

CURRICULUM VITAE

University of Idaho

NAME: Katherine D. Lee

DATE: 8/26/2022

RANK OR TITLE: Associate Professor

DEPARTMENT: Agricultural Economics and Rural Sociology

OFFICE LOCATION:

Agricultural Science 029
Moscow, ID 83844

OFFICE PHONE: (208) 885-5527

EMAIL: katherinelee@uidaho.edu

DATE OF FIRST EMPLOYMENT AT UI: August 2016

DATE OF TENURE: 7/2022

DATE OF PRESENT RANK OR TITLE: July 2022

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

2016	Ph.D. in Economics, University of Wyoming <i>Fields: Natural Resource Economics, Industrial Organization</i>	Laramie, WY
2008	B.S. in Economics, University of Wisconsin	Madison, WI
2008	B.S. in Biology, University of Wisconsin	Madison, WI

EXPERIENCE:

Teaching and Research Appointments:

2022 – now	Associate Professor, Agricultural Economics and Rural Sociology, University of Idaho	Moscow, ID
2016 – 2022	Assistant Professor, Agricultural Economics and Rural Sociology, University of Idaho	Moscow, ID
2011 – 2016	Graduate Research Assistant, University of Wyoming	Laramie, WY

Non-Academic Employment:

2009 – 2011	Biological Research Technician, University of Notre Dame	South Bend, IN
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Consulting:

2020	Ecosystem Service Market Consortium Assessment of legal and economic feasibility of creating markets for ecosystem service production on public grazing lands	Washington, DC
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TEACHING ACCOMPLISHMENTS:

Areas of Specialization: Microeconomics, Applied Economics, Natural Resource Economics, Environmental Economics

Courses Taught:

University of Wyoming

Principles of Macroeconomics, ECON 102, Spring 2014 and 2015

Principles of Microeconomics (Supplemental Instructor), ECON 101, Fall 2013

University of Idaho

Environment and Natural Resource Economics, AGEC 451, Spring 2017—present

Natural Resource Economics and Policy, AGEC 532, Spring 2018—present

Students Advised:

Undergraduate students: 4 undergraduate researchers at University of Idaho

Graduate students – Served as Major Professor:

Student Name	Degree	Years Advised
Aaron Johnston	M.S. Environmental Science	2022—now
Kelton Hunter	M.S. Applied Economics	2018—now
Laura Gerner	M.S. Applied Economics (non-thesis)	2021 – 2022
Madison Moore	M.S. Applied Economics	2016 – 2018

Graduate student committee membership

Student Name	Degree	Years Advised
Kayla Johnston	Ph.D. (College of Natural Resources)	2021—present
Aaron Wold	M.S. Environmental Science (Washington State University)	2019—2021
Evelyn Lemgo	M.S. Applied Economics	2018 – 2020
Kiroles Awad	M.S. Applied Economics	2018 – 2020

Total Undergraduate Academic Advisees to Date: 29

Teaching and advising honors and awards

Year	Award
2022	CALS Outstanding Academic Advisor nominee
2020	CALS R.M. Wade Award for Excellence in Teaching nominee
2019	CALS Outstanding Academic Advisor nominee

SCHOLARSHIP AND ACCOMPLISHMENTS:

Peer-reviewed Publications:

*indicates graduate student mentee

**indicates undergraduate student mentee

^a indicates graduate work

- 1] Albers, H.J., Lee, K.D., Martínez-Salinas, A., Middleton, A., Murphy, M., Newbold, S., Stoellinger, T. Ecology and policy for economic analysis of seasonal migratory species. Accepted. *Review of Environmental Economics and Policy*.
- 2] Torell, G., Lee, K.D., Garnica, L., Meyer, A., Ward, F. (2022). Least-Cost Provision of Ecosystem Services from Water: When, Where, and How Much? *Journal of Water Resources Planning and Management*. 148(2).
[https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001511](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001511)
- 3] Lee, K.D., Apriesnig, J.L., Zhang, H. Socio-ecological evaluation of bioeconomic fisheries management: the case of Yellow Perch in Lake Erie. *Frontiers in Ecology and Evolution*. 9, 801. <https://doi.org/10.3389/fevo.2021.703813>
- 4] Burton, K**, Maas, A., Lee, K.D. A Case Study in Contamination: Persistent Home Value Losses Associated with the Elk River Spill. *Journal of Agricultural and Resource Economics*. Accepted August 2021
- 5] Wardropper, C.B., Angerer, J.P., Burnham, M., Fernández-Giménez, M.E., Jansen, V.S., Karl, J.W., Lee, K.D., Wollstein, K. (2021). Improving rangeland climate services for ranchers and pastoralists with social science. *Current Opinion in Environmental Sustainability*. 52, 82-91. <https://doi.org/10.1016/j.cosust.2021.07.001>
- 6] Shogren, J., Hochard, J., Lee, K.D.^a, Varelas Henderson, L. (2021). Experimental mindset for environmental challenges: The puzzling case of public goods contributions. *European Review of Agricultural Economics*, 48(4), 785-804.
<https://doi.org/10.1093/erae/jbab033>.
- 7] Lee, K.D., Torell, G. L., & Newman, S. (2021). A once-in-one-hundred-year event? A survey assessing deviation between perceived and actual understanding of flood risk terminology. *Journal of Environmental Management*, 277.
<https://doi.org/10.1016/j.jenvman.2020.111400>

- 8] Albers, H.J., Lee, K.D., Rushlow, J.R., & Zambrana-Torrellio, C. (2020). Disease Risk from Human–Environment Interactions: Environment and Development Economics for Joint Conservation-Health Policy. *Environmental and Resource Economics*, 76, 929–944. <https://doi.org/10.1007/s10640-020-00449-6>
- 9] McClure, M., Machalaba, C., Zambrana-Torrelío, C., Feferholtz, Y., Lee, K.D., Daszak, P., & Karesh, W. B. (2019). Incorporating Health Outcomes into Land-Use Planning. *EcoHealth*, 16, 627–637. <https://doi.org/10.1007/s10393-019-01439-x>
- 10] Torell, G. L., Lee, K.D., & Steele, C. (2019). Understanding future threats to western rangelands: Modeling the performance of grazing strategies in the face of environmental change. *Western Economics Forum*, 17(1). <https://doi.org/10.22004/ag.econ.287313>
- 11] Lee, K.D.^a, Finnoff, D., & Daszak, P. (2018). Impacts of Pathogen Introduction Risk on Importer Behavior and Gains from Trade in the Livestock Industry. *EcoHealth*, 15(2), 317–326. <https://doi.org/10.1007/s10393-017-1292-3>
- 12] Torell, G. L., & Lee, K.D. (2018). Impact of Climate Change on Livestock Returns and Rangeland Ecosystem Sustainability in the Southwest. *Agricultural and Resource Economics Review*, 47(2). <https://doi.org/10.1017/age.2018.13>
- 13] Albers, H. J., Hall, K. M., Lee, K.D., Taleghan, M. A., & Dietterich, T. G. (2018). The Role of Restoration and Key Ecological Invasion Mechanisms in Optimal Spatial-Dynamic Management of Invasive Species. *Ecological Economics*, 151. <https://doi.org/10.1016/j.ecolecon.2018.03.031>
- 14] Albers, H. J., Lee, K.D., & Sims, K.R.E. (2017). Economics of habitat fragmentation: A review and critique of the literature. *International Review of Environmental and Resource Economics*, 11(2). <https://doi.org/10.1561/101.00000092>
- 15] Barbier, E.B., & Lee, K.D.^a (2013). Economics of the marine seascape. *International Review of Environmental and Resource Economics*, 7(1), 35–65. <https://doi.org/10.1561/101.00000056>

Book Chapters and Proceedings:

- 16] Albers, H. J., Dietterich, T. G., Hall, K. M., Lee, K. D., & Taleghan, M. A. (2019). Simulator-Defined Markov Decision Processes: A Case Study in Managing Bio-invasions. In F. Feng, M. Tambe, B. Dilkina, & A. Plumptre (Eds.), *Artificial Intelligence and Conservation* (p. 210). Cambridge University Press.
- 17] National Academies of Sciences Engineering and Medicine. (2018). Understanding the economics of microbial threats: Proceedings of a workshop. In The National Academies Press (Ed.), *Understanding the economics of microbial threats: Proceedings of a workshop*. Washington, DC. <https://doi.org/https://doi.org/10.17226/25224>

- 18] Albers, H. J., Lee, K. D., & Robinson, E. J. Z. (2017). Economics of REDD: incentives to change forest use behavior. In D. A. Della Sala & M. I. Goldstein (Eds.), *Encyclopedia of the Anthropocene*. Elsevier.

Outreach and Extension Reports:

- 19] Miller, F., Torell, G., Lee, K.D. (2020). Grass-fed beef as an option for New Mexico producers. 2020 New Mexico State Beef and Livestock Update.

Other publications:

- 20] Lee, K.D., Torell, G. L., & Ritten, J.P. (2021). Markets for Ecosystem Services on Public Grazing Lands: Assessment of Potential Services and Considerations for a Successful Program. White paper for Ecosystem Services Market Consortium.
- 21] Winford, E., Lee, K.D. (2021). Rangelands Report. *Idaho Climate-Economy Impacts Assessment*. James A. & Louise McClure Center for Public Policy Research, University of Idaho. Boise, ID.

Presentations:

- *Indicates the presenter
**Indicates graduate student mentee

Invited:

- T1] *Lee, K.D., Finnoff, D., Daszak, P. The cost of land use change: impacts of deforestation on malaria incidence in Brazil. State of Michigan King-Chavez-Parks Lecture Series in Economics. Michigan Tech University. Houghton, MI. October 2019.
- T2] *Lee, K. D., Daszak, P., Finnoff, D. Implementing a One Health Approach to Combating Microbial Threats. National Academies Forum on Microbial Threats, Washington D.C. June 2018.
- T3] *Lee, K. D. Economics of Noxious Weeds, Jordan Valley Cooperative Weed Management Area Winter Weed Seminar, Jordan Valley, OR. Virtual. February 2017.
- T4] *Lee, K.D. Managing emerging vector-borne disease: an economic perspective. Colorado State University Wildlife Disease Association. Fort Collins, CO. April 2015.
- T5] *Lee, K. D., Finnoff, D., Daszak, P., Zambrana-Torrel, C., Pike, J. Pike. Ecosystem based management approach to a land use change-driven outbreak. Infectious Disease Emergence & Economics of Altered Landscapes (IDEEAL). Kota Kinabalu, Malaysia. July 2014.

Professional Meetings and Workshops:

- T1] *Lee, K.D., Winford E. Risks and opportunities presented by climate change to Idaho's rangelands. Palouse Land Trust. May 2022.
- T2] *Lee, K.D., Brockmann, S. Estimating the value of pest predation ecosystem services for coffee producers in Costa Rica. Southern Economics Association Annual Meeting, Virtual. November 2021.

- T3] *Lee, K.D. Ecology and Economics for Conservation of Migratory Species. BIOECON Meeting. Jackson, WY. September 2021.
- T4] *Lee, K.D., Moore, M.L. Effects of Water Security on Land Values: Evidence from the Columbia Basin Project. Agricultural & Applied Economics Association Annual Meeting. Austin, TX. August 2021.
- T5] **Wold, A., Lee, K.D., Jansen, V., Meddens, A. Effects of climate on the dynamics of rangeland vegetation and productivity in the Western US. Society for Range Management Annual Meeting. Virtual. February 2021.
- T6] *Lee, K.D., Torell, G., Newman, S. A once-in-one-hundred-year event? A survey assessing deviation between perceived and actual understanding of flood risk terminology. Southern Economics Association Annual Meeting, Virtual. November 2020.
- T7] *Lee, K.D., Torell, G., Garnica, L., Mayer, A., Ward, F. Least-cost provision of ecosystem services: when, where, and how much? Southern Economics Association Annual Meeting, Ft. Lauderdale, FL. November 2019.
- T8] *Lee K.D. The economics of invasive species: an overview of methods, challenges, and opportunities. Innovations in Invasive Species Management Conference. December 2019.
- T9] *Lee, K.D., Finnoff, D., Daszak, P. Fever from the lost forest: missing ecosystem service markets for health. Michigan Tech University, Houghton, MI. October 2019.
- T10] *Lee, K.D. Economics of ecosystem management and infectious disease. New Mexico State University. Las Cruces, NM. December 2018.
- T11] Apriesnig, J. J., Warziniack, T., Finnoff, D., Zhang, H., *Lee, K.D., Ruthorford, E. A coupled bioeconomic model of a regional economy and an aquatic food web. International Institute of Fisheries Economics & Trade. Seattle, WA. July 2018.
- T12] *Lee, K.D., D. Finnoff, P. Daszak. Optimal control of land conversion in Brazil: Impacts of malaria as an externality of deforestation. World Congress of Environment and Resource Economists. Gothenburg, Sweden. June 2018.
- T13] *Lee, K.D., Torell, G. Climate change, livestock stocking rates, and sustainability in the desert Southwest. University of Idaho AERS Seminar Series. Moscow, ID. March 2018.
- T14] *Lee, K. D., Finnoff, D. Impacts of foot and mouth introduction risk on trade behavior. RAPIDTrade Workshop. Tempe, AZ. October 2017.
- T15] *Lee, K.D., Newman, S. Torell, G., Stevens, R. Estimating the impacts of misunderstanding the term '100 year flood'. EcoHealth Alliance, New York, NY. September 2017.
- T16] *Torell, G. L., Lee, K.D. The effect of climate change and interspecies competition on rangeland stocking decisions. Northeast Agricultural and Resource Economics

Association Workshop on Climate Change and Land Conservation, Washington D.C. June 2017.

- T17] *Lee, K. D., Finnoff, D. Economic impact of malaria in the Brazilian Amazon. RAPIDTrade Workshop, York, UK. June 2016
- T18] *Lee, K. D., Finnoff, D., Daszak, P. Managing vector-borne disease as an externality of land use change. Heartland Environmental and Resource Economics Workshop, Urbana Champaign, IL. November 2015,
- T19] *Lee, K. D., Finnoff, D., Daszak, P. Spatial externalities of land use change: An ecosystem-based approach to managing vector-borne disease. North Carolina State University's Camp Resources XXII, Asheville, NC, August 2015.
- T20] *Lee, K. D., Finnoff, D., Daszak, P., Zambrana-Torrel, C., Pike, J. Spatial externalities of land use change: controlling infectious disease through landscape management. RAPIDTrade Workshop, Tempe, AZ, April 2015.
- T21] *Lee, K. D., Finnoff, D., Daszak, P., Elwood, S., Pike, J. Ecosystem management as a tool to regulate impacts of land use change-driven infectious outbreaks. MASpread Workshop, Princeton, NJ, March 2014.
- T22] Hochard, J., *Lee, K.D., Parry, B., Shogren, J., Varelas, L. Putting the pieces together: cost structure, contribution, and climate change. Colorado University Environmental and Resource Economics Workshop. Vail, CO, October 2013.

Grants and Contracts Awarded

Total Funding: \$3,254,300 Lee Spending Authority (2016-present): \$521,000

- G1] “Technology to Manage Livestock Location Within RANGE and REALITY”
- Funding dates: 1/2022—12/2025
 - PI: K. Launchbaugh, Co-PIs: K. Lee, D. Shrestha, G. Murdoch, J. Karl, T. Hudson, J. Sprinkle
 - Sponsor: USDA-AFRI
 - Amount awarded: \$983,299 (Lee \$)
- G2] “Sustaining Rural Livelihoods, Livestock Grazing, and Sage-Grouse Habitat in Western Sagebrush Systems”
- Funding dates: 1/2022-12/2024
 - PI: P. Williams, Co-PIs: K. Lee, J. Ritten, J. Mosley, C. Hagen, J. Wulfhorst
 - Sponsor: USDA-AFRI
 - Amount awarded: \$650,000 (Lee \$189,000)
- G3] “Evaluating the ecological and economic effectiveness and impacts of fuel breaks in Great Basin rangelands”
- Funding dates: 7/1/2020—4/30/2024
 - PI: E. Strand Co-PI(s): K. Lee, T. Prather, E. Winford

- Sponsor: Joint Fire Sciences Program
 - Amount Awarded: \$575,284 (Lee: \$114,921)
- G4] “Drought decision-support platform (DDeSuP): Deriving physical drought metrics from Earth observations for integration into ranch management and economic models”
- Funding dates: 9/1/2019—8/30/2021
 - PI: J. Brandt Co-PI(s): J. Abatzoglou, K. Lee, A. Meddens, C. Wardropper
 - Sponsor: USDA-AFRI
 - Amount Awarded: \$75,020 (Lee: \$10,487)
- G5] “Economic, and Ecological Implications of Grazing Utilization and Timing on Riparian Areas in the Intermountain West”
- Funding dates: 8/1/2020 – 7/30/2024
 - PI: M. Ellison, Co-PI(s): J. Aycrigg, T. Johnson, K. Lee, J. Wulforst
 - Sponsor: USDA-AFRI
 - Amount Awarded: \$500,000 (Lee: \$100,000)
- G6] “Dormant Season Grazing of Cheatgrass to Reduce Fuel Loads”
- Funding dates: 10/1/2019—9/30/2023
 - PI: A. Hulet, Co-PI(s): K. Lee, E. Winford
 - Sponsor: USDA Forest Service Intermountain Region
 - Amount Awarded: \$431,306 (Lee: \$70,000)
- G7] “Risky Business: Implications of Decisions Under Uncertainty for Environmental Policy”
- Funding dates: 9/1/2019—8/30/2020
 - PI: K. Berry, Co-PI(s): K. Lee, S. McDermott
 - Sponsor: University of Alaska
 - Amount Awarded: \$9,998 (Lee: \$2,500)
- G8] “Fever from the forest: modeling drivers and impacts of sylvatic dengue virus spillover events in Borneo”
- Funding dates: 5/1/2019- 4/30/2022
 - PI: K. Lee, Co-PI(s): K. Hanley
 - Sponsor: University of Idaho ORED
 - Amount Awarded: \$17,487 (Lee: \$17,487)
- G9] “Measuring opportunity costs of ecosystem service provision in the Rio Grande River”
- Funding dates: 9/1/2018—8/31/2019
 - PI: K. Lee
 - Sponsor: University of Idaho ORED
 - Amount Awarded: \$11,600 (Lee: \$11,600)

Honors and Awards:

Year	Award
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2015	William E. Morgan graduate student award
2011	American Fisheries Society Midwest Chapter best student paper

SERVICE:

Major committee Assignments:

Departmental Committees:

- Undergraduate program committee chair, September 2021 – present
- Undergraduate program assessment coordinator, September 2021 – present
- Graduate program committee, September 2016 – August 2021
- 1 junior faculty mentoring committee
- 5 search committees at UI (CALs and CNR)
- 3 junior faculty 3rd year review committees

College-level Committees:

- CALs Faculty Promotion and Tenure committee
- UI CNR Policy Analysis Group Director search committee member

Professional and Scholarly Organizations:

- American Economic Association (AEA)
- Association of Environmental and Resource Economics (AERE)
- Agricultural and Applied Economics Association (AAEA)

Synergistic Activities:

Idaho's Economy in a Changing Climate: Impact Assessment and Opportunities for Innovation Group – Working group to assist the state of Idaho in understanding climate change-related economic risks, opportunities to cultivate innovative business sectors, and build a climate resilient future.

WDC40 Endangered Species Science and Policy, Multistate Research Coordinating Committee and Information Exchange Group - Development Committee to further the integration of land-grant university science into ESA decision making with special focus on species of the sagebrush ecosystem and Western Region.

Professional Service

Reviewer

- Regular abstract reviewer for the Agricultural and Applied Economics Association annual meeting (2017 – present)
- Regular abstract reviewer for the Southern Economic Association annual meeting

(2018 – present)

- Regular abstract reviewer for the Western Agricultural Economics Association annual meeting (2017 – present)
- Topic leader for the Western Agricultural Economics Association annual meeting (2020)
- Proposal reviewer for Western Sustainable Agriculture Research and Education (SARE)
- Referee for: *American Journal of Agricultural Economics*, *Applied Economic Perspectives and Policy*, *EcoHealth*, *Ecological Economics*, *Environmental and Resource Economics*, *Journal of the American Water Resources Association*, *Journal of Environmental Management*, *Journal of Agricultural and Resource Economics*, *Land Economics*, *Resource and Energy Economics*, *Western Economics Forum*

Editor

- Review editor for *EcoHealth*
- Editorial council for *Journal of Agricultural and Resource Economics* (beginning 2022)

Community Service:

- Moscow Area Mountain Bike Association (MAMBA) member and volunteer, August 2016 – present

PROFESSIONAL DEVELOPMENT:

Scholarship:

- AAEA Junior Faculty Development Workshop. Vail, CO. May 2017
- Pacific Institute for Mathematical Sciences Mathematics Behind Biological Invasions Summer Course. University of Alberta. Edmonton, Alberta. May 2013.
- BESTNet Modeling Biodiversity and Ecosystem Services. London, United Kingdom. March 2012.