

Adrian L. Vogl

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EDUCATION

Ph.D.	Aquatic Resources Texas State University-San Marcos, San Marcos, Texas	May 2011
B.A.	Anthropology (Minor in Environmental Science & Policy) University of Arizona, Tucson, Arizona	Aug 2004
	Earth Semester, a field school for environmental studies and ecology Columbia University's Biosphere 2 Center, Oracle, Arizona	Spring 2000

POSITIONS HELD

Oct 2022 – Present	Director of Research Impact, Natural Capital Project, Stanford University
June 2021 – Dec 2023	Consultant, The World Bank Group
Nov 2018 – Sep 2022	Lead Scientist, Natural Capital Project, Stanford University
Jan 2015 – Oct 2018	Senior Scientist, Natural Capital Project, Stanford University
Apr 2013 – Dec 2014	Program Manager, Freshwater, Natural Capital Project, Stanford University
Feb 2012 – Mar 2013	Post-doctoral Researcher, Natural Capital Project, Stanford University
Nov 2010 – Feb 2012	Science Program Lead, Wimberley Valley Watershed Association
Sep 2007 – Sep 2011	Doctoral Research Assistant, River Systems Institute, Texas State University

PUBLICATIONS

Journal Articles

Polasky, S., P.L. Hawthorne, R. Chaplin-Kramer, J. Gerber, S. Mamun, M. Ruckelshaus, J. Russ, R. Schmitt, J. Smith, **A.L. Vogl**, A.C. Castonguay, J. Douglass, V. Kowal, I. Madden, R. Sharp, et al. (*submitted*). Frontiers for sustainable development through landscape efficiency. *Science*.

Villarreal-Rosas, J., JR. Rhodes, L.J. Sonter, H.P. Possingham, **A.L. Vogl**. 2023. Optimal allocation of nature-based solutions to achieve climate mitigation and adaptation goals. *People and Nature*.
<https://doi.org/10.1002/pan3.10481>

Langhans, K.E., A. Echeverri, C. Daws, S. Moss, C.B. Anderson, R. Chaplin-Kramer, J.N. Hendershot, L. Liu, L. Mandle, O. Nguyen, S. Ou, R.P. Remme, R.J.P. Schmitt, **A.L. Vogl**, G.C. Daily. 2023. Centering justice in conceptualizing and improving access to urban nature. *People and Nature*.
<https://doi.org/10.1002/pan3.10470>

Dib, Viviane, P.H.S. Brancalion, S.C. Chou, M. Cooper, D. Ellison, V.F. Farjalla, S. Filoso, P. Meli, A.P.F. Pires, D.A. Rodriguez, A. Iribarrem, A.E. Latawiec, F.R. Scarano, **A.L. Vogl**, C.E. de V. Grelle, B. Strassburg. 2023.

Shedding light on the complex relationship between forest restoration and water services. *Restoration Ecology* 13890. <https://doi.org/10.1111/rec.13890>

Villarreal-Rosas, J., **A.L. Vogl**, L.J. Sonter, H.P. Possingham, J.R. Rhodes. 2021. Trade-offs between efficiency, equality, and equity in restoration for flood protection. *Environmental Research Letters* 17: 014001. <https://doi.org/10.1088/1748-9326/ac3797>

Mandle, L., A.K. Shields-Estrada, R. Chaplin-Kramer, M.G.E. Mitchell, L.L. Bremer, J.D. Gourevitch, P. Hawthorne, J. Johnson, B.E. Robinson, J.R. Smith, L.J. Sonter, G.M. Verutes, **A.L. Vogl**, G.C. Daily, T.H. Ricketts. 2020. Increasing decision relevance of ecosystem service science. *Nature Sustainability* 4: 161-169. <https://doi.org/10.1038/s41893-020-00625-y>

Bryant, B.P., T.R. Kelsey, **A.L. Vogl**, S.A. Wolny, D. MacEwan, P.C. Selman, T. Biswas, H.S. Butterfield. 2020. Shaping land use change and ecosystem restoration in a water-stressed agricultural landscape to achieve multiple benefits. *Front. Sustain. Food Syst.* 4:138. <https://doi.org/10.3389/fsufs.2020.00138>

Griffin, R., **A.L. Vogl**, S.A. Wolny, S. Covino, E. Monroy, H. Ricci, R. Sharp, C. Schmidt, E. Uchida. 2020. Including additional pollutants into an integrated assessment model for estimating non-market benefits from water quality. *Land Economics* 96(4): 457-477. <https://doi.org/10.3368/wple.96.4.457>

Chaplin-Kramer, R. R.P. Sharp, C. Weil, E.M. Bennett, U. Pascual, **A.L. Vogl**, *et al.* 2019. Global Modeling of Nature's Contributions to People. *Science* 366(6462): 255-258. <http://dx.doi.org/10.1126/science.aaw3372>

Tellman, B., R. McDonald, J.H. Goldstein, **A.L. Vogl**, *et al.* 2018. Opportunities for natural infrastructure to improve urban water security in Latin America. *PLOS ONE*. 13(12): e0209470. <https://doi.org/10.1371/journal.pone.0209470>

Vogl, A.L., J.H. Goldstein, G.C. Daily, B. Vira, L. Bremer, R. McDonald, D. Shemie, B. Tellman, J. Cassin. 2017. Mainstreaming investments in watershed services to enhance water security: Barriers and opportunities. *Environmental Science & Policy* 75: 19-27. <https://doi.org/10.1016/j.envsci.2017.05.007>

Vogl, A.L., B.P. Bryant, J. Hunink, S. Wolny, P. Droogers. 2016a. Valuing investments in sustainable land management in the Upper Tana River basin, Kenya. *Special Issue on Optimizing the impact of science: Translational research and stakeholder engagement to identify sustainable land management-based adaptation for challenges posed by environmental change, Journal of Environmental Management* 195(1): 78-91. <http://dx.doi.org/10.1016/j.jenvman.2016.10.013>

Vogl, A.L., P.J. Dennedy-Frank, S. Wolny, J.A. Johnson, P. Hamel, U. Narain, A. Vaidya. 2016b. Managing forest ecosystem services for hydropower production. *Environmental Science & Policy* 61: 221–229. <http://dx.doi.org/10.1016/j.envsci.2016.04.014>

Mandle, L., J. Douglass, J.S. Lozano, R.P. Sharp, **A.L. Vogl**, *et al.* 2016. OPAL: An open-source software tool for integrating biodiversity and ecosystem services into impact assessment and mitigation decisions. *Environmental Modelling & Software* 84: 121–133. <http://dx.doi.org/10.1016/j.envsoft.2016.06.008>

- Bremer, L., D.A. Auerbach, J.H. Goldstein, **A.L. Vogl**, *et al.* 2016. One size does not fit all: Diverse approaches to natural infrastructure investments within the Latin American Water Funds Partnership. *Ecosystem Services* 17: 217–236. <http://dx.doi.org/10.1016/j.ecoser.2015.12.006>
- Mandle, L., H. Tallis, L. Sotomayor, **A.L. Vogl**. 2015. Who loses? Tracking ecosystem service redistribution from road development and mitigation in the Peruvian Amazon. *Frontiers in Ecology and the Environment* 13(6): 309–315. <http://dx.doi.org/10.1890/140337>
- Rosenthal, A., G. Verutes, E. McKenzie, K.K. Arkema, N. Bhagabati, L.L. Bremer, N. Olwero, and **A.L. Vogl**. 2014. Process matters: a framework for conducting decision-relevant assessments of ecosystem services. *International Journal of Biodiversity Science, Ecosystem Services & Management*. <https://doi.org/10.1080/21513732.2014.966149>
- Balvanera, P., M. Uriarte, L. Almeida-Leñero, A. Altesor, F. DeClerk, T. Gardner, J. Hall, A. Lara, P. Laterra, M. Peña-Claros, D.M. Silva Matos, L. P. Romero-Duque, **A.L. Vogl**, *et al.* 2012. Ecosystem services research in Latin America: The state of the art. *Ecosystem Services* 2:56-70.
- Vogl, A.L.** and V.L. Lopes. 2010. Evaluating watershed experiments through recursive residual analysis. *Journal of Irrigation and Drainage Engineering*. Volume 136(5): 348-353.
- Vogl, A.L.** and V.L. Lopes. 2009. Impacts of water resources development on flow regimes in the Brazos River. *Journal of Environmental Monitoring and Assessment* 157: 331-345.
- Lopes, V.L. and **A.L. Vogl**. 2008. Integrating modeling and field experiments to evaluate impacts of vegetative practices on ponderosa pine watersheds. *Journal of the American Water Resources Association* 44(4): 1284-1294.

Peer-Reviewed Book Chapters & Reports

- Warner, C., A. Jensen, S. Kapila, N. Rafique, P.A. Smytzek, R. Jabeen, K. Shahzad, M. Naeem, U. Narain, **A. Vogl**, J.E. Leon, E. Rutebuka, *et al.* (*in press*). Working for a Green Pakistan: Recommendations for Upscaling Restoration of Landscapes and Ecosystem Services. The World Bank Group, Washington, DC.
- Baudoin Farah, A., S. Ten, H. Angarita, **A. Vogl**, and S. Wolny. 2024. Sacrificar el agua: desconexión entre las valoraciones del agua para el bienestar y los modelos de desarrollo en los Llanos de Moxos. In Cauthin, M., H. Salazar, A. Baudoin, and J. Nuñez del Prado (Coord.) *Si la Amazonía Queda en Silencio. Aportes para la reflexión y la acción desde la Amazonía boliviana*. Cochabamba / La Paz: Colorado State University / Centro de Estudios Populares / Posgrado en Ciencias del Desarrollo (Cides – UMSA).
- Bucher, A.E., R. Burdescu, S. El Saghir, **A.L. Vogl**, A. Jarotschkin, A. Sanoh, *et al.* 2023. Democratic Republic of Congo Country Climate and Development Report. 2023. The World Bank Group, Washington, DC.
- Braimoh, A., E. Esikuri, E. Chigumira, G. Guvheya, S. Muyengwa, D. Thapa, **A. Vogl**, J. Turpie, L. Wilson, G. Letley, and J. Weiss. 2023. Mapping and Valuing Ecosystem Services for Sustainable Landscape Management in Zimbabwe. The World Bank Group, Washington, DC.
- Damania, R., J. Russ, M. Fay, M. Heger, A. Khan, G. Ruta, E. Zaveri, S. Polasky, M. Ruckelshaus, R. Chaplin-Kramer, A. Charette-Castonguay, G. Daily, J. Gerber, P. Hawthorne, J. Johnson, G. Kowal, S. Mamun, E.

- McDonald-Madden, J. Smith, R. Schmitt, B. Sohngen, **A.L. Vogl**, P. West, F. Wagner, M. Amann, G. Kieseewetter, Z. Klimont, and W. Schöpp. 2023. *A Balancing Act: Efficiency, Sustainability, Prosperity*. The World Bank Group, Washington, DC.
- Narain, U., W.G. Battaile, N. Zmijewski, D. Revell de Waal, **A.L. Vogl**, A. Burns, A.N. Frake, *et al.* 2022. *Malawi Country Climate and Development Report*. 2022. The World Bank Group, Washington, DC.
- B. Boehlert, **A.L. Vogl**, D. Castillo, J. Leon, R. Payet-Burin, J. Helman, Y. Gebretsadik, P.Y. Owusu, S. Austin, V. Cheron Kirui, E. Rutebuka, and K. Strzepek. 2022. Sectoral impacts of climate change in Malawi: Deep dive on land, water, agriculture, energy, infrastructure, and health. Background note to *Malawi Climate Change and Development Report*. The World Bank Group, Washington, DC.
- Ruckelshaus, M, A. D. Guerry, L. Mandle, **A. Vogl** and N. Nathan. 2022. *Report on Natural Capital Approaches*. The Natural Capital Project at Stanford University, Stanford CA, USA. June 10, 2022.
- Narain, U., **A.L. Vogl**, B. Garnaud, L. Rakotondrasoa, M.J. Sohn, E. Rutebuka, and J. Leon. 2022. Integrated Landscape Management. Chapter 2 in *Madagascar Country Environmental Analysis*. The World Bank Group, Washington, DC.
- Tall, A., N.K. Dampha, **A.L. Vogl**, J. Leon, C. Jaime, A. Savchuk, I. Pinto, S. Giodini, L. Stephens, L. van Aardenne, J. Suidman, C. Scholz, L. Hielkema, L. Ntakirutimana, and J. Van Den Hoek. 2021. Burundi Climate and Environmental Fragility Advisory Services and Analytics (ASA). Synthesis Report. The World Bank Group, Washington, DC.
- Vigerstøl, K., R. Abell, K. Brauman, W. Buytaert, and **A.L. Vogl**. 2021. Addressing water risks through nature-based solutions. In *Nature-based Solutions and Water Security: An Agenda for the 21st Century*. J. Cassin, E. Lopez Gunn, and J. Matthews (eds.), Elsevier. <https://www.elsevier.com/books/nature-based-solutions-and-water-security/cassin/978-0-12-819871-1>.
- Kelsey, T.R., B.P. Bryant, **A.L. Vogl**, A.K. Hart, and H.S. Butterfield. 2021. Strategic selection of lands for rewilding to optimize outcomes and minimize costs. In *Rewilding Agricultural Landscapes: A California Study in Rebalancing the Needs of People and Nature*, H.S. Butterfield, T.R. Kelsey, and A.K. Hart (eds.). Island Press, Washington, DC. <https://islandpress.org/books/rewilding-agricultural-landscapes>.
- Guevara, M., M. Torres, **A. Vogl**, L. Fernández, S. Moss, A. Fredriksson Häägg. 2020. *Proyecto de Resiliencia y Ordenamiento Territorial del agua y Servicios Ecosistémicos en la Amazonía de Perú, Bolivia y Brasil*. Proyecto PRO-Agua - Centro de Innovación Científica Amazónica, Natural Capital Project - Stanford University. <https://doi.org/10.25740/MX682NY6097>.
- Vogl, A.L.**, S. Wolny, M. Guevara, A. Peralta, E. Kay, A. Camhi, and K. Williams. 2020. Sustainable Development Plan for the Chiquibul-Mountain Pine Ridge-Caracol Complex. Economic Development Council in the Office of the Prime Minister, Government of Belize, Belmopan.
- Vogl, A.L.**, R. Schmitt, D. Simpson, B. Bryant, S. Wolny, and U. Narain. 2019. Valuing Green Infrastructure: Case study of Kali Gandaki watershed, Nepal. The World Bank Group, Washington, DC.

Beatty, C.R., L. Raes, **A.L. Vogl**, P. Hawthorne, M. Moraes, J.L. Saborio, and K. Meza Prado. 2018. Landscapes at your service: Applications of the Restoration Opportunities Optimization Tool (ROOT). IUCN, Gland, Switzerland. <https://doi.org/10.2305/IUCN.CH.2018.17.en>

Hamel, P., B.P. Bryant, B. Chaplin-Kramer, and **A.L. Vogl**. 2018. Integrating environmental and social impacts with ecosystem services analysis. In *Routledge Handbook of the Resource Nexus*, R. Bleischwitz, H. Hoff, C. Spataru, et al. (eds.). Routledge, London and New York.

Abell, R., N. Asquith, G. Boccaletti, L. Bremer, E. Chapin, A. Erickson-Quiroz, J. Higgins, J. Johnson, S. Kang, N. Karres, B. Lehner, R. McDonald, J. Raeppe, D. Shemie, E. Simmons, A. Sridhar, K. Vigerstøl, **A. Vogl**, and S. Wood. 2017. Beyond the source: The environmental, economic and community benefits of source water protection. The Nature Conservancy, Arlington, VA, USA.

Vogl, A.L., S. Wolny, P. Hartger, P. Chinnasamy, A. Sood, U. Narain, Z. Jiang, A. Rajbhandari, D.P. Sangraula, and D. Lamichhane. 2017. Kaligandaki hydropower plant rehabilitation project: Catchment management for sediment retention technical report. Natural Capital Project, IWMI, and The World Bank Group. 71pp.

Peterson, G. J. Kabubo-Mariara, N. Crossman, B. Rashleigh, P. Munoz, J. Anticamara, M. V. Mdemu, A. Aunins, W. Cheung, and **A.L. Vogl**. 2016. Modelling consequences of change in biodiversity and ecosystems for nature's benefits to people. Chapter 5 in *IPBES (2016): The methodological assessment report on scenarios and models of biodiversity and ecosystem services*. S. Ferrier et al. (eds.), Secretariat of the Intergovernmental Science-Policy Platform for Biodiversity & Ecosystem Services (IPBES), Bonn, Germany.

Bremer, L., **A.L. Vogl**, B. de Bievre, and P. Petry (eds.). 2016. Bridging theory and practice for hydrological monitoring in water funds. Instituto de Ecología, Natural Capital Project, and The Nature Conservancy, Xalapa, Mexico. 98pp.

Apse, C., B. Bryant, P. Droogers, J. Hunink, F. Kihara, C. Leisher, **A. Vogl**, and S. Wolny. 2015. Upper Tana-Nairobi water fund: A business case (Version 2). The Nature Conservancy, Nairobi, Kenya. 36pp.

Vogl, A.L., S. Wolny, P.J. Dennedy-Frank, P. Hamel, J.A. Johnson, and M. Rogers. 2015. Managing catchments for hydropower services. Wealth Accounting and the Valuation of Ecosystem Services (WAVES) Technical Report. The World Bank Group. 95pp.

Batista, W., P. Krone-Davis, M. Jonas, V. Perkins, and **A.L. Vogl**. 2013. Annotated Bibliography: Impacts of Restoration and Conservation Activities. In *A Primer for Monitoring Water Funds*, Global Freshwater Program, The Nature Conservancy, June 2013. 150pp.

Software and Other Media

Vogl, A.L., Heather Tallis, James Douglass, Rich Sharp, Fernando Veiga, Silvia Benitez, Jorge León, Eddie Game, Paulo Petry, João Guimerães, Juan Sebastián Lozano. 2015. Resource Investment Optimization System (RIOS). Software and User's Guide, v1.1.16.
[<http://naturalcapitalproject.stanford.edu/software/#rios>]

Sharp, R., Tallis, H.T., Ricketts, T., Guerry, A.D., ..., **Vogl, A.L.**, et al. 2018. InVEST User's Guide, v3.7.0. The Natural Capital Project, Stanford University, University of Minnesota, The Nature Conservancy, and World Wildlife Fund. [<http://releases.naturalcapitalproject.org/invest-userguide/latest/>]

SELECTED INVITED PRESENTATIONS

Dennedy-Frank, P.J., A.L. Vogl, S. Kang, R. Abell, K. Vigerstol, K.A. Brauman, T. Grantham, S. Moss, et al. *Reviewing the evidence: How do nature-based solutions affect water flows in agriculture and rangelands*. AGU Fall Meeting. 1-17 December 2020.

Vogl, A.L. *El Agua en la gestión del territorio: Ciencia e herramientas para co-desarrollar una visión sostenible para el futuro (Water in land management: Science and tools for co-developing a sustainable vision for the future)*. ExpoAGUA Educativa SUNASS 2020. 18 November 2020. Madre de Dios, Peru.

Vogl, A.L. *El valor agregado del analisis de servicios ecosistemicos para el diagnostico de la resiliencia de las cuencas hidrográficas en la Amazonía Peruana*. Second macro-regional workshop for the Peruvian Amazon: Strategies for the effective implementation of mechanisms for compensation for forest ecosystem services. 22-25 October 2019. Moyobamba, Peru.

Vogl, A.L. *Innovation in ecosystem management for water security: Challenges and opportunities for bridging innovation and practice*. Ecosystem based water management: From innovation to practice session, SIWI World Water Week. 26-31 August 2018. Stockholm, Sweden.

Vogl, A.L., P.J. Dennedy-Frank, R. Abell, K. Brauman, W. Buytaert, J. Cassin, T. Grantham, et al. *Known and unknown benefits flowing from source water protection: Predicting impacts of land management on baseflow, recharge, and flood mitigation*. Green landscapes for water security: Measuring and modeling hydrologic benefits session, SIWI World Water Week. 26-31 August 2018. Stockholm, Sweden.

Vogl, A.L. *Innovations for linking watershed management science to practice: Lessons learned and opportunities*. Creating Enduring and Resilient Programs for Water Security, 2018 Natural Capital Symposium. 19-22 March 2018. Stanford, California, USA.

Vogl, A.L. *Integrating natural capital & ecosystem services into investment decisions*. Ceres Conference 2017. 25-27 April 2017. San Francisco, California, USA.

Vogl, A.L. *Uso de modelos en la ciencia y en el fomento de políticas públicas para el manejo sustentable de cuencas*. Keynote address at the IV National Congress of Watershed Management. 26-28 October 2016. Xalapa, México.

Vogl, A.L. *Ecosystem Services for Water Security: State of science for targeting and evaluating water fund investments*. 3rd Biennial Water Funds Conference. 15-17 June 2016. Bogotá, Colombia.

Vogl, A.L., J. Goldstein, R. McDonald, P. Hamel, M. Ruckelshaus. *Decision-relevant science for water security: An iterative process for targeting and evaluating impacts of watershed investments*. Our Common Future under Climate Change Conference. 7-10 July 2015. Paris, France.

Vogl, A.L. *Decision-relevant science for ecosystem services: Successes and frontiers in Latin America and beyond*. Plenary presentation at Ecosystem Services Partnership Conference. 8-12 September 2014. San José, Costa Rica.

SELECTED GRANTS AND AWARDS

Transforming policy and investment through mainstreaming rapid approaches to natural capital assessment and accounting. Funder: Global Environment Facility (GEF). Period of Performance: Jul 2023 – Dec 2025. Amount: \$2M

Accelerating integration of natural capital approaches into development policy and finance. Funder: The Gordon and Betty Moore Foundation. Period of Performance: Nov 2022 – Feb 2024. Amount: \$3M.

Natural resilience in the Amazon: Water and sustainable development in Peru and Bolivia. Funder: The Gordon and Betty Moore Foundation. Period of Performance: Oct 2020 – Feb 2022. Amount: \$660,000.

Protected area benefits for sustainable infrastructure development in the Amazon basin. Funder: The Gordon and Betty Moore Foundation. Period of Performance: May 2020 – Dec 2021. Amount: \$1.2M.

Advancing a “natural capital” based model for national level sustainable development planning and aligning development financing standards. Funder: The Gordon and Betty Moore Foundation. Period of Performance: Dec 2019 – Nov 2022. Amount: \$2M.

Incorporating ecosystem-based watershed management for rapidly-growing Amazonian urban centers to mitigate water-related risks in the MAP region of Peru, Brazil, and Bolivia. Funder: The Gordon and Betty Moore Foundation. Period of Performance: Dec 2017 – Jun 2020. Amount: \$990,000.

Sustainable development planning for the Chiquibul-Mountain Pine Ridge-Caracol Complex region in Belize. Funder: Inter-American Development Bank. Period of Performance: Mar 2019 – Jun 2020. Amount: \$425,000.

SNAPP: Assessing the water quantity benefits that flow from source water protection. Funder: Science for Nature and People Partnership/ The Gordon and Betty Moore Foundation. Period of Performance: Jan 2018 – May 2020. Amount: \$110,000.

A tool to identify suitable areas for natural regeneration of tropical forests in the world. Funder: RJ Kose Fund/ The Nature Conservancy. Period of Performance: Jan – Dec 2018. Amount: \$28,000.

Open source platform for water funds design and impacts monitoring. Funder: RJ Kose Fund/ The Nature Conservancy. Period of Performance: Jan – Dec 2018. Amount: \$29,000.

Mapping and valuing ecosystem services and prioritizing watershed investments in Nepal and Pakistan to support sustainable hydropower. Funder: The World Bank. Period of Performance: Aug 2017 – Nov 2019. Amount: \$443,500.

Multi-benefit targeting and assessment of strategic land retirement in the San Joaquin Valley, California. Funder: The Nature Conservancy. Period of Performance: Jun 2017 – Dec 2018. Amount: \$83,400.

Ecosystem Services and the Restoration Opportunity Assessment Methodology (ROAM): Building capacity and magnifying impact. Funder: International Union for Conservation of Nature. Period of Performance: Sep 2016 – Sep 2017. Amount: \$200,000.

Capacity building for upscaling natural capital work in Bhutan. Funder: World Wildlife Fund. Period of Performance: Sept 2017. Amount: \$10,000.

Using ecosystem services to prioritize investments in source water protection; the Global Water Atlas. Funder: The Nature Conservancy. Period of Performance: Jul 2016 – Jan 2017. Amount: \$53,000.

Finding common ground: Bringing together ecosystem services, agricultural productivity and smallholder livelihoods in landscape planning. Funder: International Water Management Institute. Period of Performance: Oct 2014 – Sept 2016. Amount: \$360,000.

Targeting watershed investments to improve sustainability of hydropower investments in Nepal. Funder: The World Bank. Period of Performance: Nov 2015 – Feb 2017. Amount: \$100,273.

Application of the Resource Investment Optimization System (RIOS) Truckee River water fund stakeholder engagement process, California. Funder: The Nature Conservancy. Period of Performance: Feb – Dec 2015. Amount: \$33,495.

Assessing the values of ecosystem services for the Upper Tana-Nairobi Water Fund, Kenya. Funder: The Nature Conservancy. Period of Performance: Sep 2013 – Jun 2014. Amount: \$56,000.

Green growth in Himachal Pradesh, India. Funder: The World Bank. Period of Performance: May – Dec 2013. Amount: \$108,133.

Technical support to apply the RIOS analytical modeling tool to guide climate adaptation planning in Nicaragua. Funder: The World Bank. Period of Performance: Jun – Nov 2013. Amount: \$49,433.

Doctoral Research Fellowship. Texas Commission on Environmental Quality, Texas River Systems Institute, and Texas State University. 2007 – 2011.

PROFESSIONAL SERVICE

Member of the *Advisory Group for Benefit Accounting of Nature-Based Solutions* (The Pacific Institute, CEO Water Mandate, TNC, Danone and LimnoTech), member of the *Valuing Water Initiative Scientific Advisory Committee* (Ceres) and the *Water Funds Application Technical Advisory Group* (The Nature Conservancy).

Co-Chair of the Science for Nature and People Partnership (SNAPP) working group *Assessing the water quantity benefits that flow from source water protection*. Jan 2018 – Dec 2019.

Organized Plenary Session, Natural Capital Project Symposium, Stanford University, March 2019. *Achievements and Challenges in a Changing Latin America*.

Co-Chair of organized Session, World Water Week, Stockholm, Sweden, August 2018. *Ecosystem Based Water Management: From Innovation to Practice*.

Lead Organizer for the Natural Capital Regional Symposium and Training, Quito, Ecuador, November 2017.

Organized Session, World Water Week, Stockholm, Sweden, August 2017. *The Role of Green Infrastructure Investments in Meeting Multiple Global Commitments*.

Lead for the *Pathways to Impact – Bringing Ecosystem Services into Policy* thematic track, Natural Capital Project Symposium. Stanford University, March 2016.

Chair of working group on *Evaluating and mainstreaming the use of ecosystem services in decision making*. Stanford University, October 2015.

Chair of working group on *Natural Capital & Resilience: Methods for Ecosystem Services Assessment*. Stockholm Resilience Center, November 2014.

Proposal evaluation panel for the National Science Foundation.

Organized Oral Session, 56th Annual Meeting of the ISSS, July 2012. *Socio-Ecological Systems*.

Organized Oral Session, Ecological Society of America 96th Annual Mtg, August 2011. *Community Engagement for Sustainability: Linking Research, Policy and Education*.

TEACHING

Co-led 4-day training course on ecosystem services concepts and tools: *Herramientas para la construcción de una visión de desarrollo sostenible para los Llanos de Moxos*. Jun – Jul 2022.

Developed curriculum for and led 1-5 day training and capacity building workshops on natural capital and ecosystem services concepts and tools (20+ workshops in 16 countries, 2012–present).

Guest lecturer for Stanford’s BIO 138 / 238 course: *Integrated Valuation of Ecosystem Services and Tradeoffs – The InVEST models and approach for valuing nature*. Fall 2022.

Guest lecturer for Stanford Graduate School of Business Executive Education course for AB InBev: *Sustainability*. August 13 - 17, 2018.

Guest lecturer for Stanford’s EARTH 280 course: *Pursuing Sustainability: Managing Complex Social Environmental Systems*. Fall 2017.

Guest lecturer for Stanford’s Natural Capital Project course for the National Development and Reform Commission (NDRC), China: *Training in Green Development: Mainstreaming the values of natural capital into policy & finance*. July 31 – Aug 4, 2017.

Developed content/ Guest lecturer for University of Geneva online course (MOOC) [Ecosystem Services: A Tool for Sustainable Development](#). Launched February 2017.

Co-developed and provide ongoing instruction for the Stanford online course (MOOC) [NCP-101: Introduction to the Natural Capital Project Approach](#). Version 2 launched January 2016.

Led training workshop on technical tools and models developed for the Cypress Creek Project, Wimberley, TX. June 2011.

MENTORING

Hector Angarita (postdoctoral researcher, Jun 2021 – present)

Stacie Wolny (GIS Analyst, 2013 – present)

Evariste Rutebuka (PhD student, University of Melbourne, Oct 2021 – Jun 2024)

Jorge Leon (PhD candidate, University of São Paulo, Jun 2021 – Mar 2024)

Sydney Moss (Research Assistant, Sep 2019 – Dec 2023)
Andrea Baudoin (postdoctoral researcher, May 2021 – Dec 2022)
Marcelo Guevara, MSc (Research Data Analyst, 2018 – Jan 2022)
Jaramar Villarreal Rosas (PhD candidate, University of Queensland, Mar 2019 – Dec 2021)
Dr. Rafael Schmitt (postdoctoral researcher, 2017 – 2020)
Charlotte Weil, MSc (visiting research fellow, 2016; Research Data Analyst, 2017 – 2020)
Dr. Ralph David Simpson (Economist, 2018 – 2019)
Sheila Cochrane (undergraduate intern, Spring – Summer 2018)
David Cutler (graduate fellow, Nov 2017 – June 2018)
Manuel Guerrero, MSc (visiting research fellow, Fall 2017)
Alan Díaz-Santana (undergraduate intern, Summer 2017)
Dr. Blal Adem Esmail (graduate fellow, University of Trento, 2016 – 2017)
Laia Mallén (visiting research fellow, 2015)
Gonzalo Vergara (visiting research fellow, 2015)
Willow Batista, MSc (graduate intern, Fall 2012)
Pamela Krone-Davis, MSc (graduate intern, Fall 2012)
Melanie Jonas (graduate intern, Fall 2012)
Vanessa Perkins (undergraduate intern, Fall 2012)

LEADERSHIP TRAINING

Stanford Manager Academy, Spring 2019.

LANGUAGES

English – native; Spanish – professionally fluent; Portuguese – basic speaking, good reading