

# Chuan Liao

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## EDUCATION

2012-2015 PhD, Natural Resources and Environment, Cornell University  
2010-2012 MS, Natural Resources and Environment, Cornell University  
2006-2010 BS, Natural Resources, Beijing Normal University

## PROFESSIONAL APPOINTMENTS

2022- Assistant Professor, Department of Global Development, Cornell University  
2021- Editor-in-Chief, *World Development*  
2018-2022 Assistant Professor, School of Sustainability, Arizona State University  
2015-2018 Postdoctoral Research Associate, School for Environment and Sustainability,  
University of Michigan – Ann Arbor

## PUBLICATIONS

### *Peer-Reviewed Journal Articles*

41. Wang, X.\*, **Liao, C.**, Brandhorst, S.\*, Clark, P. 2022. Sedentarization as an adaptation to socio-environmental changes? Everyday herding practices in pastoralist communities in Southern Ethiopia. *Ecology & Society* (accepted). \**Graduate Mentee*
40. Fu, H., Zhao, S., **Liao, C.** 2022. Spatial Governance of Beijing-Tianjin-Hebei Urban Agglomeration Towards Low-Carbon Transition. *China Agricultural Economic Review* (accepted).
39. Ye, C., Chen, M., Chen, R., **Liao, C.** 2022. Rural–Urban Governance toward Sustainable Development Goals. *Journal of Geographical Sciences*, 232(7): 1405-1408.
38. Agrawal, A., Brandhorst, S., Jain, M., **Liao, C.**, Pradhan, N., Solomon, D. 2022. From Environmental Governance to Governance for Sustainability. *One Earth*, 5(6): 615-621.
37. Yin, D., Huang, Q., He, C., Hua, X., **Liao, C.**, Inostroza, L., Zhang, L., Bai, Y. 2022. The Varying Roles of Ecosystem Services in Poverty Alleviation among Rural Households in Urbanizing Watersheds. *Landscape Ecology*, 37: 1673–1692
36. **Liao, C.**, Agrawal, A. 2022. Sustainable and Just Energy Transitions in the Global South. *World Development*, 152:105798.
35. Fu, H., Wang, Y., Mao, L., Hong, N., Wang, Z., Zhao, S., **Liao, C.** 2022. The Spatial

Pattern and Sustainability of Zhongyuan Urban-Rural System in Its Development Trajectory. *Journal of Geographical Sciences*, 232(7): 1261-1280.

34. **Liao, C.**, Nolte, K, Sullivan, J. Brown, D., Lay, J., Althoff, C., Agrawal, A. 2021. Carbon Emissions from the Global Land Rush and Potential Mitigation. *Nature Food*, 2, 15-18.
33. Fei, D., **Liao, C.**, Yang, H. 2021. Student Returnees from China's COVID-19 Epicenter: Spatio-temporal Movement and Impact of Tracing. *Social Science & Medicine*, 287 (2021) 114371.
32. Williams, T., Trush, S., Sullivan, J., **Liao, C.**, Chesterman, N., Agrawal, A., Guikema, S., Brown, D. 2021. Land-Use Changes Associated with Large-Scale Land Transactions in Ethiopia. *Ecology & Society*, 26(4):34.
31. **Liao, C.**, Erbaugh, J., Kelly, A., Agrawal, A. 2021. Clean Energy Transitions and Human Well-Being Outcomes in Lower and Middle Income Countries: A Systematic Review. *Renewable & Sustainable Energy Reviews*, 145 (2021) 111063.
30. Chen, C., Long, X., Li, Z., **Liao, C.**, Xie C., Che, S. 2021. Exploring the Determinants of Urban Green Space Utilization Based on Microblog Check-in Data in Shanghai, China. *Forests*, 2021, 12 1783.
29. **Liao, C.**, Fei, D., Huang, Q., Jiang L., Shi, P. 2021. Targeted Poverty Alleviation through Photovoltaic-Based Intervention: Rhetoric and Reality in Qinghai, China. *World Development*, 137 (2021) 105117.
28. Fu, H., Zhang, Y., **Liao, C.**, Mao, L., Wang, Z., Hong, N. 2020. Investigating PM<sub>2.5</sub> Responses to Air Pollutants and Meteorological Factors at Multiple Temporal Scales. *Scientific Reports*, 10:15639
27. **Liao, C.**, Agrawal, A., Clark, P., Levin, S., Rubenstein, D. 2020. Landscape Sustainability Science in the Drylands: Mobility, Rangeland and Livelihoods. *Landscape Ecology*, 35, 2433–2447.
26. Khatami, R., Southworth, J., Muir, C., Caughlin, T., Ayana, A., Brown, D., **Liao, C.**, Agrawal, A. 2020. Operational Large-Area Land Cover Mapping: An Ethiopia Case Study. *Remote Sensing*, 2020, 12(6), 954.
25. **Liao, C.**, Jung, S., Agrawal, A., Brown, D. 2020. Spatial Patterns of Large-Scale Land Transactions and Their Potential Socio-Environmental Outcomes in Cambodia, Ethiopia, Liberia, and Peru. *Land Degradation and Development*, 31 (10), 1241-1251.
24. **Liao, C.**, Qiu, J., Chen, B., Chen, D., Fu, B., Georgescu, M., He, C., Jenerette, D., Li, X., Li, X., Li, X., Qiuying, B., Shi, P., Wu, J. 2020. Advancing Landscape Sustainability Science: Theoretical Foundation and Synergies with Innovations in Methodology, Design, and Application. *Landscape Ecology*, 35, 1–9.
23. Fei, D., **Liao, C.** 2019. China's Eastern Industrial Zone in Ethiopia: Unpacking the Enclave. *Third World Quarterly*, 41 (4), 623-644.
22. **Liao, C.**, Fei, D. 2019. Poverty Reduction through Photovoltaic-Based Development Intervention in China: Potentials and Constraints. *World Development*, 122: 1-10.
21. Hajjar, R., Ayana, A., Rutt, R., Hinde, O., **Liao, C.**, Keene, S., Bandiaky-Badji, S.,

- Agrawal, A. 2019. Capital, Labor, and Gender: The Consequences of Large-Scale Land Transactions on Household Labor Allocation. *Journal of Peasant Studies*, 47 (3), 566-588.
20. Jung, S., **Liao, C.**, Agrawal, A., Brown, D. 2019. Evidence on Wealth-Improving Effects of Forest Concessions in Liberia. *Journal of the Association of Environmental and Resource Economists*, 6(5): 961-1000.
  19. **Liao, C.**, Clark, P., DeGloria, S. 2018. Bush Encroachment Dynamics and Rangeland Management Implications in the Horn of Africa. *Ecology and Evolution*, 8(23): 11694-11703.
  18. Agrawal, A. Hajjar, R., **Liao, C.**, Rasmussen, L., Watkins, C. 2018. Editorial Overview: Forest Governance Interventions for Sustainability through Information, Incentives, and Institutions. *Current Opinions in Environmental Sustainability*, 32: A1-A7.
  17. **Liao, C.**, Brown, D., Fei, D., Long, X., Chen, D., Che, S. 2018. Big Data-Enabled Social Sensing in Spatial Analysis: Potentials and Pitfalls. *Transactions in GIS*, 22(6): 1351-1371.
  16. **Liao, C.**, Brown D. 2018. Assessments of Synergistic Outcomes from Sustainable Intensification of Agriculture Need to Include Smallholder Livelihoods with Food Production and Ecosystem Services. *Current Opinions in Environmental Sustainability*, 32: 53-59.
  15. **Liao, C.** Clark, P., Shibia, M., DeGloria, S. 2018. Spatio-Temporal Dynamics of Cattle Behaviors and Resource Selection Patterns in the Open Grazing System of East Africa. *International Journal of Geographical Information Science*, 32(7): 1523-1540.
  14. **Liao, C.** 2018. Quantifying Multi-Scale Pastoral Mobility: Developing A Metrics System and Using GPS-Tracking Data for Evaluation. *Journal of Arid Environments*, 153: 88-97.
  13. **Liao, C.**, Clark, P. 2018. Rangeland Vegetation Diversity and Transition Pathways under Indigenous Pastoralist Management Regimes in Southern Ethiopia. *Agriculture, Ecosystems & Environment*, 215: 105-113.
  12. **Liao, C.** 2018. Modeling Herding Decision-Making in the Extensive Grazing System in Southern Ethiopia. *Annals of American Association of Geographers*, 108 (1): 260-276.
  11. Fei, D., Samatar, A., **Liao, C.** 2018. Chinese-African Encounters in High-Tech Sectors: Comparative Investigation of Chinese Workplace Regimes in Ethiopia. *Development Policy Review*, 36 (S1): O455-O475.
  10. **Liao, C.**, Clark, P., DeGloria, S., Barrett, C. 2017. Complexity in the Spatial Utilization of Rangelands: Pastoral Mobility in Borana, Ethiopia. *Applied Geography*, 86: 208-219.
  9. **Liao, C.**, Fei, D. 2017. Pastoralist Adaptation Practices under Non-Governmental Development Interventions in Southern Ethiopia. *The Rangeland Journal*, 39 (2): 189-200.
  8. **Liao, C.** Fei, D. 2017. Sedentarization as Constrained Adaptation: Evidence from Pastoral Regions in Far Northwestern China. *Human Ecology*, 45 (1): 23-35.
  7. **Liao, C.**, Ruelle, M., Kassam, K-A. 2016. Indigenous Ecological Knowledge as the Basis for Adaptation to Rangeland Vegetation Regime Shifts: Evidence from Pastoralist Communities in the Horn of Africa. *Journal of Environmental Management*, 182 (2016): 70-79.

6. **Liao, C.**, Jung, S., Brown, D., Agrawal, A. 2016. Insufficient Research on Land Grabbing. *Science*, 353 (6295): 131.
5. **Liao, C.**, Fei, D. 2016. Resilience of What to What: Evidence from Pastoral Contexts in East Africa and Central Asia. *Resilience: International Policies, Practices and Discourses*, 4 (1): 14-29.
4. **Liao, C.**, Barrett, C., Kassam, K.-A. 2015. Does Diversification Improve Livelihoods? Pastoral Households in Xinjiang, China. *Development and Change*, 46 (6): 1302-1330.
3. **Liao, C.**, Sullivan, P., Barrett, C., Kassam, K.-A. 2014. Socioenvironmental Threats to Pastoral Livelihoods: Risk Perceptions in the Altay and Tianshan Mountains of Xinjiang, China. *Risk Analysis*, 34 (4): 640–655.
2. **Liao, C.**, Morreale, S., Kassam, K.-A., Sullivan, P., Fei, D. 2014. Following the Green: Coupled pastoral migration and vegetation dynamics in the Altay and Tianshan Mountains of Xinjiang, China. *Applied Geography*, 46: 61–70.
1. Wang, M., **Liao, C.**, Yang, S., Zhao, W., Liu, M., Shi, P. 2012. Are People Willing to Buy Natural Disaster Insurance in China? Risk Awareness, Insurance Acceptance, and Willingness to Pay. *Risk Analysis*, 32 (10): 1717–1740.

#### *Under Review*

- **Liao, C.**, Agrawal, A. Risk of Zoonotic Disease Outbreaks from the Global Land Rush.
- **Liao, C.**, Agrawal, A. Towards a Science of ‘Land Grabbing’.
- **Liao, C.**, Moore, P.\*, Shrestha, M. Can We Generalize from Different Earthquake Disaster Governance Scenarios? A Four-Country Comparative Analysis. \**Graduate Mentee*
- **Liao, C.**, Nolte, K., Lay, J., Brown, D., Agrawal, A. The Carbon Cost of Agricultural Production in the Global Land Rush.
- Shuai, C., **Liao, C.**, Qu, S., Chen, X., Zhao, B., Zou, J., Xu, M. Scaling of Development Indicators in Countries and Its Origin.
- Fu, H., Wang, Z., **Liao, C.** Urbanization, Industrial Structure Adjustment, and Urban Land Use Efficiency in China.

#### *Book Chapters*

- Kassam, K-A., **Liao, C.**, Dong S. 2016. Sociocultural and Ecological Systems of Pastoralism in Inner Asia: Cases from Xinjiang and Inner Mongolia in China and the Pamirs of Badakhshan, Afghanistan. In Dong, S., Kassam, K-A., Tourrand, J., Boone, R. (Ed) *Building Resilience of Human-Natural Systems of Pastoralism in the Developing World*. Springer.
- **Liao, C.**, Fei, D. 2016. The Operationalization of Resilience in Pastoral Regions in East Africa and Central Asia. In Chandler, D., Coaffee J. (Ed) *Routledge Handbook of International Resilience*. Taylor & Francis Group.

#### *Reports*

- Jung, S., **Liao, C.**, Agrawal, A., Brown, D. 2019. Evidence on Wealth-Improving Effects of

Forest Concessions in Liberia. AIDDATA Working Paper 76.

- Daupan, M., Erbaugh, J.T, Jung, S., Kinzer, A., **Liao, C.**, Sullivan, J., Watkins, C. Agrawal, A. 2018. Livelihood and Well-Being Survey Tool User Manual for Enumerators. Forest and Livelihoods: Assessment, Research, and Evaluation (FLARE).
- Hajjar, R., Rutt, R., Mulu, E., Ayana, A., **Liao, C.**, Agrawal, A. 2017. Gendered impacts of large-scale land acquisitions in Western Ethiopia. Rights and Resources Initiative
- **Liao, C.**, Clark, P., DeGloria, D., Mude, A., Barrett, C. 2016. Pastoral mobility and policy recommendations for livestock herding in the Borana pastoral system in southern Ethiopia. Consultative Group on International Agricultural Research (CGIAR) Research Program on Dryland Systems.
- **Liao, C.** 2014. Pastoral Migration Atlas. Maps returned to participant households in Borana, Ethiopia.
- **Liao, C.** 2014. Coupled Socio-Ecological System under Woody Plant Encroachment: Rangeland Utilization and Conservation in Borana, Ethiopia. Toward Sustainability Foundation Final Report.
- **Liao, C.** 2013. Rural Resilience Assessment in Borana, Ethiopia. ACSF-Oxfam Rural Resilience Collaboration and Fellowship Final Report.
- **Liao, C.** 2012. Toward Sustainable Pastures: Nomadic Migration, Livelihood Diversification, and Risk Perception in the Altay and Tianshan Mountains. Toward Sustainability Foundation Final Report.

## **RESEARCH FUNDING**

- Global Drylands Center, Arizona State University (2022). *The Sustainability of Socio-Environmental System Transitions in the Kenyan Drylands*. **My role: PI.** Co-PI: Jianguo Wu (ASU). **Funded: \$5000.**
- City of Phoenix (2021-2022). *Phoenix Backyard Garden Program Evaluation*. **My role: PI. Funded: \$47,106.**
- Knowledge Enterprise, Arizona State University (2021-2022). *Can Urban Agriculture Promote Food System Justice and Resilience in a Desert City*. **My role: PI. Funded: \$15,000.**
- Institute of Social Science Research, Arizona State University (2020-2021). *Assessing the Emerging Geographies of South-South Cooperation in Sustainable Energy and Its Socio-Environmental Impacts*. **My role: Co-PI; PI: Ding Fei (ASU). Funded: \$2,250.**
- Swette Center for Sustainable Food Systems, Arizona State University (2019-2020). *Impacts of Large-Scale Land Acquisitions on Food Systems in Bolivia*. **My role: PI.** Co-PI: Hallie Eakin (ASU). **Funded: \$5,000.**
- Institute of Social Science Research, Arizona State University (2018-2019). *Sustainability of Subsistence Pastoralism in the African and Asian Drylands: The Mobility- Land-Livelihood Nexus*. **My role: PI. Funded: \$7,950.**
- Graham Sustainability Institute, University of Michigan (2016-2018). *Complex Rural and*

*Urban Sustainability Issues: Using Big Data for Impact Assessment. My role: PI. Funded: \$15,000*

- Michigan Institute for Data Science (2016-2018). *Unlocking the Potential of Big Data from Mobile Phones to Assess Urban Green Space Utilization. My role: Co-PI; PI: Daniel Brown (Michigan), Shengquan Che (Shanghai Jiao Tong U), Co-PI: Natalie Colabianchi (Michigan), Dan Chen (Shanghai Jiaotong U). Funded: \$199,735*
- Rights and Resources Institute (2016). *The Impacts of Large-Scale Land Acquisitions on Local Women's Land and Forest Tenure Rights: Case Studies from Western Ethiopia. My role: Co-PI; PI: Arun Agrawal, Co-PI: Reem Hajjar (Michigan), Alemayehu Ayana (Ethiopian Environment and Forest Research Institute). Funded: \$68,632*
- National Science Foundation (2016-2020). *Recent Land Transactions in Ethiopia: Impacts on Agriculture, Ecosystem Services, and Food-Energy Security. My role: Senior personnel; PI: Arun Agrawal; Co-PI: Daniel Brown (Michigan), Jane Southworth (Florida). Funded: \$1,599,951*
- Cornell University and CARE International (2014-2015). *Toward Resilient Pastoral Communities: How Mobility Mapping Supports Rangeland Management in Borana, Ethiopia. My role: Graduate researcher who developed the proposal; PI: Stephen DeGloria (Cornell); Co-PI: Christopher Barrett (Cornell). Funded: \$9,745*
- Atkinson Center for a Sustainable Future, Cornell University (2014). *Coupled Socio-ecological System under Woody Plant Encroachment: Rangeland Biodiversity and Utilization in Borana, Ethiopia. My role: PI. Funded: \$4,500*
- Cornell University and Oxfam America (2013). *Rural Resilience Assessment in Borana, Ethiopia. My role: PI. Funded: \$5,000*
- Toward Sustainability Foundation (2013-2015). *Reaching the Tipping Point of Pastoral Food System? Vegetation Dynamics, Herder Mobility, Community Cooperation, and Environmental Impact Monitoring in Borana, Ethiopia. My role: PI; Co-PI: Karim-Aly Kassam (Cornell). Funded: \$10,000*
- Sigma Xi: The Research Society (2011) *Linking Natural Resource Conservation with Disaster Risk in Local Communities of the Tian Shan Mountain Regions in Xinjiang, China. My role: PI. Funded: \$400*
- Toward Sustainability Foundation (2011). *Mapping Disaster Risk in Local Communities in Tian Shan Mountains Regions in Xinjiang, China. My role: PI; Co-PI: Karim-Aly Kassam (Cornell). Funded: \$4,000*

### **HONORS, AWARDS AND FELLOWSHIPS**

- School of Sustainability Travel Award (2019), ASU
- National Postdoctoral Association Annual Meeting Award (2016), Michigan
- Hsien and Daisy Yen Wu Scholarship (2015), Cornell
- Graduate Teaching Assistant Fellows (2015), Center for Teaching Excellence, Cornell
- Scholarship of Teaching and Learning Practitioner Fellows (2015), Center for Teaching

Excellence, Cornell

- Graduate School Conference Travel Grant (2015), Cornell
- Cornell Population Center Travel Grant (2015), Cornell
- Graduate School Conference Travel Grant (2014), Cornell
- Guani Fellowship (2012), Cornell

## **TEACHING EXPERIENCE AND APPOINTMENTS**

- Instructor, SOS 327 Sustainable Food and Farms, ASU (Fall, 2021; Spring 2021; Fall 2020; Spring 2020; Fall 2019; Fall 2018)
- Instructor, SOS 494/598 Introduction to Quantitative Research in R, ASU (Spring 2022; Fall 2020; Fall 2019; Fall 2018)
- Instructor, SOS 790 Reading and Conference (Fall 2020)
- Instructure, SOS 492 Honors Directed Study (Fall 2020)
- Guest Lecturer, GIS 270 Statistics for Geography and Planning, ASU (02/2020)
- Invited Lecturer, Sustainability and Development Conference Lecture, U Michigan (10/2019)
- Guest Lecturer, SOS 520 Research Design and Methods for Sustainability, ASU (09/2019; 10/2021)
- Invited Instructor, Data Visualization in R Workshop, Beijing Normal U, Beijing, China (07/2019)
- Guest Lecturer, NRE 563 International Environmental Policy, U Michigan (02/2017)
- Teaching and Learning Practitioner Fellow, Center for Teaching Excellence, Cornell (Spring 2015)
- Graduate Teaching Assistant, NTRES 2201 Society and Natural Resources, Cornell (Spring 2015)
- Invited Lecturer, NTRES 2010 Environmental Conservation, Cornell (02/2015)
- Invited Lecturer, BIOPL 2430 Taxonomy of Cultivate Plants, Cornell (12/2014)
- Invited Lecturer, NTRES 3330 Ways of Knowing, Cornell (11/2014)
- Graduate Teaching Assistant, NTRES 2100 Introductory Field Biology, Cornell (Fall 2014)

## **STUDEN MENTORING**

### ***Current Students***

- Xin Wang: PhD, School of Sustainability, ASU (co-chair, 2020-)

### ***Graduated Students***

- Sidney Brandhorst: MS, School of Sustainability, ASU (chair, 2020-2022)

- Julia Aumann: BA, W.P. Carey School of Business, ASU (honor thesis advisor, 2021-2022)
- Cade Koch: BA, School of Sustainability, ASU (honor thesis advisor, 2022)
- Yousuf Mahid: MS, School of Geographical Sciences and Urban Planning, ASU (graduate committee member, 2018-2020)
- Megan Ewy: honors contract research on Native American land use history in the Salt River Reservation, School of Sustainability, ASU (honors contract advisor, 2018)
- Samantha Hollinshead: BA, School of Sustainability, ASU (honor thesis advisor, 2020)
- Madeleine Johnson: PhD, Deakin University, Australia (external PhD dissertation examiner, 2022)

### ***Other Mentoring***

- Haiyue Fu: Visiting scholar from Nanjing Agricultural University, School of Sustainability, ASU, 2019-2021
- Leah Kunkel: Graduate research assistant, School of Sustainability, ASU, Spring 2020
- Phillip Moore: Graduate research assistant, School of Sustainability, ASU, Fall 2019
- Mark Crandell: Undergraduate Research Opportunities Program, U Michigan, 2017-2018
- Jacqueline Freeman: Undergraduate Research Opportunities Program, U Michigan, 2017-2018
- Caylin Luebeck: Undergraduate Research Opportunities Program, U Michigan, 2017-2018
- Xuewen Long: Visiting graduate research assistant from Shanghai Jiao Tong University, U Michigan, 2018
- Yufei Miao: Visiting undergraduate research assistant from Tsinghua University, U Michigan, 2016

### **CONFERENCE PRESENTATIONS** (\* indicates presenter)

- Fei, D.\*, **Liao, C.** “Chinese Overseas Economic and Trade Cooperation Zones in Africa: Development Trajectories and Urbanizing Impacts”. Development Studies Association 2022 Annual Conference, University College London, online, July, 2022.
- Fu, H.\*, Hong, N., **Liao, C.** “Spatio-Temporal Patterns of Chinese Urban System Resilience in the Context of the Pandemic”. The Third Sustainability and Development Conference, University of Michigan, online, January, 2022.
- Liao, C.\*** “Energy and Environmental Management Research in World Development”. Annual Forum on Energy and Environmental Management, online, October, 2021.
- Liao, C.\*** “Post-Pandemic Development: Sustainability Justice and Global Governance”. College of International Development and Global Agriculture Annual Conference, China Agricultural University, online, October, 2021.
- Yin, D.\*, Huang Q., He, C., Hua, X., **Liao, C.** The Varying Roles of Ecosystem Services in Poverty Alleviation among Rural Households in Urbanizing Watersheds. AGU Fall



- Meeting 2020, online, December, 2020.
- Liao, C.\*** “Herding Decision Making in the Commons of Southern Ethiopia”. IASC 2020 Web Conference on African Commons, online, July, 2020.
- Liao, C.\***, Fei, D., Huang, Q., Wu, J., Shi, P. “Impact of solar energy-based development intervention program on poverty reduction: Evidence from a pilot study in Qinghai, China”. Sustainability and Development Conference, Ann Arbor, MI, October, 2019.
- Liao, C.\*** “Landscape Sustainability Science for Achieving Sustainable Development Goals in the Global Drylands”. Landscape Sustainability Science Forum (Plenary Talk), Xining, Qinghai, China, July, 2019.
- Liao, C.\*** “A Network Approach for Understanding the Global Land Rush”. Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.
- Muir, C.\*, Khatami, R., Southworth, J., **Liao, C.**, Ayana, A. “Agricultural Intensification and Large-Scale Land Acquisition in Ethiopia”. Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.
- Khatami, R.\*, Southworth, J., Muir, C., Caughlin, T., Ayana, A., Brown, D., **Liao, C.**, Agrawal, A. “Operational Large-Area Land-Cover Mapping: An Ethiopia Case Study”. Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.
- Smith A.\*, Southworth, J., Agrawal, A., Brown, D., **Liao, C.**, Ayana, A. “Large-Scale Land Acquisitions in Ethiopia: Implications for Ecosystem Services”. Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.
- Agrawal, A.\*, Brown, D., **Liao, C.**, Lund, J. “Agricultural Development, Structural Change, and Large-Scale Land Transactions”. Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.
- Liao, C.\*** “Poverty Reduction through Solar Energy-Based Intervention in China: Potentials and Constraints.” Sustainability and Development Conference, Ann Arbor, MI, November, 2018.
- Liao, C.\***, Brown, D., Long, X., Chen, D., Che, S. “Applying Big Data from Social Media to Assess Urban Green Space Utilization Patterns in Shanghai, China.” The 2017 Global City Forum, Shanghai, China, October, 2017.
- Liao, C.\***, Brown, D., Fei, D., Long, X., Chen, D., Che, S. “Data Biases Undermine Geospatial Inference Based on Location-Based Crowdsourced Data.” The 2017 Michigan Institute for Data Science Symposium, Ann Arbor, MI, October, 2017.
- Liao, C.\***, Nolte, K., Lay, J., Brown, D., Agrawal, A. “Anticipating Carbon Emission and Its Mitigation from the Global Land Rush.” Third Annual Meeting of Forests & Livelihoods: Assessment, Research, and Engagement, Stockholm, Sweden, September, 2017.
- Ingalls, M.\*, **Liao, C.**, Barney, K. “Geopolitical Dimensions of Land Systems Governance in the Mekong: Implications of Political and Economic Securitization.” International Conference on Research for Development, Bern, Switzerland, September, 2017.
- Liao, C.\***, Nolte, K., Agrawal, A. “Virtual Land Flow and Potential Carbon Emission in the Global Land Rush” Association for Law, Property & Society 8th Annual Meeting, Ann

- Arbor, MI, May, 2017.
- Fei, D.\*, **Liao, C.** “Chinese Dispatched Labour Migration to Africa.” Annual Meeting of Population Association of America, Chicago, IL, April 2017.
- Brown, D.\* Agrawal, A., **Liao, C.**, Jung, S., Sullivan, J. “Large-Scale Land Transactions as Drivers of Land-Cover Change in Sub-Saharan Africa.” 2017 Land Use and Land Cover Change Spring Science Team Meeting, Rockville, MD, April, 2017.
- Liao, C.\***, Ayana, A., Brown, D., Agrawal, A. “Can Large-Scale Land Transactions Lead to Social-Economic-Ecological Synergy” Annual Meeting of Association of American Geographers, Boston, MA, April, 2017.
- Liao, C.**, Sullivan, J.\*, Agrawal, A., Brown, D., Jung, S. “Large-Scale Land Transactions as Drivers of Land-Cover Change in Ethiopia” Annual Meeting of Association of American Geographers, Boston, MA, April, 2017.
- Liao, C.\***, Ayana, A., Brown, D., Agrawal, A. “Can Large-Scale Land Transactions Lead to Social-Economic-Ecological Synergy?” Forests & Livelihoods: Assessment, Research, and Engagement Second Annual Meeting, Edinburgh, UK, December, 2016.
- Liao, C.\***, Jung, S., Agrawal, A., Brown, D. 2016. “Do Large-Scale Land Transactions Accelerate Deforestation? A Matching-Based Four-Country Comparison.” Third GLP Open Science Meeting, Beijing, China, October, 2016.
- Liao, C.\***, Brown, D., Jung, S., Agrawal, A. 2016. “Large-Scale Land Transactions as Drivers of Land-Cover Change in Sub-Saharan Africa.” 2016 Land Use and Land Cover Change Spring Science Team Meeting, North Bethesda, MD, April, 2016.
- Fei, D\*, **Liao, C.\*** 2015. “Development through Assimilation and Integration? Evidence from Kazak Pastoral Sedentarization in Xinjiang, China.” Population Association of America Annual Conference, San Diego, CA, April, 2015.
- Washington-Allen, R\*, Louhaichi, M\*, Mude, A, **Liao, C**, Clifton, K, Clark, P. 2015. “The Impact of Land Use Change on the 3-D Structure of Shrubland and Savanna Dryland Ecosystems.” 3rd UNCCD Scientific Conference: Combating Desertification/Land Degradation and Drought for Poverty Reduction and Sustainable Development: The Contribution of Science, Technology, Traditional Knowledge and Practices, Cancún, Mexico, March, 2015.
- Liao, C.\*** 2014. “Following the Green: Coupled pastoral migration and vegetation dynamics in the Altay and Tianshan Mountains of Xinjiang, China.” Annual Meeting of Association of American Geographers, Tampa, FL, April, 2014.
- Wang, M\*, **Liao, C.** 2010. “Toward an Understanding of Risk Perception and Willingness to Pay of Chinese People on Natural Catastrophe Insurance.” Global Risk Forum, Davos, Switzerland, June, 2010.
- Liao, C.\*** 2009. “A Nationwide Survey: Feasibility Study of Catastrophe Insurance in China.” Fourth Asian Conference on Risk Assessment and Management, Beijing, China, May, 2009.

**OTHER TALKS AND ACTIVITIES** (\* indicates presenter)

- Liao, C.** “The Sustainability Justice of Human-Environment System Transitions in the Drylands”, School of Public Administration Distinguished Lecture Series, Guangxi University, online, July, 2022.
- Liao, C.** “Sustainable and Just Energy Transition in the Global South”, Institute of New Structural Economics Lecture Series, Peking University, online, June, 2022.
- Liao, C.** “Sustainable and Just Energy Transition in Developing Countries”, School of Economics and Management, Southeast University, online, April, 2022.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”, School of Public Administration, Chongqing University, online, April, 2022.
- Liao, C.** Chair of Session “Socio-Economic Sustainability” in The Hiroshima International Conference on Peace and Sustainability, Hiroshima University, online, March, 2022.
- Liao, C.** “Spatial Data Science of the Commons for Sustainable and Just Development”, Ostrom Workshop, Indiana University, Bloomington, Indiana, February, 2022.
- Liao, C.** “Data Science of Socio-Ecological Systems for Equitable and Inclusive Development”, Dean’s Inclusive Excellence Seminar Series, College of Agriculture and Life Sciences, Cornell University, online, February, 2022.
- Liao, C.** “Spatial Science of Socio-Ecological Systems for Sustainable Development”, Department of Geography and Sustainable Development, University of Miami, online, February, 2022.
- Liao, C.** Panelist on the Journal Editor Roundtable, The Third Sustainability and Development Conference, University of Michigan, online, January, 2022.
- Liao, C.** “Environmental Justice for Global Development”, Jackson School of International Studies, University of Washington-Seattle, online, January, 2022.
- Liao, C.** “Sustainability in China’s Frontiers and Beyond”, Princeton Institute for International and Regional Studies, Princeton University, online, January, 2022.
- Liao, C.** Chair of Special Conversation on “Towards Quality Sustainability: From China to the Globe”, The Third Sustainability and Development Conference, University of Michigan, online, January, 2022.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”. School of Environment 20<sup>th</sup> Anniversary Keynote Speech, Renmin University of China, online, December, 2021.
- Liao, C.** Panelist on the UK-China Workshop on Energy and Climate Change Economics, University College London, online, December, 2021.
- Liao, C.\*** “Sustainable and Just Energy Transitions in the Global South”. School of Applied Economics, Renmin University of China, online, November, 2021.
- Liao, C.\*** “Sustainable and Just Energy Transitions in the Global South”. China Energy Policy Research Institute, Xiamen University, online, November, 2021.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”. Nanjing Agricultural University, online, October, 2021.
- Liao, C.** “Spatial Science of Socio-Environment Systems for Sustainable Development”.

- Renmin University of China, online, May, 2021.
- Liao, C.** “Spatial Science of Socio-Environment Systems for Sustainable Development”. Beijing Normal University, online, May, 2021.
- Liao, C.** “Spatial Science of Socio-Environment Systems for Sustainable Development”. East China Normal University, online, April, 2021.
- Liao, C.** “Spatial Science of Socio-Environment Systems for Sustainable Development”. GeoInsider Seminar, online, March, 2021.
- Liao, C.** “Justice, Equity, Diversity, and Inclusion in Sustainability and Development”. Sustainability Research Seminar: Justice, Equity, Diversity, and Inclusion in School of Sustainability, Arizona State University, online, February, 2021.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”. University College London, online, February, 2021.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”. Colloquium in School of Geographical Sciences and Urban Planning, Arizona State University, online, October, 2020.
- Liao, C.** “Spatial Science of Human-Environment Systems for Sustainable Development”. Public Administration Forum, Huazhong Agriculture University, online, July, 2020.
- Liao, C.** “Impacts of Large-Scale Land Acquisitions on Food Systems in Bolivia”. Food for Thought Series, Arizona State University, Tempe, AZ, October, 2019.
- Liao, C.** “Spatial Science of Coupled Natural-Human Systems for Sustainable Development in the Drylands”. Yanbian University, Yanbian, Jilin, China, August, 2019.
- Liao, C.** “Spatial Science of Coupled Natural-Human Systems for Sustainable Development in the Drylands”. Beijing Normal University, Beijing, China, July, 2019.
- Liao, C.** “Landscape Sustainability Science for Achieving Sustainable Development Goals in the Global Drylands”. Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, Jilin, China, June, 2019.
- Liao, C.\*** 2019. “Spatial Science of Human-Environment Systems for Sustainable Development.” Department of Geography, University of Washington, Seattle, WA, February, 2019.
- Liao, C.\*** 2018. “Spatial Science of Coupled Natural-Human Systems for Sustainable Development.” Spatial Analysis Research Center, Arizona State University, Tempe, AZ, November, 2018.
- Liao, C.\*** 2018. “Modeling Herding Decision Making in the Extensive Grazing System in Southern Ethiopia.” Center for Behavior, Institutions and the Environment, Arizona State University, Tempe, AZ, October, 2018.
- Liao, C.\*** 2018. “Poverty Reduction through Solar Energy-Based Intervention in China: Potentials and Constraints.” Eradicating Poverty through Energy Innovation Workshop, Arizona State University, Tempe, AZ, February, 2018.
- Liao, C.\*** 2017. “Research Tools to Study Forest and Livelihoods.” School of Agricultural Economics and Rural Development. Renmin University of China, Beijing, China,

October, 2017.

- Liao, C.\*** 2017. “Diversity of Large-Scale Land Acquisitions and Their Divergent Outcomes in Ethiopia.” German Institute of Global and Area Studies Socioeconomic Seminar Series, Hamburg, Germany, September, 2017.
- Liao, C., Clark, P., Shibia, M., DeGloria, S.\*** “Spatio-Temporal Dynamics of Cattle Behaviors and Resource Selection Patterns on the East African Rangelands” Grazing Behavior Inservice, Springdale, UT, January, 2017.
- Liao, C.\*** 2016. “Livelihood Diversification, Herd Migration and Risk Perception on the Western Edge of Mongolian Plateau.” Symposium on Research synthesis & innovation on the Mongolian Plateau, Ann Arbor, MI, May, 2016.
- Liao, C.\*, Brown, D., Jung, S., Agrawal, A.** 2016. “Spatial Patterns of Large-Scale Land Transactions: Number, Size, Context and Outcome in Cambodia, Ethiopia, Liberia and Peru.” Symposium on Large-Scale Land Transactions in sub-Sahara Africa, South Asia and Southeast Asia, Ann Arbor, MI, April, 2016.
- Liao, C.\*** 2016. “A Coupled Systems Approach to Understanding Human Dimensions of Global Environmental Change.” Department of GeoSciences, University of Missouri – Kansas City, Kansas City, MO, March, 2016.
- Liao, C.\*** 2015. “Modeling Pastoralists’ Camp Relocation Strategies in Borana, Ethiopia: An Integrated Approach.” Department of Natural Resources Seminar Series, Cornell University, Ithaca, NY, October, 2015.
- Liao, C.\*** 2015. “How Does a Rubric Enhance Learning: Using Place Journal as a Case Study.” Classroom Research and Teaching Symposium: A Symposium for Current and Future Faculty, Cornell University, Ithaca, NY, May, 2015.
- Liao, C.\*** 2015. “Adaptation to Bush Encroachment: Insights from Ethnobotanical Knowledge of Pastoralists in Borana, Ethiopia.” Student Symposium at Atkinson Center for a Sustainable Future, Cornell University, Ithaca, NY, March, 2015.
- Liao, C.\*** 2014. “Quantifying Pastoral Mobility Using GPS Collar Data: An Application in Borana, Ethiopia.” Department of Natural Resources Seminar Series, Cornell University, Ithaca, NY, November, 2014.
- Liao, C.\*** 2014. “External Development Interventions and Pastoral Resilience in Borana, Ethiopia.” Cornell University Workshop on Resilience & Development, Ithaca, NY, October, 2014.
- Liao, C.\*** 2014. “Rangeland Vegetation State-and-transition and Pastoral Mobility in Borana, Ethiopia.” Sustainable Biodiversity Fund Symposium, Cornell University, Ithaca, NY, October, 2014.
- Liao, C.\*** 2014. Invited Panelist on Panel “Natural Resources and Infrastructure Development in Inner Asia.” Annual Meeting of Association of American Geographers, Tampa, FL, April, 2014.
- Liao, C.\*** 2014. “Rangeland Ecology and Livestock Mobility in Borana, Ethiopia.” Special Seminar of Northwest Watershed Research Center, USDA Agriculture Research Service in Boise, ID, March, 2014.

- Liao, C.\*** 2013. “Pastoral Resilience in Borana, Ethiopia.” ACSF-Oxfam Rural Resilience Community Assessment workshop, Cornell University, Ithaca, NY, September, 2013.
- Liao, C.\*** 2012. “Livelihood Strategies and Migration Patterns in the Pastoral System in Xinjiang, China.” Department of Natural Resources Graduate Student Association Symposium, Cornell University, Ithaca, NY, January, 2012.
- Liao, C.\*** 2011. “Mapping Disaster Risk in Local Communities in Tian Shan Mountain in Xinjiang, China.” Department of Natural Resources Graduate Student Association Symposium, Cornell University, Ithaca, NY, January, 2011.

## **PROFESSIONAL SERVICE**

### **Editorial**

- Editor-in-Chief, *World Development* (2021-)
- Editorial Board, *Chinese Geographical Science* (2021-)
- International Advisory Board, *Journal of Peasant Studies* (2022-)
- Editorial Advisory Board, *World Development Sustainability* (2021-)
- Guest co-editor, Special Issue “Everyday Adaptations to Climate Change”, *Ecology & Society* (in progress)
- Guest editor, Special Issue “Sustainable and Just Energy Transition in the Global South”, *World Development* (2021)
- Guest co-editor, Special Issue “Forest Governance Interventions for Sustainability: Information, Incentives, and Institutions”, *Current Opinions in Environmental Sustainability* (2018)

### **Journal Manuscript Review**

- Annals of the American Association of Geographers* (2016)
- Applied Energy* (2020)
- Biodiversity and Conservation* (2020)
- Community Development* (2018x2, 2019)
- Earth's Future* (2019)
- Ecological Applications* (2019)
- Ecological Economics* (2022)
- Ecological Processes* (2018)
- Ecology and Evolution* (2017x2)
- Ecosphere* (2017)
- Environment, Development and Sustainability* (2017, 2018x2)
- Environmental Management* (2017)
- Environmental Science & Policy* (2020)
- Global Change Biology* (2020)
- Global Ecology and Conservation* (2020)
- Human Ecology* (2016x6, 2017x2, 2018x2, 2020)

*Humanities & Social Sciences Communications* (2020)  
*International Journal of Disaster Risk Science* (2017)  
*International Journal of Geographical Information Science* (2018)  
*Journal of Arid Environments* (2019x2, 2020)  
*Journal of Cleaner Production* (2019, 2020)  
*Journal of Contemporary African Studies* (2019)  
*Journal of Development Studies* (2022)  
*Journal of Environmental Management* (2019)  
*Journal of Environmental Studies and Sciences* (2015)  
*Journal of Mountain Science* (2016)  
*Journal of Peasant Studies* (2022)  
*Journal of Poverty* (2018)  
*Journal of Rural Studies* (2020)  
*Land Degradation and Development* (2019)  
*Land Use Policy* (2018, 2021x2)  
*Landscape Ecology* (2020x3)  
*Livestock Science* (2016)  
*Natural Hazards* (2019)  
*Nature Climate Change* (2021)  
*Nature Food* (2021, 2022x2)  
*Nature Sustainability* (2019x2, 2021x2)  
*Papers in Regional Science* (2020)  
*PLoS One* (2020x3)  
*Proceedings of the National Academy of Sciences* (2020, 2022)  
*SAGE Open* (2020)  
*Sustainability* (2018x2, 2020)  
*The Rangeland Journal* (2019)  
*Water* (2018)  
*World Development* (2015, 2016, 2017, 2018, 2019x3, 2020)  
*World Development Perspectives* (2021)

### **Grant Proposal Review**

National Science Foundation, Science and Technology Studies Program (2021); National Science Foundation, Division of Environmental Biology (2020); Institute of Social Science Seed Grant, ASU (2020); Science & Technology Facilities Council, UK (2018); National Geographic Society Committee for Research and Exploration Grant (2015); Sustainable Biodiversity Fund, Cornell (2014); Mellon/Kieckhefer Grant, Cornell (2011)

### **Leadership**

Coordinating Lead Author, Transformative Change Assessment, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), 2022-

Program leader, “World Development Junior Reviewer Program”, 2021-

Workshop co-organizer, “The Everyday in Everyday Adaptations”, Online, June, 2021.

Member, Research Technical Assistance Center Network, United States Agency for International Development (USAID), 2020-

Board of directors, Forests & Livelihoods: Assessment, Research, and Engagement (FLARE) Corporation, 2019-

Conference session organizer, “Large-Scale Land Acquisitions and Effect on Agricultural Production, Ecosystem Services, and Smallholder Livelihoods”, Annual Meeting of Association of American Geographers, Washington, DC, April, 2019.

Member, Board of University of Michigan Postdoctoral Association, 2016-2018.

Conference session organizer, “Systematic Assessment of Land Transaction Outcomes”, Third Annual Meeting of Forests & Livelihoods: Assessment, Research, and Engagement, Stockholm, Sweden, September, 2017.

Conference session co-organizer, “Dynamics of Coupled Natural and Human Systems Panels: Models, Feedback, Analyses, and Outcomes”, Annual Meeting of Association of American Geographers, Boston, MA, April, 2017.

Roundtable discussion session organizer, “The Impact of Large-Scale Land Transactions on Smallholder Livelihoods and Agroecological Systems”, Third GLP Open Science Meeting, Beijing, China, October, 2016.

Symposium co-organizer, “Large-Scale Land Transactions in Sub-Saharan Africa, South Asia and Southeast Asia”, University of Michigan, Ann Arbor, MI, April, 2016.

### **Campus Level**

Member, Graduate College Completion Fellowship Review committee, Graduate College, ASU (2021)

Member, Interdisciplinary Enrichment Fellowship Review Committee, Graduate College, ASU (2021)

Member, Judging Committee for Institute of Social Science Research’s Graduate Student Poster Contest, ASU (2019)

Member, Coordination Committee of Forests & Livelihoods: Assessment, Research, and Engagement (FLARE) Network (2016-2019)

### **School/Department Level**

Member, Sustainable Food Systems faculty search committee, School of Sustainability, ASU (2021-2022)

Member, Sustainability Education faculty search committee, School of Sustainability, ASU (2020-2021)



Member, Sustainable Food Systems Program Committee, School of Sustainability, ASU (2019-)  
Undergraduate Quantitative Skills Curriculum Committee, School of Sustainability, ASU (2019)  
Graduate Committee, School of Sustainability, ASU (2018-2019)

### **POPULAR PRESS CONTRIBUTIONS AND QUOTATIONS**

Environmental News Network; Thomson Reuters

### **ACADEMIC AFFILIATIONS**

American Association of Geographers  
American Association for the Advancement of Science  
International Association for the Study of the Commons  
Sigma Xi, The Scientific Research Society

### **LANGUAGES**

Chinese (native); English (fluent); Afaan Oromo (basic)