

Jonathan A. Sullivan
Email: jasullivan@arizona.edu

CURRENT POSITION

Post-doctoral researcher (starting as Assistant Professor in Fall '23)
School of Geography, Development & Environment
University of Arizona
2021-present

EDUCATION

Ph.D, Environment & Sustainability, 2016-2021

University of Michigan, School for Environment & Sustainability
Advisors: Arun Agrawal & Dan Brown

Master of Forestry, 2011-2013

Yale School of Forestry and Environmental Studies
Advisor: Mark Ashton

B.A., Environmental Chemistry, Minor Public Policy

Connecticut College
Advisor: Timo Ovaska & MaryAnne Borrelli

PUBLICATIONS

Referred Articles

- Sullivan J.A.**, Brown DG, Moyo F, Jain M. Agrawal A. (2022). Impacts of large-scale land acquisitions on smallholder agriculture and livelihoods in Tanzania . *Env. Res. Letters*.
<https://doi.org/10.1088/1748-9326/ac8067>
- Tellman, B. *, **Sullivan, J. A.***, Kuhn, C., Kettner, A. J., Doyle, C. S., Brakenridge, G. R., Erickson, T. A., & Slayback, D. A. (2021). Satellite imaging reveals increased proportion of population exposed to floods. **Nature**, August 2020. <https://doi.org/https://doi.org/10.1038/s41586-021-03695-w>. (*) *Equal first co-authors*
- Williams, T. G., Trush, S. A., **Sullivan, J. A.**, Liao, C., Chesterman, N., Agrawal, A., Guikema, S. D. and Brown, D. G. (2021). Land-use changes associated with large-scale land transactions in Ethiopia, *Ecology and Society*, 26(4). <https://doi.org/10.5751/ES-12825-260434>
- Liao, C., Nolte, K., **Sullivan, J.A.**, Brown, D.G., Lay, J., Althoff, C., Agrawal, A., 2020. Carbon emissions from the global land rush and their potential mitigation. **Nature Food** 2, 15–18.
<https://doi.org/10.1038/s43016-020-00215-3>
- Hawker L, Neal J, Tellman B, Liang J, Schumann G., Doyle C, **Sullivan JA**, Savage J., Tshimanga R. 2020. Comparing earth observation and inundation models to map flood hazards. *Environ. Res. Letters* <https://doi.org/10.1088/1748-9326/abc216>
- Agrawal A, Brown DG, **Sullivan J.A.**, 2019. Are Global Land Grabs Ticking Socio-environmental Bombs or Just Inefficient Investments? *One Earth* 1, 159–162.
<https://doi.org/10.1016/j.oneear.2019.10.004>
- Ovaska T, **Sullivan J.A.**, Ovaska S, Winegrad J, Fair J. 2009. Asymmetric Synthesis of Seven-Membered Carbocyclic Rings via a Sequential Oxyanionic 5-Exo-Dig Cyclization/ Claisen Rearrangement Process. Total Synthesis of (-) Frondosin B. *Organic Letters*, 11(12), 2715-2718.

Li X, Keon A, **Sullivan J.A.**, Ovaska T. 2008. Studies toward Frondosin A and its Analogues. Formal Total Synthesis of (±)-Frondosin A. *Organic Letters*, 10(15), 3287-3290

In revision and/or submitted

Aronow, PM, Samii C, **Sullivan J.A.**, Wang Y. (*In press*). Inference in Spatial Experiments with Interference using the SpatialEffect Package. *Journal of Agricultural, Biological, and Environmental Statistics*

Sullivan J.A., Samii, C., Brown, D., Moyo, F., Agrawal, A. (*In revision*). Large-scale land acquisitions exacerbate local land inequality in Tanzania., *Proc. Natl. Acad. Sci.*

Sullivan, J.A., Brown, D.G., Wengrowski E., Jain M., Agrawal, A. (*Revise & resubmit*). Deep Learning for Monitoring Large-Scale Croplands in sub-Saharan Africa. *Remote Sensing of Env.*

Book chapters

Tellman, B., **Sullivan, J. A.**, & Doyle, C. S. (2021). Global Flood Observation with Multiple Satellites: Applications in Rio Salado, Argentina, and the Eastern Nile Basin. In H. Wu, D. P. Lettenmaier, Q. Tang, & P. J. Ward (Eds.), *Global Drought and Flood: Observation, Modeling, and Prediction*. American Geophysical Union; 1st edition.

Schwarz B, Pestre G, Tellman B, **Sullivan J.A.**, Kuhn C, Mahtta R, Pandey B, Hammett L, (2018). Mapping Floods and Assessing Flood Vulnerability for Disaster Decision-Making: A Case Study Remote Sensing Application in Senegal,” in *Earth Observation Open Science and Innovation*, P.-P. Mathieu and C. Aubrecht, Eds. Cham: Springer International Publishing, 2018, pp. 293–300.

HONORS, AWARDS & FELLOWSHIPS

University of Michigan Rackham One-Term Fellowship (\$16,800), 2021. Dissertation writing and completion support

Fulbright Research Fellow, Tanzania (\$20,150), 2018-2019. Food Security and the Well-being Impacts of Privatization

Boren Fellow, Tanzania (\$23,000), 2018-2019. Food Security and the Well-being Impacts of Agricultural Investments in Tanzania

Rackham Graduate Student Research Grant (\$2,900), 2019. Field-work support for household data collection in Tanzania

Rackham International Research Award, Tanzania (\$11,250), 2018-2019. Field-work support for household and property data collection in Tanzania

Rackham Language Training Award, Swahili Training in Tanzania (\$6,500), 2018-2019. Tuition, travel and materials support for Swahili training

Weinberg Fellowship for Population, Development and Climate Change (\$7,500), 2017. Global Land Rush, Migration & Deforestation

NSF Graduate Research Fellowship Program (GRFP) – Honorable Mention, 2017. Interactions among Payments for Ecosystem Services and Governance Strategies in Guatemala’s Agricultural Frontier

Best Poster Presentation, Society of American Forester National Convention (\$500), 2012

Jubitz Family Endowment for Research Internships (\$3,000), 2012

Yale School of Forestry and Environmental Studies Scholarship (\$10,000), 2012. Tuition support

RESEARCH GRANTS

SESYNC Graduate Pursuit (\$10,000 + travel & lodging for participants), 2020-2021, Co-PI, Financial Opacity & Challenges to Forest Governance in Indonesia and Malaysia.

Land Matrix Commissioned Study, (\$5,000) 2019, PI. Data Campaign for Large-Scale Land Transactions in Tanzania.

Google Earth Engine Research Award (\$100,000), 2016-2019, Co-PI. Development of a Global Database for Historical Flood Events in Google Earth Engine.

Research Assistantship, 2016-2017. NASA Land Cover and Land Use Change Grant, *Large-Scale Land Transactions as Drivers of Land-Cover Change in Sub-Saharan Africa*. PIs: A. Agrawal, D.G. Brown

Research Assistantship, 2015. Google Earth Engine Research Award, *Dynamic Flood Vulnerability Mapping for Climate Affected Areas in the US*. PI: P. Vinck

Research Assistantship, 2014. Yale F.K. Weyerhaeuser Research Grant, *Addressing Forest Commodity Supply and Deforestation: Inventory Methods and Value Estimation Models of Tropical Bamboo Species*. PI: Timothy Gregoire

TEACHING

Instructor, University of Arizona, 2021, Introduction to Remote Sensing (Undergrad)

Teaching Assistant, Yale University, 2011-2012, Introductory Chemistry (Undergrad)

DEI TRAINING

Racial microaggressions

Unconscious bias

Leading inclusively

SERVICE

Review for *PNAS*, *World Development*, *Ambio*, *National Science Foundation* (ad-hoc)

Co-organize [Machine Learning for Remote Sensing Working Group](#)

Community Science Fellow, AGU Thriving Earth Exchange, [Reidsville Community Floods](#)

PROFESSIONAL AFFILIATIONS

American Association of Geographers

American Geophysical Union

PROFESSIONAL POSITIONS & CONSULTING

Remote Sensing Scientist, Cloud to Street (New York City), 2015-2019. Responsible for designing and implementing methods for detection of flood events using existing and historical satellite imagery. Spatial datasets of historical flood events have been prepared for clients including the World Bank and the French Development Bank (AFD).

Manager of Development Service, ecoPartners Carbon LLC (Berkeley, CA), 2014-2016 Designed and provided technical support in the development of international REDD+ projects. Clients included national governments, non-profit conservation organizations, national working groups and multiple small corporate clients both in Latin America and Africa.

Remote Sensing Consultant, REDD Systems (Berkeley, CA), 2014-2016. Provided technical support for the conceptualization and design of a novel forest monitoring system based on

Planet Labs data to be utilized in jurisdictional REDD+ programs.

Technical Consultant, World Bank, 2013. Provided an assessment of geomorphological and socio-physical vulnerability flooding in Uttarakhand India using an exploratory Google Earth Engine model and analysis.

Vice President of Certification, EcoPlanet Bamboo (New Haven, CT), 2013-2014. Responsible for managing and documenting compliance with several land-use certifications including Forest Stewardship Council, Verified Carbon Standard (VCS), and Climate-Community-Biodiversity Alliance for reforestation operations in Nicaragua and South Africa.

Community Forester, Yale School Forest (Eastford, CT), 2013. Member of forest crew team that contributed to the sustainable management of +10,000 acres of the Yale School Forest landholdings through road and trail maintenance, inventory design and execution, implementing silvicultural prescriptions, timber marking, and community engagement.

CONFERENCE PRESENTATIONS

FLARE Twitter Conference, 2020. Online. Oct 26-29. Tweet thread. *Large-scale land acquisitions exacerbate land inequality in Tanzania*

Sustainable Development Conference 2019. Ann Arbor, MI. October 11-14. Presentation. *Agricultural Transitions: Direct and Indirect Land-Use Change Pathways of Large-Scale Land Acquisitions in Tanzania*

Global Land Programme Open Science Meeting 2019. Bern, Switzerland. April 24-26, Presentation. *Linking Tenure Change to Large-Scale Land Acquisitions*

Understanding Risk Tanzania 2018. Dar es Salaam, Tanzania. August 29-30, Presentation. *A Flood of Data: Remote Sensing for Global, National & Urban Flood Risk*

American Geophysical Union 2017. New Orleans, LA. December 11-15, Poster. *Leveraging Trillions of Pixels for Flood Mitigation Decisions Support in the Rio Salado Basin, Argentina*

American Association of Geographers 2017. Boston, MA. April 5-9, Presentation. *Large-Scale Land Transactions as Drivers of Land-Cover Change in Ethiopia*

Forests & Livelihoods: Assessment, Research, and Engagement Annual Meeting 2016. Edinburgh, Scotland. December 2-4, Poster. *Cocaine Carbon: Narco-Trafficking as a threat to REDD+*

USAID BioREDD Program 2015. Bogota, Colombia. March 19-20. Presentation. *REDD+ Carbon Accounting in the Pacific Coast of Colombia*

International Society of Tropical Foresters 2014. New Haven, CT, Jan 30-Feb 1, Presentation. *Political Risk Insurance for Forestry Investment: Experience from Bamboo Reforestation in Nicaragua*

Google Earth Outreach 2013. Geo for Higher Ed Summit, Mountain View, CA, July 22-24, Presentation. *Open Data Kit: Experiences from Forestry and Remote Sensing*

Society of American Foresters 2012. National Convention: Resilient Forests, Spokane, WA, Oct 24-28, Poster. *Market Potential of Bamboo as a Biomass Material*

TECHNICAL SKILLS

Remote sensing: ENVI, Google Earth Engine, Google Earth Engine API; **Mapping:** ArcGIS, QGIS

Programming Skills: R (econometrics, multi-level, causal inference, spatial analysis), Python (spatial analysis, deep learning), Javascript.

Mobile Data Collection: Open Data Kit, Formhub, Qualtrics;

Language: Spanish (intermediate); Swahili (intermediate)