McGee Levorsen Grant, Stanford School of Earth, Energy, & Environmental Sciences ($6,000)	*2014 - 2015*
NSF Graduate Research Fellowship ($96,000 + 3 years tuition)	*2013 - 2017*
Teresa Elms and Robert D. Lindsay IPER Fellowship (total $64,000 + tuition)	*2013 - 2014*
UNC-Chapel Hill Order of the Golden Fleece	*2009*
Eve Marie Carson Scholar, UNC-Chapel Hill (One Year of Tuition and $5,000 of Summer Funding Support)	*2009*
Morris K. and Stewart L. Udall Scholar ($5,000)	*2008*

Consultant, *Climate Policy Initiative* *06/2016 - 09/2016*

Evaluated strategic opportunities for sustainable land use finance investments for philanthropic partners that have disbursed over $200mil. to address social and environmental impacts of land uses.

Analyst, *Climate Policy Initiative* *12/2010 - 07/2013*

- Conducted interviews and co-wrote report on ways that California public schools can target a newly authorized $2.75bil. state fund for energy efficiency to save energy & money.
- Co-authored report on the role of the leasing model on California's solar deployment and costs.
- Contributed to development of organization's new tropical resource productivity program in Indonesia:
  - Wrote briefs on international tropical forest conservation programs, the eligibility of oil palm as a feedstock under the U.S. Renewable Fuel Standard, and ecosystem assessment processes.
  - Co-drafted $2mil. grant on joint agricultural production and ecosystem protection project in Borneo.

Teaching

Remote Sensing in the Social Sciences *Fall 2021*
Instructor of Record, Graduate Course, Virginia Tech

Environmental and Sustainable Development Economics *Spring 2021 & 2022*
Instructor of Record, Undergraduate Course, Virginia Tech

The Economics of Index Insurance *Summer 2019*
Co-Instructor of Short Course for Remote Sensing Specialists in Nairobi, Kenya

Environmental Governance *Spring 2018*
Teaching Assistant, Stanford University

ECON/ESS 106/206: World Food Economy *Spring 2016*
Teaching Assistant, Stanford University

Honors Seminar on Energy in Transition: De-Carbonizing America *Spring 2010*
Teaching Assistant, UNC - Chapel Hill

Service & Community Involvement

Reviewer: *Nature Communications; Journal of Environmental Economics and Management; Nature Communications Earth & Environment; Applied Economic Perspectives and Policy (AEPP); Global Food Security; Public Administration; NeurIPS, Land Use Policy; Climatic Change; QOpen; Environmental Research Letters; Research Grant Reviews for Markets, Risk, & Resilience Innovation Lab, Submissions for Agricultural & Applied Economics Assoc. (AAEA) & European Assoc. of Agricultural Economists (EAAE)*

Co-convener at AGU: *Bridging the Gap Between Science & Practice to Improve Understanding of Natural Peril Risk For Risk Transfer & Risk Finance (2021); Innovations in Risk Transfer Solutions using Earth Observations, Weather Data, Physical Models, and Short to Long Term Forecasts (2020); Advances in remote sensing, machine learning, and economics to improve risk management and evaluate impacts in socio-environmental systems (2019)*

Languages*

English, native; **German**, advanced (C1 - C2), scored "very good/sehr gut" on Zertifikat Deutsch für den Beruf; **Brazilian Portuguese**, intermediate - advanced (B2 - C1); **Spanish** & **French**, basic - intermediate (A2 - B1); **Modern Hebrew** & **Indonesian**, basic (A1)

*Letter scale corresponds to Common European Framework of Reference for Languages

Additional Skills

Proficient user of R, LaTeX, Google Earth Engine, GitHub, ArcGIS, ENVI, Stata

Last updated: February 2022