

Summary

Ecological Economist with a focus on metrics and models of fundamental and comprehensive human value, and pricing in externalities.

Education

Current, from Fall 2017: PhD in Energy and Resources. Energy Resources Group, UC Berkeley.

MS in Energy and Resources, Energy and Resources Group, UC Berkeley. 2017.

Interdisciplinary Analysis in Energy and Resources; Energy Economics; Social Science Methods; Scalable Spatial Analytics; Econometrics - Multiple Equation Estimation; Quantitative Aspects of Global Environmental Problems; Energy and Society; Teaching and Learning in Higher Education; Programmers Python.

- Thesis: “Genuine Progress Indicator and Gross State Welfare for California: 2010-2014”.

Bachelor of Economics (Emphasis: Ecological Economics). San Francisco State University. 2011
Graduating *Summa cum laude*; 3.94 Grade Point Average.

Econometric Theory; Linear Algebra; Calculus 2; Senior Seminar: Economic Inquiry and Analysis; Independent Study - Economics; Independent Study - Biology; Conceptual Physics; Our Endangered Planet; Environmental Problems and Solutions; Introduction to Ecology.

- Designed and implemented Independent Study course plan, with a focused research agenda, culminating in an interim and final paper, and a presentation of the research results.
- Conducted self-guided research on metrics of environmental/biophysical valuation including the Ecological Footprint, Energy Analysis and Life Cycle Analysis, undertaking a critical analysis of the methodologies.
- Senior Papers: “The Climate Change of Economics” (Senior Thesis); “Toward a Sustainability Theory of Value”; “The Malthusian Theory of Growth and its Impact on Economics”.

Associates in Arts, City College San Francisco. 2009
Graduated with Highest Honors

Certificate of Professional Writing, Royal Melbourne Institute of Technology, Australia.

Academic Publications

- *Brown, Clair, and **Eli Lazarus**. 2018. “Genuine Progress Indicator for California: 2010–2014.” *Ecological Indicators* 93 (October): 1143–51. <https://doi.org/10.1016/j.ecolind.2018.05.072>.*
- *Biocapacity and Ecological Footprint Accounting. 2016. Lin D., Galli A., Grunewald N., Lazarus E., Martindill J., Wackernagel M., Zimmerman D. Book chapter for Sustainability Assessment of Renewables-Based Products: Methods and Case Studies. eds Dewulf J., de Meester S., Alvarenga R. Wiley*

- *Biodiversity Loss and the Ecological Footprint of Trade.* **Lazarus, E.**; Lin, D.; Martindill, J.; Hardiman, J.; Pitney, L.; Galli, A. *Diversity* 2015, 7, 170-191.
- *Footprint facts and fallacies: A response to Giampietro and Saltelli (2014) "Footprints to Nowhere"* Goldfinger S., Wackernagel M., Galli A., Lazarus E., Lin D. *Ecological Indicators, Letter to the Editor*, 2014
- *Implications for biodiversity.* Galli A., Wackernagel M., Iha K., Lazarus E. *Biological Conservation. Volume 173, May 2014, Pages 121–132*
- *Accounting for demand and supply of the biosphere's regenerative capacity : The National Footprint Accounts' underlying methodology and framework.* Borucke M., Moore D., Cranston G., Gracey K., Iha K., Larson J., Lazarus E., Morales J.C., Wackernagel M., & Galli A. *Ecological Indicators*, N° 24, pp. 518–533, 2013
- *The influence of farming technique on cropland: A new approach for the Ecological Footprint N.* Passeri, M. Borucke, E. Blasi, S. Franco, E. Lazarus. *Ecological Indicators* 29 (2013) 1-5
- *Ecological footprint accounting Chapter 11, Globalisation, Economic Transition and the Environment: Forging a Path to Sustainable Development .*, Wackernagel M., Galli A., Lazarus E., Borucke M., Mattoon, S. 2013

Working Papers

- *Gross Domestic Welfare: Comprehensively Measuring Wellbeing and Sustainability – pilot accounts for California and the U.S. 1995- 2016.* Lazarus, E.
- *Toward a Sustainability Theory of Value.* Lazarus, E.
- *Sustainability & Quality of Life: Ecological Footprint Efficiency by Consumption Category*

Reports

- *Living Planet Report 2014, 2012*
- *Hong Kong Ecological Footprint Report 2013*
- *United Arab Emirates, Ecological Footprint Initiative – 3 reports*
- *National Footprint Accounts Guidebook, 2013*
- *Atlas de l'Empriente Écologique de la Biocapacité des pays membres de la Francophonie, 2013.*
- *Restoring Balance in Laguna Lake Region, 2013 Ecological Footprint Report*
- *Philippines Ecological Footprint Report, 2012*
- *A New Angle on Sovereign Credit Risk E-RISC: Environmental Risk Integration in Sovereign Credit Analysis*
- *Japan Ecological Footprint Report 2012*

Presentations

- *Institute for New Economics Thinking, Young Scholars Initiative N. America Convening 2019, Los Angeles, CA: Making Markets Work for US: Pigouvian Taxes, pricing in externalities toward optimal social welfare and sustainability*
- *International Society of Ecological Indicators 2018, Puebla Mexico: Gross Domestic Welfare, Pilot accounts for California & Ecological Footprint Efficiency by Consumption Category*
- *Institute for Research on Labor and Employment. 2017: Genuine Progress Indicator for*

California

- *UC Berkeley Development Engineering Seminar, 2017: Ecosystem Services and Valuation.*
- *U.S. Ecological Economics Conference 2016, DC: Toward a Sustainable Theory of Value*
- *ISSST 2014, Comparing NFA and MRIO approaches for calculating nations' Ecological Footprint of consumption*
- *Indonesian Department of Planning, 2013*
- *ANZSEE 2012, Comparing NFA and MRIO approaches to the Ecological Footprint & Sustainability Theory of Value*
- *Philippines Climate Change Commission forum, 2012*
- *True-Cost Economics: the Real Potential and Problems* presented at the U.S. Social Forum, 2010.
- *Valuation: Where Environmental and Ecological Economics Meet, Theories of Valuation, GDP: Measuring Aggregate Welfare?;* presented as undergraduate work at SFSU.

Honors, scholarships and grants

- National Science Foundation Graduate Research Fellow, Fall 2017 – Spring 2022
- Fellow, Data Science for the 21st Century National Science Foundation Research Traineeship. Fall 2016-Spring 2018.
- Outstanding Graduate Student Instructor 2016-2017, UC Berkeley
- Markowski-Leach Scholarship, 2016-2017.
- Economics Hood nominee, SFSU Business School, 2012
- Phi Beta Kappa, Honors Society membership, 2012.
- George Feliz Memorial Scholarship in Economics, 2010.
- Dean's List, San Francisco State University, Fall 2009.
- Herbert and Edvige Leberz Scholarship, 2008.
- Dean's List City College of San Francisco, Fall 2008, Spring 2009.
- Travel Grants, Australian Film Commission, 2003 & 2002.
- Prize Awards (representing 99.7 percentile), Australian Mathematics Competition, 1982 & 1984.

Affiliations

Member of U.S., Australia/New Zealand, and International Society of Ecological Economics. Member of the Institute of New Economic Thinking, Young Scholars Initiative.
Member of the Cal Sailing Club and the Berkeley Hang Gliding Club.

Recent Work History

- 2017 Graduate Student Research Assistant, with Professor Clair Brown
- Developed and completed Genuine Progress Indicator assessment of California, 2010-2014
 - Supervised undergraduate research assistants
- 2016-2017 Graduate Student Instructor: Climate Change Economics, with Professor David Anthoff
- Developed written weekly plan for discussion sections for curriculum

- Led multiple discussion sections weekly
- Grading of Excel-based models and written exams

- 2015 Lead Researcher – Resource Accounting, Global Footprint Network
- Co-managing a team of 9 researchers internationally plus interns, including coordinating team work for internal and external client projects.
 - Directly overseeing 2 Ecological Footprint accounting models (NFA and MRIO-FA), a NFA projection model, and driving model development and comparison research.
 - Ongoing work as immediately below

- 2011-2014 Research Scientist, Global Footprint Network
- Leading substantial process improvement as manager of National Footprint Accounts 2015 Edition, including a collaborative team approach, proactive model audit and development, and new quality assurance procedures.
 - Instituted system for tracking ongoing research and model improvement agenda; instituted coordinated model process documentation; created novel multi-use graph generating file; initiated test protocol for projection model; participated in licensing program refresh; coordinated institutionalization of licensing program to client services department; facilitated organizational human resources working group.
 - Worked on a multitude of projects and tasks including: NFA 2011-2015 Editions; technical and public reports; trainings and presentations; academic publications; project management; hiring and other team administration; and communications.
 - Engaged with clients, partners, and other stakeholders from a variety of domains: government bodies including national ministries, ministers and commissioners; international agencies; environmental advocacy groups; academics, researchers and students; consultants; contractors; and the general public.

- 2010 Research Assistant to Dr. Philip King, San Francisco State University.
- Conducted a literature review surveying contemporary environmental valuation methodologies summarized in the environmental economics report *Economic Analysis of South Monterey County Coastal Zone*.
 - Created a project outline for environmental economic valuation of South Monterey beaches based on research of academic literature.

- 2010-2011 Proctor/Grader, San Francisco State University.
- Recognised for high achievement and responsible character and selected to supervise and grade exams for undergraduate Economics classes with up to 60 students.

Previous Work History

- 2006-2011 Owner/Manager, Everyday Eden - natural gardening and landscaping.
- Established and managed a business providing natural and ecologically benign gardening and landscaping, using a biodiesel vehicle.
 - Built and maintained a client base, managed scheduling, employees, accounts, bids,

stock purchases, tool and vehicle maintenance.

2004-2005 Landscape Gardener, Eli Wadley Fine Gardening Care.

2003 Landscape Gardener Earthly Sites Landscaping.

Other studies and experience

Immersive Spanish language course - WAYRA Instituto de Español (Costa Rica). Self-taught touch typist. Drummer, song writer, and guitarist. Avid bike-rider, sailor, snowboarder, and hang-gliding enthusiast.