

**Jonathan A. Sullivan**  
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### **CURRENT POSITION**

Assistant Professor (starting Fall '23)  
School of Geography, Development & Environment  
University of Arizona  
Fall 2023

Post-doctoral researcher  
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.**, Samii, C., Brown, D., Moyo, F., Agrawal, A. 2023. Large-scale land acquisitions exacerbate local farmland inequalities in Tanzania. *Proceedings of the National Academy of Sciences* 120, e2207398120. <https://doi.org/10.1073/pnas.2207398120>
- Samii C., Wang Y., **Sullivan J.A.**, Aronow, P.M. (2022). Inference in Spatial Experiments with Interference using the SpatialEffect Package. *Journal of Agricultural, Biological, and Environmental Statistics*. <https://doi.org/10.1007/s13253-022-00517-y>
- 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

### ***Submitted and/or In revision***

**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*, *National Science Foundation (ad-hoc)*, *World Development*, *International Conference on Learning Representations (ICLR)*, *Conference on Computer Vision and Pattern Recognition (CVPR)* *EarthVision*, *Ambio*  
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**

**American Association of Geographers 2023.** Denver, CO. Co-organized session. *Understanding the rural-urban-climate nexus.*

**American Association of Geographers 2023.** Denver, CO. Presentation. *Large-scale land acquisitions exacerbate local land inequalities in Tanzania.*

**American Geophysical Union 2022.** Chicago, IL. Presentation. *Deep Learning for Monitoring Large-Scale Croplands in sub-Saharan Africa.*

**American Geophysical Union 2022.** Chicago, IL. Presentation. *Using Satellite-Observed Inundation for Socio-economic Assessments of Flood Impacts in the United States.*

**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)