

Lydia P. Olander

Program Director

Nicholas Institute for Energy, Environment & Sustainability
Adjunct Associate Professor in the Nicholas School of the Environment

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Summary

Lydia Olander is a program director at the Nicholas Institute for Energy, Environment & Sustainability at Duke University and adjunct associate professor at the Nicholas School of the Environment. She works on improving evidence-based policy and accelerating implementation of climate resilience policy, nature-based solutions, natural capital accounting, and environmental markets. She leads the Nature Activation Hub at Duke, hosts the National Ecosystem Services Partnership, is Co-Site Director for The Center for Innovation in Risk, Catastrophes, and Decisions (CIRCAD), and sits on Duke's Climate Commitment action team. Olander also currently serves on North Carolina's Land and Water Fund board. She spent two years with the Biden administration at the Council on Environmental Quality as Director of Nature based Resilience and before that spent five years on the Environmental Advisory Board for the US Army Corps of Engineers. She is a fellow of the American Association for the Advancement of Science (AAAS) and widely published researcher. Prior to joining the Nicholas Institute, she spent a year as an AAAS Congressional Science and Technology Fellow working with Senator Joseph Lieberman on environmental and energy issues. She was a college scholar at Cornell University and earned her Master of Forest Science from Yale University and Ph.D. from Stanford University.

Education

2002 Doctor of Philosophy, Biogeochemistry, Stanford University, Palo Alto, CA

1995 Masters of Forest Science, Yale School of Forestry and Environmental Studies, New Haven, CT

1992 Bachelor of Arts, Environmental Science and Policy (College Scholar Program, summa cum laude), Cornell University, Ithaca, NY

Continuing Education

2020-2021 Duke Leadership Academy, Durham NC

Fall 2019 Training in Program Evaluation at Duke University, Durham NC

Spring 2018 Training in Planning and Facilitating Collaborative Meetings from NOAA, Raleigh NC

Professional Experience

2023-Present Nicholas Institute for Energy, Environment & Sustainability, Duke University, Durham NC. (Institute changed names)

Program Director (2023-present)

- Leads the Institute's work on nature data and nature-based solutions with many federal agencies (DOI, USDA, DOD, USFWS, USGS, CEQ), including continued partnership with the Southeast Climate Adaptation Science Center (4 years)
- Manages her teams work providing foundational work to improve the nation's efforts to create natural capital accounts for the US. (3 years – building on previous work)
- Plays a critical role with state and regional natural and working lands initiatives starting with the NC's Natural and Working Lands Climate Mitigation and Resilience Action Plan through mapping, analysis and online resources. Her team

leads tracking and reporting of carbon and other benefits for the \$420 million Climate Pollution Reduction Grant awarded to mid-Atlantic states to implement natural climate solutions across the region. (7 years)

- Co-leads a growing suite of work on climate resilience including the new Built to Endure project with local government partners in North Carolina (4 years), and helping to build and support the new Center for Innovation in Risk-analysis for Climate Adaptation and Decision-making (CIRCAD) (2 years)
- Chair of External Engagement subcommittee for the University's Climate Commitment and previously participated in working groups to design the commitment (4 years)

2005-2023 Nicholas Institute for Environmental Policy Solutions, Duke University, Durham, NC
Director of Ecosystem Services Program (2010-2023)

- Coordinate the Institute's work on ecosystem services, which includes a variety of initiatives such as the National Ecosystem Services Partnership which has a 1500-member email list, newsletter, webinar series, and continuing work with federal (USGS, USFS, NOAA, BLM, DOD, USACE, EOP) and state agencies on integrating social and economic benefits of nature into decision making and developing natural capital accounts for the US (13 years).
- Served on US Army Corps of Engineers Environmental Advisory Board, leading reports on the incorporation of environmental benefits into corps policy and practice (5 years).
- Serve on The Bridge Collaborative secretariat seeding training and research on aligning evidence for and designing cross sector (environment, health, development) solutions (4 years).
- Duke University representative on the USGS Southeast Climate Adaptation Science Center hosted by NC State University through which my team conducts regional ecosystem services mapping and case studies with North Carolina state agencies and partners (4 years).
- Serving on the U.S. Army Corps Environmental Advisory Board (5 years)
- Directing the Environmental Impact Fellows leadership training program for doctoral students (1 year).
- Led a series of reports/papers on environmental markets in support of the USDA Office of Environmental Markets and led the Technical Working group on Agricultural Greenhouse Gases to inform the design of carbon offsets programs (8 years).

Senior Associate Director for Ecosystem Services (2006-2010)

- Developed the Institute's expanding initiative on ecosystem services and environmental markets.
- Coordinated and provided policy and technical assessment on design of carbon offsets for national climate policy and the burgeoning multinational effort on Reduced Emissions from Deforestation and Degradation (REDD) into future international climate agreements.

Associate Director of Projects (2005-2006)

- Helped to create and develop the Institute from its inception in September 2005, participating in the research, organizational, and administrative tasks involved with launching the Institute.
- Areas of research included national energy policy; the nexus between transportation technology and climate change science and policy; oil and energy security; and water issues for a rapidly developing North Carolina.

- 2012-present Nicholas School for the Environment, Duke University, Durham NC
Adjunct Associate Professor (2015-present)
Adjunct Assistant Professor (2012-2015)
- Joined the faculty leadership of the school's Natural Resources Finance Initiative
 - Teaching project based Bass Connections courses 2020 and 2024
 - Designed and taught two courses on alternating years - environmental markets and ecosystem services methods through 2012-2019
 - Provide research opportunities for 6-12 students every year
 - Advise student projects 1-2 per year
 - Collaborate on research with NS faculty continuously
- 2021-2023 IPA¹ with the White House Executive Office Council on Environmental Quality, Washington DC
Director of Nature-based Resilience
- Worked on nature-based solutions, valuing and accounting for nature including work on Office and Management and Budget guidance, and compensatory mitigation.
 - Co-lead White House Nature-based Solutions Roadmap released 2022.
 - Worked on climate resilience team, on national framework, and on community driven relocation.
- 2009 - 2010 IPA with US EPA, Ecosystem Services Research Program Durham, NC
- Coordinated ecosystem services research to inventory federal agency activities and conducted interagency exchanges on ecosystem services for career staff.
 - Built federal and non-federal network of ecosystem services practitioners
- 2004 - 2005 Office of Senator Lieberman, Washington, D.C.
AAAS Congressional Fellow
- Provided legislative support on environment and energy issues for Senator Lieberman, including aspects of climate change, energy, water, national parks, sudden oak death syndrome, and invasive species.
 - Drafted legislation, statements, and sections of speeches; worked on media campaigns and press events; coordinated briefings and letter writing; and
 - Collaborated with numerous organizations and government agencies, including constituent groups and state government.
- 2003 - 2004 Carnegie Institution of Washington, Department of Global Ecology, Stanford, CA
NSF Research Fellow
- Conducted research on how selective logging impacts nutrient cycling in Amazonia in collaboration with Brazilian scientists.
 - Tested and assisted in the development of new remote sensing methods to quantify selective logging and its impacts.
 - Manuscripts with collaborators include these studies as well as a global assessment of livestock grazing and global change.
- 1995 – 1996 USDA Forest Service, International Institute of Tropical Forestry, Puerto Rico
Research Volunteer

¹ Intergovernmental Personnel Agreement

- Conducted an 8-month field campaign with the U.S. Forest Service to assess their restoration efforts and explored ways to improve restoration and limit invasive species in high-elevation cloud forests.
- A report and publication on the lessons learned for restoration were produced.

External Grants & Contracts

Walton Family Foundation contract to build “A Nature-based Solutions Accessibility Index” (PI) 2026-2027 (\$350,000)

NSF IUCRC grant in support of The Center for Innovation in Risk, Catastrophes, and Decisions (CIRCAD) (co-PI) 2025-2030 (\$1,000,000 plus member fees).

Hewlett Foundation grant for a review of recent nation-wide conservation investments and what they have achieved and exploration of other high impact projects (co-PI) 2025-2026 (\$200,000).

Climate Pollution Reduction Grant (EPA) administered through NC Dept of Cultural and Natural Resources and the NC Coastal Federation (sub) 2025-2030 (\$630,000).

Climate Works Foundation gift to explore opportunities for US Congressional action on climate resilience in the 119th Congress. 2025 (\$25,000)

NC Department of Environmental Quality grant for “High-resolution mapping of drainage ditches in eastern North Carolina and Southeastern Virginia for wetland restoration planning and saltwater intrusion vulnerability assessment.” (PI) 2025-2026 (\$215,750)

NC Department of Cultural and Natural Resources, Climate Pollution Reduction Grant subcontract for “The Atlantic Conservation Coalition” (Sub) 2024-2028 (\$629,125)

David and Lucille Packard Foundation grant for “Climate Resilience 2025: A plan for the next administration” (PI) 2024-25 (\$50,000)

USDA Office of Environmental Markets cooperative agreement “Method comparison for evaluating carbon and biodiversity benefits provided by natural and working lands, and a framework for evaluating implications for equity” (PI) 2024-2026 (\$200,000)

Southeast Climate Science Center North Carolina State University “Nature-based Solutions Metrics and Data System” and US Department of Interior “Nature-based Solutions Roadmap” (PI) 2024-2027 (\$414,000)

Doris Duke Foundation “National Nature Data Statistical Center” (PI) 2024-2026 (\$200,000)

IUCRC (NSF-NOAA) Planning Grant: Center for Innovation in Risk Analysis for Climate Adaptation and Decision Making (CIRCAD) (Co-PI) 2024-2025

Southeast Climate Science Center North Carolina State University supported by the U.S. Geological Survey – (Sub-Award PI) 2024-2029 (\$16,000)

USDA Office of Environmental Markets cooperative agreement “Quantitative Synthesis to Evaluate Management Activities’ Compatibility with the Provision of Biodiversity and Carbon on Public and Private Lands and Waters.” (PI) 2023-2024 (\$200,000)

Doris Duke Charitable Foundation Grant supporting work to integrate nature-based solutions into federal programs. 2022-2023 (\$99,000).

DOD Strategic Environmental Research and Development Program “Model-based Tracking and Integrated Valuation of Ecosystem Services (MoTIVES) for Military Base Land-Use and Land-Management Decisions” (Co-PI) 2022-2025 (\$2,000,000)

USDA Office of Environmental Markets cooperative agreement “Assessing Management Activities Compatibility with the Provision of Biodiversity, Carbon and Equity on Public and Private Lands and Waters.” (PI) 2022-2023 (\$50,000)

U.S. Forest Service Joint Venture Contract “Ecosystem Service Model Application to U.S. Forest Service Management. (PI) 2018-2019 (\$70,000) and 2020-2023 (\$35,000)

USDA Office of Environmental Markets cooperative agreement “Quantifying Conservation on Public and Private Lands” (PI) 2021-2022 (\$35,000)

NOAA Restore Science Program planning grant “Integrating Socioeconomic Impacts into Fisheries Restoration Decisions” (PI) 2021-2022 (\$200,000)

Windward Fund grant “Resilience Roadmap Project” 2021 (\$72,200)

Packard Foundation grant for Bridge Collaborative, subaward from PATH to support Bridge and build and test training materials (Sub-Award PI) 2020-2022 (\$60,000)

Pew Foundation grant for a Living Shoreline case study for military bases (Sub to Duke Marine Lab) 2020-2021 (Key Personnel \$13,000)

NOAA Cooperative Agreement for design and development of ecosystem services training (PI) 2020-2021 (\$39,999)

The Nature Conservancy subcontracts from Packard Foundation to support Duke Universities contribution to Systematic Review on cross sector solutions 2020-2021 (\$45,000)

US Climate Alliance (through American Forests) award “Prioritizing coastal habitats for carbon sequestration and resilience benefits” (PI) 2019-2020 (\$114,180)

The Nature Conservancy subcontract to support Duke University’s engagement and leadership of the Bridge Spark program of the Bridge Collaborative (Sub-award PI) 2019-2020 (\$30,000); 2021 (\$20,000)

Rockefeller Foundation grant on “Cultured Proteins” Sub-award from PATH to assess carbon offsets opportunity (Sub-Award PI) 2018-2020 (\$68,000)

National Academies Keck Futures Initiative “Institutionalizing Interdisciplinarity: A cross-institutional network to synthesize what is working (and not) in the pursuit of transformative sustainability science” (Sub-Award PI) 2019-2020 (\$50,000)

National Estuarine Research Reserve System Science Collaborative- 2018 Collaborative Science Catalyst Grant Program “Exploring applications of ecosystem services conceptual models for coastal habitats” (PI w support from S Mason) 2018-2019 (\$113,300)

DOD Strategic Environmental Research and Development Program “Assessing Ecosystem Service Benefits from Military Installations” (Sub-Award PI) 2018-2019 (\$200,000)

USDA Office of Environmental Markets cooperative agreement “Clarifying opportunities for private investment on public lands” (PI) 2018-2019 (\$40,000).

National Academies Gulf Research Program “Standard logical models and metrics for Gulf restoration: Linking project outcomes to economic, health, and wellbeing benefits for people.” (PI) Dec 2017-May 2021 (\$1,335,800)

Southeast Climate Science Center North Carolina State University supported by the U.S. Geological Survey – (Sub-Award PI) 2017-2022 (\$420,000)

The Nature Conservancy subcontract to support Duke University’s engagement and leadership of the Bridge Collaborative (Sub-Award PI). 2016-2017 (\$171,677) and 2017-2019 (\$230,000)

USGS Cooperative Agreement “Evidence Based Ecosystem Services Research, Example Applications, and Best Practices: A Collaboration between NESP and Federal Partners” (PI) 2016-2019 (2016: \$100,000)

David and Lucille Packard Foundation grant to support “Using science to develop strong federal guidance on ecosystem services” (PI) 2016-2017 (\$50,000)

The Nature Conservancy subcontract to support participation in a series of workshops and papers on Incorporating Ecosystem services into Evidence Chains for Decision Makers. (Sub-Award PI) 2016. (\$39,000)

US Forest Service grant for a workshop on engaging large private landowner in large scale coordinated conservation activities. (PI) 2016. (\$26,000)

USDA Office of Environmental Markets cooperative agreement to support development of two reports – A review of early action mechanisms and an assessment of how landscape scale planning affects the generation of credits and use of markets. The grant also supports creating a printable version of the NESP guidebook. (PI) 2015-2016 (\$65,000)

4R Nutrient Stewardship Research Fund grant to support A Meta-analysis of nitrogen losses under 4R Nutrient Management in U.S. Corn-Based Systems. (Co-PI) 2014-2015 (\$70,000)

USDA Office of Environmental Markets cooperative agreement “Facilitating Environmental Market Development: Legal and Financial Considerations.” to support development of three reports – A review of liability and risk potential across US environmental markets, an assessment of multiple markets for animal manure digester technology, and a review of accounting methods for US environmental markets. (PI) 2014-2015 (\$140,986)

North Carolina Department of Environment and Natural Resources, Ecosystem Enhancement Program “Improving River Basin Prioritization Products”. (Sub Award PI) 2014-2015 (\$118,000)

Gulf Coast Ozark and Plains Landscape Conservation Cooperative grant on “Assessment of ecosystem service value and program delivery options: Establishment of a scalable model for understanding landowner engagement opportunities” (Sub-Award PI) 2014-2015 (\$83,478)

Gordon and Betty Moore Foundation grant for the development of a robust ecosystem services assessment and evaluation framework within US federal agency planning and management processes to improve natural resource decision making and optimize social, environmental and economic outcomes (PI) 2013-2015 (\$486,010)

National Center for Ecological Analysis and Synthesis support for a working group on a standard assessment framework for ecosystem services (PI) 2013-2014.

Socio Environmental Synthesis Center support for a working group on incorporating values and assessing social and environmental trade-offs in managing for ecosystem services (PI) 2013-2014.

USDA Office of Environmental Markets cooperative agreement “Livestock Ecosystem Services Evaluation and Assessment of Existing Water Quality Metrics, Tools, and Methods.” (PI) 2012-2013 (\$109,940)

David and Lucille Packard Foundation grant “Informing Agricultural Greenhouse Gas Mitigation Strategy for California” to support the California Air Resources Board in development of its Climate Change Scoping Report on agriculture and emission reduction (PI) 2012-2013 (\$210,840)

Gordon and Betty Moore Foundation gift for the development of a partnership with federal agencies on ecosystem services in natural resource management and the organization of related sessions for the ACES meetings. 2012 (\$40,000)

National Academies Keck Futures Initiative seed grant “Ecosystem services as an alternative foundation for development, urban planning, and water infrastructure in the U.S..” for a series of workshops and concept papers on incorporating ecosystem services concepts and approaches into urban planning and land use policy (PI) 2012-2013 (\$100,000)

International Center for Research in Agroforestry (ICRAF) & Climate Change Agriculture and Food Security (CCAFS) grant to “Quantify Agricultural Greenhouse Gases in Developing Countries” for coordination of a workshop and special issue journal (PI) 2011-2012 (\$156,961)

David and Lucille Packard Foundation grant for Technical Working Group on Agricultural Greenhouse Gases project “Greenhouse Gas Management Strategies for Livestock in the United States” (PI) 2011-2012 (\$65,000)

David and Lucille Packard Foundation grant titled “Agricultural Greenhouse Gas Management Methodologies” for the Technical Working Group on Agricultural Greenhouse Gases (PI) 2009-2011 (\$628,263)

Organization for Tropical Studies (David and Lucille Packard Foundation and Gordon and Betty Moore Foundation) grant for International Forest Carbon Series for U.S. Decision Makers, (Sub-PI) 2009-2010

World Wildlife Foundation grant for NI papers on REDD, 2009

David and Lucille Packard Foundation grant for White Papers on REDD – Preparation, 2008-2010

Resources for the Future grant for Outreach to Decision Makers on REDD, 2008-2010

Linden Trust for Conservation grant “Mitigation Beyond the Cap” for Finding Solutions for Effective Offsets Policy, (PI) 2008-2010 (\$502,504)

Fellowships and Honors

Fellow of the American Association for the Advancement of Science, 2022

AAAS Congressional Fellowship, 2004–2005
NSF Post-doctoral Research Fellowship in Biological Informatics, 2003–2004
NASA Earth System Science Fellowship, 1999–2002
National Science Foundation, Dissertation Improvement Grant, 1999–2001
Excellence in Teaching Award for work as a teaching assistant, Stanford University, 1997
Tropical Resource Institute grant for Masters research, Yale University, 1994
Forestry School Scholarship, Yale University, 1993–1995
Cornell University, Golden Key Honor Society, 1992

Teaching and Curriculum Design

(Courses designed with expert speakers, student led discussions and group projects, often in an interactive workshop format, both in person and virtual)

Bass connections Team course “Risk Analytics and Innovation for Community Climate Adaptation” in partnership with the NC Office of Recovery and Resilience and Professors Mark Borsuk and Betsy Albright and Executive in Residence, Francis Bouchard, Duke University 2024-2025.

Science to Policy Pathways short course for Environmental Impact Fellows, Duke University, Spring 2021.

Bass connections Team course “How External Financing Influences National Commitments to Biodiversity Conservation” in partnership with the Conservation Measures Partnership (Moore Foundation and Wildlife Conservation Society), Duke University, Spring 2020.

Ecosystem Services Markets course, Nicholas School of the Environment, Fall, Duke University, 2007, 2012, 2013, 2014, 2015, 2016, 2018, 2021.

Ecosystem Services Methods course, Nicholas School of the Environment, Duke University 2017, 2019.

Co-teaching course for doctoral students on Science and Policy and Writing Policy Briefs, Duke University 2010

Coordinated and taught in Duke Environmental Leadership program on Ecosystem services Dec 2007

Service

Serving on the Board for the North Carolina Land and Water Fund 2025-present

Serving as subcommittee chair on External Engagement for Duke University’s Climate Commitment 2024-present

Serving on North Carolina Natural and Working Lands Work Group 2019-present

Steering Committee for ACES (A Community on Ecosystem Services) 2014, 2016, 2018, 2020 Conferences.

Member Army Science Board’s (ASB) US Army Corps Environmental Advisory Sub-Committee, 2019 - 2021

Member US Army Corps of Engineers Environmental Advisory Board, 2015 - 2019.

AAAS Nominating committee section O (Agriculture Food & Renewable Resources) 2017-2019

Advising Nicholas and Sanford School Master’s students, Duke University, 2008 to present

Reader for AAAS Science and Technology fellowship applications, 2006-2010, 2013, 2015

Guest Editor of Focus Issue of Environmental Research Letters Journal “Focus on Improving Quantification of Agricultural Greenhouse Gases” 2013-2014

Serving on EPA Science Advisory Group on Biogenic Carbon Emissions 2011-2012

Serve on steering group for the Ecosystem Commons web portal 2011-2012

Member of RAE Blue Ribbon Panel on Wetlands and Climate Change, 2010

Reviewer for WWF Kathryn Fuller Fellowships, 2010

External Review Panel for US Forest Service Research and Development, Water Air and Soil Strategic Program Area, 2008

Co-organized and coordinated the inaugural seminar series for the Department of Global Ecology, Carnegie Institution of Washington, 2003–2004

Co-organized, developed, and coordinated the first Biogeochemistry seminar series, an interdepartmental initiative, Stanford University, 1997–1998
Conference organizing committee, “Local Heritage in the Changing Tropics,” a 3-day conference with 13 speakers and 150 participants from around the world, Yale University, 1995
Reviewer for Biogeochemistry (1999), Society for Conservation Biology conference submissions (2003), Plant and Soil (2003), Biotropica (2004), NSF Ecosystems proposals (2004), Ecosystems (2004, 2007), Environmental Science and Policy (2004), Soil Biology and Biochemistry (2004, 2005), Earth Interactions (2005), Forest Ecology and Management (x2) (2008), Carbon Balance and Management (2009), Climate Policy (2010), Science (2010, 2019), Greenhouse Gas Measurement and Management (2011), Journal of Applied Ecology (2011), Bioscience (2011), Environmental Research Letters (2012, 2013), IPBES Catalogue on policy support tools and methodologies (2014), PLOS (2015, 2016, 2017), TREE (2016), Ecosystem Services (2017, 2018), Nature and People (2018), Conservation Science and Practice (2019), Environmental Management (2019) Journal of Water Resources Planning and Management (2020), Nature Sustainability (2020), One Earth (2020)

Peer-Reviewed Publications

Brian R. Silliman et al (including **Lydia Olander**). Accepted. Ecosystem Technology (ecotech): Harnessing Natural Processes to Address Global Challenges. *Science Advances*.

J. Angus Webb, Kate A. Schofield et al. (including **Lydia Olander**). 2026. A Standardized Definition of Rapid Evidence Assessment for Environmental Applications. *Conservation Letters*.
<https://doi.org/10.1111/con4.70005>

Eli P Fenichel, **Lydia Olander**, and Heather Tallis. 2025. Environmental and Ecosystem Services in Benefit-Cost Analysis. *Review of Environmental Economics and Policy* <https://doi.org/10.1086/735769>

Lydia Olander, Katie Warnell, Sara Mason, Rachel Karasik, Heather Tallis, Kara Coffey, Christine Hale, Christine Shepard, Kateryna Wowk, David Yoskowitz. (2024). Advancing consistent socioeconomic monitoring of coastal ecosystem restoration through collaborative metric development. *Communications Earth & Environment*. 6:537 <https://doi.org/10.1038/s43247-024-01705-z>

Warnell, K., **L. Olander**, and C. Currin. 2022. Sea level rise drives carbon and habitat loss in the U.S. mid-Atlantic coastal zone. *PLOS Climate*. <https://doi.org/10.1371/journal.pclm.0000044>

Rusty A. Feagin, Todd S. Bridges, Brian Bledsoe, Elizabeth Losos, Susana Ferreira, Emily Corwin, Quirijn Lodder, Michael W. Beck, Borja Reguero, Ariana Sutton-Grier, Jens Figlus, Rowan Palmer, Donald R. Nelson, Carter Smith, **Lydia Olander**, Brian Silliman, Hans Pietersen, Robert Costanza, Rachel K. Gittman, Siddharth Narayan, Nigel Pontee, Mike Donahue, Don McNeill, and Todd Guidry. (2021). Infrastructure investments must incorporate Nature’s lessons in a rapidly changing world. *One Earth*. 4(10): 1361-1364 <https://doi.org/10.1016/j.oneear.2021.10.003>

J.B. Ruhl, J. Salzman, C. A. Arnold, R. Craig, K. Hirokawa, **L. Olander**, M. Palmer, and T. H. Ricketts. 2021. Connection Ecosystem Services Science and Policy in the Field. *Frontiers of Ecology and the Environment* <https://doi.org/10.1002/fee.2390>

N. Motzer, A. R. Weller, K. D. Curran, S. Donner, R. J. Heustis, C. Jordan, M. Krebs, **L. Olander**, K. Rowell, L. Silka, D. H. Wall, and A. York. 2021. Integrating Programmatic Expertise from across the U.S. and Canada to Model and Guide Leadership Training for Graduate Students in Sustainability. *Sustainability* 13(16)8950 <https://doi.org/10.3390/su13168950>

L. Olander, K. Warnell, T. Warziniak, Z. Ghali, C. Miller, and C. Neelan. 2021. Exploring the Use of Ecosystem Services Conceptual Models to Account for the Benefits of Public Lands: An Example from National Forest Planning in the United States. *Forests* 12(3): <https://doi.org/10.3390/f12030267>

Mason, S., **L. Olander**, C. Galik, R. Grala, and J. Gordon. 2020. A Practice-Oriented Approach to Foster Private Landowner Participation at a Landscape Scale. *Ecosystem Services* 46
<https://doi.org/10.1016/j.ecoser.2020.101203>

Calder, Ryan S.D., A. Alatoree, R.S. Marx, V. Mallampalli, S.A. Mason, **L.P. Olander**, M. Jeuland, M.E. Borsuk. 2020. Graphical Models and the Challenge of Evidence-Based Practice in Development and Sustainability. *Environmental Modeling & Software* 130.
<https://doi.org/10.1016/j.envsoft.2020.104734>

K. J. D. Warnell, M. Russell, C. Rhodes, K. J. Bagstad, **L.P. Olander**, D. J. Nowak, R. Poudel, P. D. Glynn, J. L. Hass, S. Hirabayashi, J. C. Ingram, J. Matuszak, K. L.L. Oleson, S. M. Posner, and F. Villa. 2020. Testing ecosystem accounting in the United States: A case study for the Southeast. *Ecosystem Services- special issue. Ecosystem Services* 43. <https://doi.org/10.1016/j.ecoser.2020.101099>

Calder, Ryan S.D., Congjie Shi, Sara Mason, **Lydia P. Olander**, and Mark E. Borsuk. 2019. Forecasting Ecosystem Services to Guide Coastal Wetland Rehabilitation Decisions. *Ecosystem Services*. 39.
<https://doi.org/10.1016/j.ecoser.2019.101007>

Tallis, H., K. Kries, **L. Olander**, C. Ringler, D. Ameyaw, et al. 2019. Aligning evidence generation and use across health, development, and environment. *Current Opinion in Environmental Sustainability*. 39:81-93.

Game, E.T., H. Tallis, **L. Olander**, S. M. Alexander, J. Busch, N. Cartwright, E.L. Kalies, Y.J. Masuda, A.C. Mupepele, J. Qiu, A. Rooney, E. Sills, and W. J. Sutherland. 2018. Cross-discipline evidence principles for sustainability policy. *Nature Sustainability* 1:452-454

Lovett, J.P., J. M. Duncan, L.S. Smart, J.P. Fay, **L.P. Olander**, D.L. Urban, N. Daly, J. Blackwell, A. B. Hoos, A.M. Garcia, and L.E. Band. 2018. Leveraging Big Data Towards Functionally-Based, Catchment Scale Restoration Prioritization. *Environmental Management* 62(6):1007-1024.

BenDor, T.K., V. Shandas, B. Miles, K. Belt, and **L. Olander**. 2018. Ecosystem services and U.S. stormwater planning: An approach for improving urban stormwater decisions. *Environmental Science & Policy* 88:92-103. <https://doi.org/10.1016/j.envsci.2018.06.006>

Sharon, O. S.N. Fishman, J.B. Ruhl, **L. Olander** and S. E. Roady. 2018. Ecosystem services and judge-made law: A review of legal cases in common law countries. *Ecosystem Services* 32A: 9-21.
<https://doi.org/10.1016/j.ecoser.2018.05.010>

Qiu, J., E.T. Game, H. Tallis, **L.P. Olander**, L. Glew, J.S. Kagan, E.L.Kalies, D. Michanowicz, J. Phelan, S. Polasky, J. Reed, E. O. Sills, D. Urban, and S.K. Weaver. 2018. Evidence-based causal chains for linking health, development and conservation action. *BioScience* 68(3):182-193.
<https://doi.org/10.1093/biosci/bix167>

Olander, L.P., R. J. Johnston, H. Tallis, J. S. Kagan, L. Maguire, S. Polasky, D. Urban, J. Boyd, L. Wainger, and M. Palmer. 2018. Benefit Relevant Indicators: Ecosystem services measures that link ecological and social outcomes. *Ecological Indicators* 85:1262-1272.
<https://doi.org/10.1016/j.ecolind.2017.12.001>

Galik, C. and **L. Olander**. 2018. Facilitating Markets and Mitigation: A systematic Review of Early-Action Incentives in the U.S. *Land Use Policy* 72:1-11.

Eagle, A.J., **L.P. Olander**, K.L. Locklier, J.B. Heffernan, and E.S. Bernhardt. 2017. Fertilizer Management and Environmental Factors Drive N₂O and NO₃ Losses in Corn: A Meta-Analysis. *Soil Science Society of America Journal* 81(5)1191-1202.

Olander, L., S. Polasky, J. Kagan, R. Johnston, L. Wainger, D. Saah, L. Maguire, J. Boyd, and D. Yoskowitz. 2017. So you want your research to be relevant? Building the bridge between ecosystem services research and practice. *Ecosystem Services* 26A:170-182. doi.org/10.1016/j.ecoser.2017.06.003

Keeler, B.L., R. Chaplin-Kramer, A. D. Guerry, P.F.E. Addison, C. Bettigole, I.C. Burke, B. Gentry, L. Chambliss, C. Young, A.J. Travis, C.T. Darimont, D.R. Gordon, J. Hellmann, P. Kareiva, S. Monfort, **L. Olander**, T. Profeta, H.P. Possingham, C. Slotterback, E. Sterling, T. Ticktin, and B. Vira. 2017. Society is Ready for a New Kind of Science – Is Academia? *Bioscience*. <https://doi.org/10.1093/biosci/bix051>

BenDor, T.K., D. Spurlock, S. C. Woodruff, and **L. Olander**. 2016. A Research Agenda for Ecosystem Services in American Environmental and Land Use Planning. 2016. *Cities* 60:260-271. <http://www.sciencedirect.com/science/article/pii/S0264275116302049>

Van Wensem, J., P. Calow, A. Dollacker, L. Maltby, **L. Olander**, M. Tuvendal, and G. Van Houtven. 2016. Identifying and assessing the application of ecosystem services approaches in environmental policy and decision-making. *Integrated Environmental Assessment and Management*. 13(1): 41-51 <http://onlinelibrary.wiley.com/doi/10.1002/ieam.1836/epdf>

Naeem, S., J. C. Ingram, A. Varga, T. Agardy, P. Barten, G. Bennett, E. Bloomgarden, L. L. Bremer, P. Burkill, M. Cattau, C. Ching, M. Colby, D. C. Cook, R. Costanza, F. DeClerck, C. Freund, T. Gartner, R. Goldman-Benner, J. Gunderson, D. Jarrett, A. P. Kinzig, A. Kiss, A. Koontz, P. Kumar, J. R. Lasky, M. Masozera, D. Meyers, F. Milano, L. Naughton-Treves, E. Nichols, **L. Olander**, P. Olmsted, E. Perge, C. Perrings, S. Polasky, J. Potent, C. Prager, F. Quétier, K. Redford, K. Saterson, G. Thoumi, M. T. Vargas, S. Vickerman, W. Weisser, D. Wilkie, S. Wunder. 2015. Get the Science Right When Paying for Nature's Services. *Science* 347(6227): 1206-1207. DOI: [10.1126/science.aaa1403](https://doi.org/10.1126/science.aaa1403)

Lydia Olander and Lorraine Maltby. 2014. Mainstreaming Ecosystem Services into Decision Making. (Editorial). *Frontiers in Ecology and the Environment*. 12: 539–539. <http://dx.doi.org/10.1890/1540-9295-12.10.539>

Heather Tallis, Jane Lubchenco and 238 co-signatories (including **L. Olander**). 2014. A Call for inclusive conservation. *Comment in Nature*. 515: 27-28.

Lydia P. Olander, Eva Wollenberg, Francesco N. Tubiello, and Martin Herold. 2014. Synthesis and Review: Advancing Agricultural Greenhouse Gas Quantification. *Environmental Research Letters* 9 075003 [doi:10.1088/1748-9326/9/7/075003](https://doi.org/10.1088/1748-9326/9/7/075003)

James Salzman, Craig Anthony (Tony) Arnold, Robert Garcia, Keith H. Hirokawa, Kay Jowers, Jeffrey LeJava, and **Lydia P. Olander**. 2014. The Most Important Current Research Questions in Urban Ecosystem Services. *Duke Environmental Law & Policy Forum*. XXV:1-47.

Ogle, S.M., **L. Olander**, L. Wollenberg, T. Rosenstock, F. Tubiello, K. Paustian, L. Buendia, A. Nihart, and P. Smith. 2013. Reducing greenhouse gas emissions and adapting agricultural management for climate change in developing countries: providing the basis for action. *Global Change Biology*. DOI: 10.1111/gcb.12361

Olander, L.P., E. Wollenberg, F. Tubiello, and M. Herold. 2013. Advancing agricultural greenhouse gas quantification. Perspectives piece in *Environmental Research Letters* focus issue. [doi:10.1088/1748-9326/8/1/011002](https://doi.org/10.1088/1748-9326/8/1/011002)

- Olander, L.P.**, C.S. Galik, and G. A. Kissinger. 2012. Operationalizing REDD+: scope of reduced emissions from deforestation and forest degradation. *Current Opinion in Environmental Sustainability*. 4(6): 661-669.
- O'Shea, T., J.S. Golden, and **L. Olander**. 2012. Sustainability and Earth Resources: Life Cycle Assessment Modeling. *Business Strategy and the Environment* doi: 10.1002/bse.1745
- Eagle, A. J., and **L.P. Olander**. 2012. Chapter Three – Greenhouse Gas Mitigation with Agricultural Land Management Activities in the United States – A side-by-side Comparison of Biophysical Potential. *Advances in Agronomy* 115: 79-179.
- Cooley, D. and **L.P Olander** (equal authorship). February 2012. Stacking Ecosystem Services Payments: Risks and Solutions. *Environmental Law Reporter News & Analysis*. 42 ELR 10150
- Olander, L.P.**, D. Cooley, and C. Galik. 2012. The Potential Role for Management of Public Lands in Greenhouse Gas Mitigation and Climate Policy. *Environmental Management*. 49(3):523-33 doi 10.1007/s00267-011-9806-1
- Lawlor, K., E. Weinthal, and **L.P. Olander**. February 2010. Institutions and Policies to Protect Rural Livelihoods in REDD+ Regimes. *Global Environmental Politics*. November 2010.
- Olander, L.P.**, H.K. Gibbs, M. Steininger, J.J. Swenson, and B.C. Murray. June 2008. Reference Scenarios for Deforestation and Forest Degradation in Support of REDD: A Review of Data and Methods. *Environmental Research Letters* 3:025011
- Olander L.P.**, M.M. Bustamante, G.P. Asner, E. Telles, Z. Prado, and P. Camargo. 2005. Surface Soil Changes Following Selective Logging in an Eastern Amazon Forest. *Earth Interactions* 9, no. 5:1–19.
- Asner, G.P., D.E. Knapp, A.N. Cooper, M.M.C. Bustamante, and **L.P. Olander**. 2005. Ecosystem Structure throughout the Brazilian Amazon from Landsat Observations and Automated Spectral Unmixing. *Earth Interactions* 9, no. 1:1–31.
- Olander, L.P.** and P.M. Vitousek. 2005. Short-term controls over inorganic phosphorus during soil and ecosystem development. *Soil Biology and Biochemistry* 37:651–659.
- Asner, G.P., A. Elmore, **L. Olander**, R. Martin, and T. Harris. 2005. Grazing systems and global change. *Annual Review of Environment and Resources* 29:261–299.
- Olander, L.P.** and P.M. Vitousek. 2004. Biological and geochemical sinks for phosphorus in soil from a wet tropical forest. *Ecosystems* 7:404–419.
- Asner, G.P., A.R. Townsend., M.M.C. Bustamante, G.B. Nardoto, and **L.P. Olander**. 2004. Pasture degradation in the central Amazon: Linking changes in carbon and nutrient cycling with remote sensing. *Global Change Biology* 10, no. 5:844–862.
- Vitousek, P.M., S. Hattenschwiler, **L. Olander**, and S. Allison. 2002. Nitrogen and nature. *Ambio* 31, no. 2:97–101.
- Olander, L.P.** and P. M. Vitousek. 2000. Regulation of soil phosphatase and chitinase activity by N and P availability. *Biogeochemistry* 49:175–190.
- Olander, L.P.**, F.N. Scatena, and W.L. Silver. 1998. Impacts of disturbance initiated by road construction in a subtropical cloud forest in the Luquillo Experimental Forest, Puerto Rico. *Forest Ecology and Management* 109:33–49.

Ashton, P.M.S., **L.P. Olander**, G.P. Berlyn, R. Thadani, and I.R. Cameron. 1998. Changes in leaf structure in relation to crown position and tree size of *Betula papyrifera* within fire-origin stands of interior cedar-hemlock. *Canadian Journal of Botany* 76, no. 7:1180–1187.

Palmiotto, Peter, Kristiina Vogt, and **Lydia Olander**. 1995. Nutrient cycling, ecophysiology and habitat heterogeneity. *Inside CTFS* (Center for Tropical Forest Science).

Olander, Lydia. 1995. The role of nutrient dynamics in maintaining tree species diversity at Lambir Hills National Park, Sarawak, Malaysia. *TRI News: Journal of the Tropical Resources Institute, Yale School of Forestry and Environmental Studies* 14, no. 1:23–26.

Pimentel, David, M. Herdendorf, S. Eisenfeld, **L. Olander**, M. Carroquino, C. Corson, J. McDade, Y. Chung, W. Cannon, J. Roberts, L. Bluman, and J. Gregg. 1993. Achieving a secure energy future: environmental and economic issues. *Ecological Economics* 9:201–219.

Book Chapters

Olander, L.P., S. Mason, H. Tallis, J. Lamb, Y. Masuda, and R. Kramer. 2021. Climate Change, Ecosystem Services, and Human Health. In *Global Climate Change and Human Health: From Science to Practice. Second Edition*, edited by Jay Lemery and George Luber.

Profeta, T.P. and **L.P. Olander**. 2012. The Nicholas Institute: Bringing Academia into a Leadership Position for Environmental Policy. In *Environmental Leadership: A Reference Handbook*, edited by Deborah Rigling Gallagher

Olander, L.P. 2011. Using Biogeochemical Process Models to Quantify Greenhouse Gas Mitigation from Agricultural Management. Chapter 20 in *Climate Change Mitigation and Agriculture*. Edited by Eva Wollenberg, Maja-Liisa Tapio-Bistrom, Maryanne Grieg-Gran, Alison Nihart. Published by Routledge – 456 pages.

Policy Briefs, Reports and White Papers

Lydia Olander. 2025. Building a Stronger, Safer, and More Energy-Smart North Carolina – A Workshop Summary. NI WP 25-03. Durham, NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University. <https://nicholasinstitute.duke.edu/publications/building-stronger-safer-and-more-energy-smart-north-carolina>.

Lydia Olander and Sara Mason. 2025. Hazard Mitigation and Preparedness – Related Action and Opportunities in the US Congress. May 2025. NI-PB-02. Durham, NC: Nicholas Institute for Energy Environment & Sustainability, Duke University. <https://nicholasinstitute.duke.edu/sites/default/files/publications/hazard-mitigation-preparedness-related-action-opportunities-us-congress.pdf>

Lydia Olander, Xavier Briggs, and Elizabeth Losos. 2025. America Prepared: A New Approach – Building a National Prepared for Extreme Weather. Durham, NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University. <https://nicholasinstitute.duke.edu/publications/america-prepared-new-approach-building-nation-prepared-extreme-weather>

Chloe Wetzler; Sara Mason; and **Lydia Olander**. 2024. Challenges and Solutions to Permitting Living Shoreline Projects: Lessons Learned from Virginia, North Carolina, and Florida. NI WP 24-03. Durham,

NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University.
<https://hdl.handle.net/10161/31678>

Katie Warnell and **Lydia Olander** 2024. Evaluation of Publicly Accessible Nature-Based Solutions Databases as Sources for Evidence of Effectiveness. NI R 24-03. Durham, NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University.
<https://nicholasinstitute.duke.edu/publications/evaluation-publicly-accessible-nature-based-solutions-databases-sources-evidence>

Sara Mason and **Lydia Olander**, eds. 2023. Expanding Finance for Nature-Based Solutions to Achieve Climate, Environment, and Community Goals: An Introduction for Green Banks and Community Lenders. NI PB23-03. Durham, NC: Nicholas Institute for Energy, Environment & Sustainability, Duke University. https://nicholasinstitute.duke.edu/sites/default/files/publications/expanding-finance-nature-based-solutions-achieve-climate-environment-community_2.pdf

Katie Warnell, Sara Mason, Aaron Siegle, Melissa Merritt, and **Lydia Olander**. 2023. Department of the Interior Nature-Based Solutions Roadmap. Nicholas Institute for Energy, Environment & Sustainability, Duke University and US Department of the Interior.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/department-interior-nature-based-solutions-roadmap.pdf>

Katie Warnell, Sara Mason, Rachel Karasik, **Lydia Olander**, Stephen Posner, Aura Alonso-Rodríguez, Natalia Aristizábal, Laura Bloomfield, Tafesse Estifanos, Jesse Gourevitch, Caitlin Littlefield, Jason Mazurowski, Katarina Menice, Maya Moore, Charlie Nicholson, Bryony Sands, Leslie Spencer, Tim Treuer, Taylor Ricketts, and Chris Hartley. 2023. Assessing the Effects of Management Activities on Biodiversity and Carbon Storage on Public and Private Lands and Waters in the United States. Nicholas Institute for Energy, Environment & Sustainability, Duke University.
<https://hdl.handle.net/10161/27196>

White House Council on Environmental Quality (**Olander**), White House Office of Science and Technology Policy (Tallis), White House Domestic Climate Policy Office, 2022. Opportunities for Accelerating Nature-Based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, and Prosperity. Report to the National Climate Task Force. Washington, D.C
<https://www.whitehouse.gov/wp-content/uploads/2022/11/Nature-Based-Solutions-Roadmap.pdf>

Katie Warnell and **Lydia Olander**. September 2022. Developing a State-Level Natural and Working Lands Climate Action Plan. Resources Guide, Nicholas Institute, Duke University.
<https://nicholasinstitute.duke.edu/publications/developing-state-level-natural-and-working-lands-climate-action-plan>

Contributor to Beyond the Academy (2022). Edited by B.L. Keeler and C. Locke. Guidebook for the Engaged University: Best Practices for Reforming Systems of Reward, Fostering Engaged Leadership, and Promoting Action- Oriented Scholarship. <http://beyondtheacademynetwork.org/wp-content/uploads/2022/09/BTA-Guidebook.pdf> (Co-authored two chapters and led one workshop)

Adam Lohman, Sara Mason, and **Lydia Olander**. May 2022. A Menu of State Action to Promote Forest Carbon Sequestration and Storage. Nicholas Institute Policy Brief.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/Menu-State-Actions-Promote-Forest-Carbon-Sequestration-Storage.pdf>

Katie Warnell, Sara Mason, and **Lydia Olander**. April 2022. Tracking the Benefits of Natural & Working Lands in the United States: Dataset Evaluation and Readiness Assessment. Nicholas Institute, Duke University.

Lydia Olander, Christine Shepard, Heather Tallis, David Yoskowitz, Kara Coffey, Chris Hale, Rachel Karasik, Sara Mason, Katie Warnell. July 2021. GEMS Phase II Report: Coastal Restoration. NI R 21-05. Durham, NC: Duke University.
https://nicholasinstitute.duke.edu/sites/default/files/publications/Gems-Phase-II-Report-Coastal-Restoration_0.pdf

Tallis H, Mason S, **Olander L**, Jacobs C, Goldstein J.. June 2021. Delivering Bigger Change Faster: A Workbook on Strengthening Proposals for Projects with Cross-sector Impacts, Version 2.0. Bridge Collaborative, Arlington, VA. <http://bridgecollaborativeglobal.org/wp-content/uploads/2021/06/Bridge-Spark-Workbook-Delivering-Bigger-Change-Faster-v2.pdf>

Lydia Olander and Elizabeth Losos writing team for steering committee. April 2021. Resilience Roadmap: The Urgent Need for Climate Resilience Action. NI R 22-03. Nicholas Institute, Duke University. <https://nicholasinstitute.duke.edu/sites/default/files/publications/resilience-roadmap-urgent-need-climate-resilience-action.pdf>

Pradnya Bhandari, Sara Mason, and **Lydia Olander**. March 2021. Life Cycle Assessment and Carbon Offset Potential for Cultured Milk Protein. I WP 21-01. Durham, NC: Duke University.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/Life-Cycle-Assessment-and-Carbon-Offset-Potential-for-Cultured-Milk-Protein.pdf>

Katie Warnell, **Lydia Olander**, Taylor Minich, Allison Killea, and Fizzy Fan. April 2020. USFS Predictive Model Library: Fire and Timber Management. NI R 20-04. Durham NC: Duke University.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/Predictive-Model-Library-Fire-and-Timber-Management.pdf>

Memorandum on “Capturing Environmental Benefits in Civil Works Projects” to the Commanding General and Chief of Engineers, by the U.S. Army Corps of Engineers (Corps) Chief of Engineers’ Environmental Advisory Board (EAB), a Subcommittee of the Army Science Board, April 2020. **Lydia Olander** and Si Simenstad, and Sam Atkinson.

Martin Doyle, **Lydia Olander**, Ori Sharon, Sara Mason, and Todd K. Bendor. February 2020. Compensatory Mitigation on Federal Lands. NI R 20-02 Durham NC: Duke University.
https://nicholasinstitute.duke.edu/sites/default/files/publications/Compensatory-Mitigation-on-Federal-Lands_0.pdf

Lydia Olander, Christine Shepard, Heather Tallis, David Yoskowitz, Kara Coffey, Chris Hale, Rachel Karasik, Sara Mason, Katie Warnell, Lauren Williams, Katya Wowk. February 2020. GEMS Phase I Report: Oyster Reef Restoration. NI R 20-01. Durham, NC: Duke University.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/GEMS-Phase-I-Report-Oyster-Reef-Restoration.pdf>

Goldstein J, Tallis H, Linou N, Small R, Huikuri S, Kreis K, **Olander L**, Ringler C, Jacobs C, Kelso M, Mason S, Zobrist S. 2019. Bigger Change Faster: Integrated Development, Health, and Environment Actions for a Sustainable Future. The Bridge Collaborative and UNDP.
http://bridgecollaborativeglobal.org/wp-content/uploads/2019/09/Bigger-Change-Faster_FINAL_Web.pdf

J. Kagan, M. Borsuk, R. Calder, M. Creutzburg, S. Mason, **L. Olander**, A. Plantinga, and C. Robinson. June 2019. Assessing Ecosystem Service Benefits from Military Installations. Final Project Report. SERDP Project Number: RC18-1604. <https://nicholasinstitute.duke.edu/publications/assessing-ecosystem-service-benefits-military-installations>

Erika Zambello, **Lydia Olander**, Emma Glidden-Lyon, Emily Meza, and Jessica Wilkinson. 2019. Trends in Measuring Biodiversity and Ecosystem Function in Mitigation Quantification Methodologies. NI-WP 19-01. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions.
https://nicholasinstitute.duke.edu/sites/default/files/publications/trends_in_measuring_biodiversity_and_ecosystem_function_in_mitigation_quantification_methodologies.pdf

Vincent Gauthier, **Lydia Olander**, and Deborah Gallagher. 2019. Are There Benefits to Integrating Corporate Health and Environmental Strategies? An Exploration of the Food/Agriculture and Textile Sectors. NI R 19-02 Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions.
https://nicholasinstitute.duke.edu/sites/default/files/publications/are_there_benefits_to_integrating_corporate_health_and_environmental_strategies_an_exploration_of_the_foodagriculture_and_textile_sectors_print2.pdf

Sara Mason, Rachel Karasik, and **Lydia Olander**. 2019. Workshop Guide: Using Facilitation Techniques to Integrate Ecosystem Services into Coastal Management Decisions. Guidebook. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions.
<https://nicholasinstitute.duke.edu/sites/default/files/publications/Workshop-Guide-Facilitation-Techniques.pdf>

Elizabeth Losos, Alexander Pfaff, **Lydia Olander**, Sara Mason, and Seth Morgan. 2019. Reducing Environmental Risks from Belt and Road Initiative Investments in Transportation Infrastructure. Policy Research Working Paper. no. WPS 8718. Washington, D.C.. World Bank Group.
<http://documents.worldbank.org/curated/en/700631548446492003/Reducing-Environmental-Risks-from-Belt-and-Road-Initiative-Investments-in-Transportation-Infrastructure>

Lydia Olander, Sara Mason, Katie Warnell, and Heather Tallis. 2018. Building Ecosystem Services Conceptual Models. National Ecosystem Services Partnership Conceptual Model Series, No. 1. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions.
<https://nicholasinstitute.duke.edu/conceptual-model-series>

Warnell, Katie, **Lydia Olander**, and Sara Mason 2018. Ecosystem Services Conceptual Model Application: Bureau of Land Management Solar Energy Development. National Ecosystem Services Partnership Conceptual Model Series No.2. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions. <https://nicholasinstitute.duke.edu/conceptual-model-series>

Mason, Sara, **Lydia Olander**, and Katie Warnell. 2018. Ecosystem Services Conceptual Model Application: NOAA and NERRS Salt Marsh Habitat Restoration. National Ecosystem Services Partnership Conceptual Model Series No.3. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions. <https://nicholasinstitute.duke.edu/conceptual-model-series>

Mason, Sara, and **Lydia Olander**. 2018. Ecosystem Services Conceptual Model Application: Testing General Model Adaptability. National Ecosystem Services Partnership Conceptual Model Series No.4. Durham, NC: Duke University, Nicholas Institute for Environmental Policy Solutions.
<https://nicholasinstitute.duke.edu/conceptual-model-series>

Heather Tallis, Barbara J. Merz, Cindy Huang, Katherine Kreis, **Lydia Olander**, and Claudia Ringler (coordinating lead authors). 2017. "A Call to Action for Health, Environment, and Development Leaders." A Report by the Bridge Collaborative. Washington DC: The Nature Conservancy.
<http://bridgecollaborativeglobal.org/wp-content/uploads/2017/10/Bridge-Collaborative-Call-to-Action-2017.pdf>

Heather Tallis, Katherine Kreis, **Lydia Olander**, and Claudia Ringler (coordinating lead authors). 2017. "Bridge Collaborative Practitioner's Guide. Principles and Guidance for Cross-sector Action Planning

and Evidence Evaluation.” Washington DC: The Nature Conservancy.

<http://bridgecollaborativeglobal.org/wp-content/uploads/2017/10/Bridge-Collaborative-Principles-and-Guidance-2017.pdf>

John Burrows, Tim Hipp, and **Lydia Olander**. 2017. “Increasing the Engagement of Large Private Forestland Owners in Conservation Management” NI WP 17-07. Durham, NC: Duke University.

https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_17-07.pdf

Lydia Olander, Ken Bagstad, Gregory W. Characklis, Patrick Comer, Micah Effron, John Gunn, Tom Holmes, Robert Johnston, James Kagan, William Lehman, John Loomis, Timon McPhearson, Anne Neale, Lauren Patterson, Leslie Richardson, Martin Ross, David Saah, Samantha Sifleet, Keith Stockmann, Dean Urban, Lisa Wainger, Robert Winthrop, and David Yoskowitz. 2017. “Data and Modeling Infrastructure for National Integration of Ecosystem Services into Decision Making: Expert Summaries.” Expanded version. NESP WP 16-02. Durham: National Ecosystem Services Partnership.

www.nicholasinstitute.duke.edu/publication

Olander, Lydia, Sara Mason, Katie Locklier, Dean Urban, Christy Ihlo and Christopher Galik. 2016. “Mapping Ecosystem Services for the Gulf Coastal Plains & Ozarks Landscape Conservation Cooperative: A Method for Targeting Opportunities.” A report by the Nicholas Institute for Environmental Policy Solutions for the Gulf Coast Ozark Plains LCC.

https://nicholasinstitute.duke.edu/sites/default/files/GCPO_Ecosystem_Service_Mapping.pdf

Young, Ben, **Lydia Olander**, and Amy Pickle. 2016. “Use of Preservation in North Carolina Wetland and Stream Mitigation.” NI WP 17-04. Durham, NC: Duke University.

<http://nicholasinstitute.duke.edu/publications>.

Olander, Lydia P., and Ben L. Young. 2016. “Integrating Large-Scale Planning into Environmental Markets and Related Programs: Status and Trends.” NI WP 17-03. Durham, NC: Duke University.

<http://nicholasinstitute.duke.edu/publications>.

Olander, Lydia P., Dean Urban, Robert J. Johnston, George Van Houtven, and James Kagan. 2016. “Proposal for Increasing Consistency When Incorporating Ecosystem Services into Decision Making.” National Ecosystem Services Partnership Policy Brief 16-01. Durham, NC: Duke University,

www.nicholasinstitute.duke.edu/publications

Galik, C. and **L. Olander**. 2016. “A Review of the Use of Early-Action Incentives in U.S. Environmental Markets.” Nicholas Institute Working Paper.

https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_16-09_final.pdf

Smith, E., **L. Olander**, P. Trianosky, and A. Bedell-Loucks. 2016. “Engaging Large Forest Owners in All-Lands Conservation: All-Lands and Large Ownerships – A Conversation to Advance Engagement. Workshop Proceedings.” Workshop held March 8, 2016, Washington DC

https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_p_16-02_full_pdf_0.pdf

Report on Incorporating Ecosystem Services into Communication, Collaboration, and Decision Making within the US Army Corps. To Lieutenant General Thomas P. Bostick, Commanding General and Chief of Engineers April 19, 2016. **Lydia Olander**, Fred Sklar, Charles Simenstad, and Melinda Daniels.

http://www.usace.army.mil/Portals/2/docs/Environmental/EAB/ecosystem_svc_rep_19apr2016.pdf

Baldino, Chelsea, **Lydia Olander**, and Christopher Galik. 2016. “Assessing County and Regional Habitat Conservation Plan Creation: What Contributes to Success?” Nicholas Institute Working Paper.

https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_16-05_final_0.pdf

Olander, Lydia. February 2016. "Managing Risk in Environmental Markets." Nicholas Institute Working Paper. NIWP 16-02. Durham, NC: Duke University.

https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_16-02.pdf

Olander, Lydia, Robert J. Johnston, Heather Tallis, Jimmy Kagan, Lynn Maguire, Steve Polasky, Dean Urban, James Boyd, Lisa Wainger and Margaret Palmer. July 2015. "Best Practices for Integrating Ecosystem Services into Decision Making." Nicholas Institute Working Paper.

https://nicholasinstitute.duke.edu/sites/default/files/publications/es_best_practices_fullpdf_0.pdf

Olander, Lydia. 2014. "Federal Resource Management and Ecosystem Services Guidebook." Durham: National Ecosystem Services Partnership, Duke University, <https://nespguidebook.com>.

Olander, Lydia, Todd Walter, Peter Vadas, Jim Heffernan, Ermias Kebreab, Thomas Harter, and Chelsea Morris. 2014. "Refining Models for quantifying the Water Quality Benefits of Improved Animal Management for Use in Water Quality Trading." NI R 14-03. Durham, NC: Duke University.

<https://nicholasinstitute.duke.edu/ecosystem/publications/refining-models-quantifying-water-quality-benefits-improved-animal-management-use-water>

Vegh, T., **L. Olander,** and B. Murray. 2014. "Greenhouse Gas Mitigation Opportunities in California Agriculture: Science and Economics Summary." NI GGMOCA R 1. Durham, NC: Duke University

<https://nicholasinstitute.duke.edu/ecosystem/publications/greenhouse-gas-mitigation-opportunities-california-agriculture-science-and-economics>

Archibeque, S. K. Haugen-Kozyra, K. Johnson, E. Kebreab, W. Powers-Schilling, **L.P. Olander,** and A. Van de Bogert. July 2012. "Greenhouse Gas Mitigation Opportunities for Livestock Management in the United States." Nicholas Institute Policy Brief.

<http://nicholasinstitute.duke.edu/ecosystem/land/greenhouse-gas-mitigation-opportunities-for-livestock-management-in-the-united-states>

Archibeque, S. K. Haugen-Kozyra, K. Johnson, E. Kebreab, W. Powers-Schilling, **L.P. Olander,** and A. Van de Bogert. July 2012. "Near-Term Options for Reducing Greenhouse Gas Emissions from Livestock Systems in the United States: Beef, Dairy, and Swine Production Systems." Nicholas Institute Report.

<http://nicholasinstitute.duke.edu/ecosystem/land/near-term-options-for-reducing-greenhouse-gas-emissions-from-livestock-systems-in-the-united-states>

Eagle, A.J., **Lydia Olander,** Lucy Henry, Karen Haugen-Kozyra, Neville Millar, and G. Philip Robertson. January 2012. "Greenhouse Gas Mitigation Potential of Agriculture Land Management in the United States: A Synthesis of the Literature (Third edition)." Nicholas Institute Report.

<http://nicholasinstitute.duke.edu/ecosystem/land/TAGGDLitRev>

Olander, L.P. and Alison J. Eagle. October 2011. "Greenhouse Gas Mitigation Opportunities for Agricultural Land Management in the United States." Nicholas Institute Policy Brief.

<http://nicholasinstitute.duke.edu/ecosystem/t-agg/greenhouse-gas-mitigation-opportunities-for-agricultural-land-management-in-the-united-states>

Olander, L.P., Alison J. Eagle, Justin S. Baker, Karen Haugen-Kozyra, Brian C. Murray, Alexandra Kravchenko, Lucy R. Henry, and Robert B. Jackson. October 2011. "Assessing Greenhouse Gas Mitigation Opportunities and Implementation Strategies for Agricultural Land Management in the United States. Nicholas Institute Report." <http://nicholasinstitute.duke.edu/ecosystem/t-agg/assessing-greenhouse-gas-mitigation-opportunities-and-implementation-strategies-for-agricultural-land-management-in-the-united-states>

<http://nicholasinstitute.duke.edu/ecosystem/t-agg/assessing-greenhouse-gas-mitigation-opportunities-and-implementation-strategies-for-agricultural-land-management-in-the-united-states>

Olander, L.P. and David Cooley. September 2011. "Stacking Ecosystem Services Payments: Risks and Solutions". Nicholas Institute Report. <http://nicholasinstitute.duke.edu/ecosystem/land/stacking-ecosystem-services-payments>

Olander, L. P., Debbie Reed, Daniella Malin, and Karen Haugen-Kozyra. July 2011. "C-AGG, T-AGG, and M-AGG: A model for building collaborative actions and common understanding on agricultural GHG mitigation." Climate Change Agriculture and Food Security working paper. http://ccafs.cgiar.org/sites/default/files/assets/docs/ccafs-wp-03-c-agg_t-agg_m-agg.pdf

Eagle, A.J., Lucy Henry, **Lydia Olander**, Karen Haugen-Kozyra, Neville Millar, and G. Philip Robertson. March 2011. "Greenhouse Gas Mitigation Potential of Agriculture Land Management in the United States: A Synthesis of the Literature (Second edition)." Nicholas Institute Report. <http://nicholasinstitute.duke.edu/ecosystem/land/TAGGDLitRev>

Olander, L.P. and Karen Haugen-Kozyra with contributions from Stephen Del Grosso, Cesar Izaurralde, Daniella Malin, Keith Paustian, and William Salas. March 2011. "Using Biogeochemical Process Models to Quantify Greenhouse Gas Mitigation from Agricultural Management Projects." Nicholas Institute Report. <http://nicholasinstitute.duke.edu/ecosystem/t-agg/using-biogeochemical-process>

Olander, L.P., D. Cooley, and C. Galik. July 2010. "The Potential Role for Management of Public Lands in Greenhouse Gas Mitigation and Climate Policy." Nicholas Institute Report. <http://nicholasinstitute.duke.edu/mitigationbeyondcap/potential-role-public-lands>

Lawlor, K., A. Jenkins, **L. P. Olander**, and B.C. Murray. Feb 2010. "Expanding the Scope of International Terrestrial Carbon Options: Implications of REDD+ and Beyond." Nicholas Institute Report http://www.nicholas.duke.edu/institute/Implications_of_REDD.12.09.pdf

Olander, L.P., T. Profeta, and C. Galik. Jan 2010. "Sticking Points in Offsets Policy." Nicholas Institute Discussion Memo. <http://www.nicholas.duke.edu/institute/offsets.memo.01.07.10.pdf>

Olander, L.P., D. Cooley, and B. Murray. Jan 2010. "Policy Options for Transitioning from Voluntary to Federal Offsets Markets." Nicholas Institute Discussion Brief on H.R. 2454, S. 1733, and S.27291 <http://www.nicholas.duke.edu/institute/offsets.01.06.10.pdf>

Murray, B.C., **L.P. Olander**, and D.P. Kanak. 2009. "Forging a Path for High Quality Compliance REDD Credits." Nicholas Institute Report NI R 09-06. http://www.nicholas.duke.edu/institute/Compliance_REDD_Credits.12.09.pdf

Jenkins, A., **L.P. Olander**, and B.C. Murray. April 2009. "Addressing Leakage in a Greenhouse Gas Mitigation Offsets Program for Forestry and Agriculture." Policy Brief - Nicholas Institute for Environmental Policy Solutions, Duke University. <http://nicholas.duke.edu/institute/offsetseries4.pdf>

Olander, L.P. and C.S. Galik. July 2009 "Greenhouse Gas Offsets for a Federal Cap-and-Trade Policy: FAQs." Nicholas Institute for Environmental Policy Solutions, Duke University. <http://www.nicholas.duke.edu/institute/offsetfaq.html>

Olander, L.P., Boyd, W., Lawlor, K., Madeira, E.M., and J.O. Niles. June 2009 "International Forest Carbon and the Climate Change Challenge: Issues and Options" Nicholas Institute Report NI-R-09-04. Nicholas Institute for Environmental Policy Solutions, Duke University. <http://www.nicholas.duke.edu/institute/carbon.issues.06.09.pdf>

Lawlor, K., **L.P. Olander**, and E. Weinthal. June 2009 “Sustaining Livelihoods while Reducing Emissions from Deforestation: Options for Policymakers.” Working Paper NI-WP-09-02. Nicholas Institute for Environmental Policy Solutions, Duke University.
<http://www.nicholas.duke.edu/institute/ni.wp.09.02.pdf>

Myers Madeira, Erin., **Lydia Olander**, William Boyd, Kathleen Lawlor, and John O. Niles. March 2009 “Forests and Climate: The Crucial Role of Forest Carbon in Combating Climate Change” Draft Policy Brief NI-PB-09-01, Nicholas Institute for Environmental Policy Solutions, Duke University.
http://www.env.duke.edu/institute/policy_brief.09.01.pdf

Galik, C.S., D.deB. Richter, M.L. Mobley, **L.P. Olander**, and B.C. Murray. 2008. “A critical comparison and virtual “field test” of forest management carbon offset protocols.” Climate Change Policy Partnership, Duke University, Durham, NC. 46p. <http://www.nicholas.duke.edu/institute/ccppoffsets.pdf>

Government Accountability Office (GAO). 2008. INTERNATIONAL CLIMATE CHANGE PROGRAMS: Lessons Learned from the European Union’s Emissions Trading Scheme and the Kyoto Protocol’s Clean Development Mechanism. GAO Report GAO-09-151, Washington, D.C. 65 pp. <http://www.gao.gov/cgi-bin/getrpt?GAO-09-151>. (Murray, B.C., Olander, L.P. Expert panelists)

Olander, L.P. and B.C. Murray 2008. “Offsets: An Important Piece of the Climate Policy Puzzle.” Policy Brief NI PB 08-01A Nicholas Institute for Environmental Policy Solutions, Duke University.
<http://www.nicholas.duke.edu/institute/offsetseries1.pdf>

Olander, L.P. and B.C. Murray. 2008. “Treatment of Early Actors in a Federal Cap-and-Trade Program.” Policy Brief — Nicholas Institute for Environmental Policy Solutions, Duke University.
<http://www.nicholas.duke.edu/institute/offsetseries2.pdf>.

Murray, B.C. and **L.P. Olander**. 2008. “Addressing Impermanence Risk and Liability in Agriculture, Land Use Change, and Forest Carbon Projects.” Policy Brief — Nicholas Institute for Environmental Policy Solutions, Duke University. <http://www.nicholas.duke.edu/institute/offsetseries3.pdf>.

Olander, L. May 2008. “Designing Offsets Policy for the U.S.: Principles, Challenges, and Options for Encouraging Domestic and International Emissions Reductions and Sequestration from Uncapped Entities as Part of a Federal Cap-and-Trade for Greenhouse Gases.” Nicholas Institute Report.
<http://www.nicholas.duke.edu/institute/offsetspolicy.pdf>.

Murray, B.C. and **L. Olander**. May 2008. “A Core Participation Requirement for Creation of a REDD Market.” Nicholas Institute Short Policy Brief. <http://www.nicholas.duke.edu/institute/pb-redd.pdf>.

Olander, L.P., B.C. Murray. July 2007. “A New Opportunity to Help Mitigate Climate Change, Save Forests, and Reach Development Goals.” Prepared for the United Nations Foundation.
<http://www.env.duke.edu/institute/unopportunity.pdf>

Olander, L., R. Jackson, G. Hegerl, and N. St. Clair. March 2007. “Climate change science: What we know. Nicholas Institute Science Brief.”
<http://www.nicholas.duke.edu/institute/climatechangesummary.pdf>.

Olander, L., E. Weinthal, and G. Binder, eds. March 2007. “For Security’s Sake: Can the United States help petroleum rich nations avoid the resource curse?” Nicholas Institute Policy Report on round table hosted by the Nicholas Institute, Washington, D.C., September 2006.
http://www.nicholas.duke.edu/institute/security_report.pdf.

Polk, E., L. Kleczek, **L. Olander**, and B. Holman. March 2007. “The Future of Water in North Carolina: Strategies for Sustaining Clean and Abundant Water.” Nicholas Institute Working Paper for the Future of Water conference, Raleigh, North Carolina, March 2007.
<http://www.nicholas.duke.edu/ncwater/preconfpaper.pdf>.

Olander, L.P., B.C. Murray, M. Steininger, and H. Gibbs. December 2006. “Establishing Credible Baselines for Quantifying Avoided Carbon Emissions from Reduced Deforestation and Forest Degradation.” Commissioned by Coalition for Rainforest Nations, UNFCCC SBSTA Meeting, Rome, Italy, Aug. 30–Sept. 1, 2006. <http://www.nicholas.duke.edu/institute/baselines-draft.pdf>.

Olander, L. November 2006. “Robertson Scholar Program buses: A cost-benefit analysis of existing technology and fuel options to reduce greenhouse gas emissions.” Produced for Robertson Scholar Program. <http://www.nicholas.duke.edu/institute/bestbusreport.pdf>

Olander, L. April 2006. “Do Recent Scientific Findings Undermine the Climate Benefits of Carbon Sequestration in Forests? An Expert Review of Recent Studies on Methane Emissions and Water Tradeoffs.” Nicholas Institute Consensus Report.
<http://www.nicholas.duke.edu/institute/methanewater.pdf>.

Datasets

Warnell, K., Russel, M., Rhodes, C., Bagstad, K. J., Olander, L., Nowak, D. J., Poudel, R., Glynn, P. D., Hass, J. L., Hirabayashi, S., Ingram, J. C., Matuszak, J., Oleson, K. L., Posner, S. M., Villa, F., & Ancona, Z. H. (2020). *Data Release for Testing ecosystem accounting in the United States: A case study for the Southeast* [Data set]. U.S. Geological Survey. <https://doi.org/10.5066/P9MF0K9X>

Warnell, K., & Olander, L. (2020). Data from: Opportunity assessment for carbon and resilience benefits on natural and working lands in North. Carolina. Duke Research Data Repository. <https://doi.org/10.7924/r4ww7cd91>

Warnell, K., & Olander, L. (2020). Data from: Coastal protection and blue carbon mapping for six mid-Atlantic states. Duke Research Data Repository. <https://doi.org/10.7924/r4pg1qw8p>

Warnell, K., & Olander, L. (2021). Pocosin wetland status and owner type for North Carolina. Duke Research Data Repository. <https://doi.org/10.7924/r4s75fc6q>

Warnell, K., Olander, L., Currin, C. (2022). Data from: Blue carbon mapping for six mid-Atlantic states. Duke Research Data Repository. <https://doi.org/10.7924/r4hq43669>

Warnell, K., Olander, L., Currin, C. (2022). Data and scripts from: Sea level rise drives carbon and habitat loss in the U.S. mid-Atlantic coastal zone. Duke Research Data Repository. <https://doi.org/10.7924/r4cr5zc7v>

Olander, L., Shepard, C., Tallis, H., & Yoskowitz, D. (2021). Data from: Gulf of Mexico Ecosystem Service Logic Models & Socio-Economic Indicators (GEMS). Duke Research Data Repository. <https://doi.org/10.7924/r4s181m3h>

News, Commentary, Blogs, Podcast appearances, Linked-in articles

Lydia Olander, Katie Warnell and Sara Mason 2024. Ecological restoration benefits communities – but how much? Springer Nature Research Blog and Liked-in article.
<https://communities.springernature.com/posts/ecological-restoration-benefits-communities-but->

[how-much-abb8876-8a02-4143-93d2-a4ee7b778673 https://www.linkedin.com/pulse/ecological-restoration-benefits-communitiesbut-how-much-lydia-olander-0v7me/?trackingId=gN0qHAfjReiHLf978ynW7Q%3D%3D](https://www.linkedin.com/pulse/ecological-restoration-benefits-communitiesbut-how-much-lydia-olander-0v7me/?trackingId=gN0qHAfjReiHLf978ynW7Q%3D%3D)

Guest on US Army Corps of Engineers, Engineering with Nature Podcast “Nature-Based Solutions from the Halls of the Exec Office of the President” December 14, 2022 <https://ewn.erdc.dren.mil/?p=10328>

Stephen Posner and **Lydia Olander**. November 2021. Natural Capital is missing in infrastructure investments. The Hill. <https://thehill.com/opinion/energy-environment/580764-natural-capital-is-missing-in-infrastructure-investments/>

Vincent Gauthier and **Lydia Olander**. May 2019. The drive to embed ‘planetary health’ impacts within corporate sustainability strategy. GreenBiz Blog <https://www.greenbiz.com/article/drive-embed-planetary-health-impacts-within-corporate-sustainability-strategy>

Elizabeth Losos, Alexander Pfaff, and **Lydia Olander**. January 2018. The deforestation risk of China’s Belt and Road Initiative. Brookings Future Development Blog <https://www.brookings.edu/blog/future-development/2019/01/28/the-deforestation-risks-of-chinas-belt-and-road-initiative/>

Elizabeth Losos, Alexander Pfaff, **Lydia Olander**, Sara Mason, and Seth Morgan. Is a green Belt and Road feasible? How to mitigate the environmental risk of BRI infrastructure projects. World Bank Blog. <https://blogs.worldbank.org/trade/green-belt-and-road-feasible-how-mitigate-environmental-risk-bri-infrastructure-project>

Heather Tallis, **Lydia Olander**, Katherine Kreis, and Claudia Ringler. March 2017. Bridging Gaps: Cross-sector Collaboration is the Future of Sustainable Business. Business Fights Poverty Blog. <http://community.businessfightspoverty.org/profiles/blogs/heather-tallis-lydia-olander-katherine-kreis-and-claudia-ringler->

Tallis, H. and **L. Olander**. October 13, 2015. US Federal Government Sends Agencies to Bat- For Nature and People. Cool Green Science, the Science Blog of The Nature Conservancy. <http://blog.nature.org/science/2015/10/13/us-government-agencies-bat-nature-people-wildfire-fire/>

Olander, L. and H. Tallis. July 21, 2015. “Nature and People: How can the US Federal Government put them together?” Cool Green Science, the Science Blog of The Nature Conservancy. <http://blog.nature.org/science/2015/07/21/nature-people-federal-government-ecosystem-services/>

Olander, L.P. August 11, 2011. “When does stacking ecosystem services payments add ecological value?” Soapbox on Ecosystem Commons website. <http://www.ecosystemcommons.org/soapbox/when-does-stacking-ecosystem-services-payments-add-ecological-value>

Olander, L.P. July 20, 2011. “Gearing up for Ecosystem Services Stacking: Are We Ready?” News Article: Ecosystem Marketplace Website. <http://www.ecosystemmarketplace.com>

Online Tools

DOI Nature-Based Solutions Roadmap. Sara Mason, Katie Warnell, and Lydia Olander. *Launched December 2024.* Website with information on 29 different types of nature-based solutions, a case study library, ideas for transitioning gray to natural infrastructure, and key considerations specific to nature-based projects. <https://nicholasinstitute.duke.edu/project/nature-based-solutions-roadmap>

Gulf of Mexico Ecosystem Services Logic Models & Socio-Economic Indicators. Lydia Olander, Katie Warnell, Sara Mason, Rachel Karasik, Heather Tallis, Kara Coffey, Christine Hale, Christine Shepard, Kateryna Wowk, and David Yoskowitz. *Launched 2021.* Website provides logic models, socio-economic metrics, and measurement protocols for four major types of coastal restoration in the Gulf. <https://nicholasinstitute.duke.edu/project/gems>

Conservation Planning Tools for North Carolina's People and Nature. Katie Warnell and Lydia Olander. *Launched February 2023.* <https://nicholasinstitute.duke.edu/project/conservation-planning-tools-north-carolinas-people-and-nature>

Natural and Working Lands in North Carolina to enhance community resilience and achieve greenhouse gas emissions goals. Katie Warnell and Lydia Olander. Launched June 2020. GIS Story Map <https://storymaps.arcgis.com/collections/2154ab2816674f7d8c7429fe87f48830>

Ecosystem Services Toolkit for Natural Resource Management. Lydia Olander, Katie Warnell and Sara Mason. *Launched December 2018.* <https://nicholasinstitute.duke.edu/project/ecosystem-services-toolkit-for-natural-resource-management>

Federal Resource Management and Ecosystem Services Guidebook. Lydia Olander et al. *Launched 2014 and revised 2016.* A comprehensive online guide to ecosystem services assessments and application for the federal government. It includes an assessment framework, agency examples, legal analysis and more. <https://nespguidebook.com/>

Engaged Scholarship – Examples of partnerships

Nicholas Institute

The mission of the [Nicholas Institute](#) is to help decision makers create timely, effective, and economically practical solutions to the world's critical environmental challenges. As a program director at the Institute, I work with government officials, international negotiators, numerous non-governmental organizations, critical stakeholder groups (e.g., commodity groups, businesses, financial institutions, etc), and scientific experts around the world. My team develops partnerships and collaborations, host meeting and dialogs, conduct policy analysis, and develop technical syntheses and translation to help inform decisions at many levels of governance and management. Our work is communicated to policy makers and stakeholders, and made widely available in policy reports or other products and is often published in the peer reviewed literature.

Nature Based Solutions to Climate Change

- Between 2019-present My team has been working with [North Carolina](#) and other [eastern states](#) to map their terrestrial and coastal carbon potential to inform management and policy goals. In 2024 we supported to development of a four-state proposal to utilize natural and working lands to achieve carbon reductions which has now been funded.
- Between 2021-2023 co-led the Biden Harris Administration's work on nature based solutions including co-authoring the [White House Nature-based Solutions Roadmap](#) and worked to implement its recommendations.
- Between 2009-2012 I led the [Technical Working Group on Agricultural Greenhouse Gases](#); a project designed to provide a review of agricultural greenhouse gas mitigation practices and potential across the US in support of a coalition of agricultural stakeholders. The project brought together technical experts from agencies, consultants, NGOs, and academia, and conducted a large literature review.

- Between 2006-2010 co-lead a series of projects on the design and development of terrestrial carbon offsets programs focused on forests and agriculture in the U.S. and [Reduced Emissions from Deforestation and Degradation \(REDD\)](#) in tropical forest countries.
- All of these projects resulted in policy briefs, technical reports, and peer reviewed publications and numerous briefings for policy audiences.

The Center for Innovation in Risk Analysis for Climate Adaptation and Decision-making (CIRCAD) (2024- present)

Co-director of [CIRCAD](#) For Duke University. CIRCAD is a nascent NSF/NOAA funded industry-university research collaborative with the insurance and finance industries focused on climate adaptation and resilience. The center is designed to be a partnership with the University of Georgia and the insurance and financial industry partners. The Center proposes activities on integrating data science and modeling, risk assessment and decision theory, and economic and policy analysis to develop innovative solutions to society’s climate challenges.

National Ecosystem Services Partnership (2012-present)

I lead the [National Ecosystem Services Partnership](#) which enhances collaboration within the ecosystem services community and to strengthen coordination of policy, market implementation, and research at the national level. It has been active since 2012. We host a [newsletter](#) (over 1500 members), an [online guidebook](#), a website, and a [webinar series](#), as well as working to support federal agencies (NOAA, USFS, USDA, USGS, BLM, USACE, DOD) and others in their implementation of ecosystem services. In this role, I have linked academic and federal agency experts with federal agency implementation in numerous ways. We have produced over a dozen products targeted to resource managers and policy makers and over a dozen peer reviewed papers. We have hosted numerous trainings and workshops and are currently designing a training that will be run by NOAA. This work has led to a number of related projects focused on implementation in different contexts. Here are a few recent examples:

GEMS Project (2018-2021)

I co-lead the multi-institution [Gulf of Mexico Ecosystem Services Logic Models & Socio-economic Indicators project](#) focused on linking restoration impacts to economic, health, and wellbeing benefits for people, in partnership with TNC and the HRI at Texas A&M. Billions of dollars are being spent on Gulf coast restoration, yet there is no shared platform for assessing and reporting on restoration progress and effectiveness for the social and economic goals shared by the many institutions working in the region. This project lays groundwork for such a shared platform for restoration program managers and funders in the Gulf. We developed standardized metrics and monitoring protocols with input from stakeholders, relevant federal agencies, and technical experts from the five Gulf States providing a suite of tools that enable the identification and assessment of social and economic outcomes and linked metrics relevant for over 20 types of projects in the Gulf of Mexico.

Partnership with Southeast Climate Adaptation Science Center (2018-present)

Through my work with the [Southeast Climate Adaptation Science Center](#) my team has been mapping ecosystem services in the Southeastern US. This led to the development of pilot ecosystem natural capital accounts for the region in support of a multi-agency effort to pilot natural capital accounts for the U.S.. Building on this work we also supported North Carolina’s effort to develop a climate and resilience plan, by mapping natural and working land climate and resilience opportunities working with agency, NGO and academic experts. To support implementation of this action plan, I serve on a number of subcommittees for North Carolina’s Natural and Working Lands Work Group. Given interest, from other states, we have expanded our mapping of coastal protection services, coastal habitat change under sea level rise, and coastal blue carbon to 6 other states on the eastern seaboard, and are working to add Georgia and South Carolina.

Bridge Collaborative (2016-2022)

I serve on the secretariat for the [Bridge Collaborative](#), a partnership between The Nature Conservancy, PATH, the International Food Policy Research Institute (IFPRI), and Duke University built on a shared commitment to the health, development, and environment communities jointly solving today's complex, interconnected challenges. We engage funders, international institutions, practitioners, and academic in cross sector dialogs. We also conduct a number of cross sector projects and ran a cross sector fund for other practitioners. Using the materials developed for the fund, we are designing a cross sector training course.

U.S. Army Corps of Engineers Environmental Advisory Board (2015-2020 and 2025)

From 2015-2020 I served on the [Environmental Advisory Board](#) (a subcommittee of the Army Science Board) to support the Chief of the US Army Corps of Engineers on issues related to the environment. I led the development of 2 reports to the chief on accounting for environmental benefits and supported a handful of others.

Environmental Market Design (2012-2020)

I worked with the USDA Office of Environmental Markets from 2012-2020 to provide analysis in support of the design of environmental markets. This work resulted in a series of technical reports and a few peer reviewed publications.

Example Workshops, webinar series, professional trainings (no individual webinars or presentations included)

Organize and host [National Ecosystem Services Partnership](#) Community of Practice [Webinar series](#) and newsletters – 2014-present

Organizer for DC Climate Week Event – “Coordinating U.S. Resilience Investment: The Case for Financing Platforms” held Monday April 20th 2026. Duke in DC Office. This dialogue explored whether nationally supported state financing platforms—or a broader national model—could streamline investment flows, accelerate project development, and ensure resources reach the communities and sectors most in need.

Organizer for two-day event “Built to Endure: A Smarter Approach to Resilient, Responsive Municipal Infrastructure” held Wed Feb 18th and Thurs Feb 19th 2026 at Duke. The event included public panel discussion and reception and a private technical workshop—will focus on exploring digital tools and systems thinking to mitigate flooding impacts and other climate-driven hazards in Durham, Chapel Hill, and surrounding areas.

Organized and led a workshop on “Building a Stronger, Safer, and More Energy-Smart North Carolina” June 6, 2025 in Raleigh NC in partnership with NC state agencies. The goal of this workshop was to surface ideas for how the public and private sectors in North Carolina can work together to enable all home and business owners to build (and rebuild) stronger, safer, and more energy-smart.

CO-organize and host [Resilience Roadmap](#) webinars 2021-2024

Planning team for [Policy Forum on Nature-Based Solutions](#) cohosted by the Network for Engineering with Nature and the National Academies of Sciences Gulf Research Program. February 2024.

Developing and conducting training on using Ecosystem Services Conceptual Models for Resource Management for NOAA's Office of Coastal Management. Piloted twice in Spring 2021 with NOAA staff and with NOAA's North Carolina coastal community partners (16 participants).

Hosting NC Forest Carbon Community of Interest in support of State's National and Working Lands Climate Action Plan. Spring 2021

Facilitated and organized Gulf of Mexico coastal restoration in person ecosystem services workshops (for the GEMS project) for experts and practitioners across the Gulf States, New Orleans LA, Biloxi MS, Mobile Bay, AL, Charlotte Harbor FL, Galveston and Huston TX. Fall 2018. And a series of 7 virtual webinars for the Gulf community and key partners (NOAA, RESTORE), Spring 2021.

Coordinated and hosted a Beyond the Academy network workshop on "Building effective strategies for co-production of sustainability science" at Duke University. Durham, NC. September 2019

Designed and led an ACES Conference half day training "Methods for Incorporating Ecosystem Services into Decision Making: Conceptual Models and Benefit Relevant Indicators" Washington DC. December 2, 2018.

Co-hosted a Sustainable Infrastructure workshop "Developing Spatial Solutions to Environmental Impacts of Infrastructure Development" Duke-Kunshan University, Kunshan China. October 15-17, 2018.

Designed and led NAEP Conference half day training "Methods for Incorporating Ecosystem Services into Decision Making", Durham, NC, March 27, 2017.

Designed and led ACES Conference all day training "Workshop on Methods for Incorporating Ecosystem Services into Decision Making: From Benefit Relevant Indicators to Monetary Values", Jacksonville FL, Dec 5, 2016. (100 participants)

Co-hosted "A Roundtable on Strategic Opportunities for Ecosystem Services in Decision Making" with the Woodrow Wilson Center and COMPASS in Washington, D.C., on March 11, 2016.

Organized and co-hosted "All Lands and Large Ownerships" workshop with the U.S. Forest Service and the Sustainable Forestry Initiative in Washington, D.C., on March 8, 2016.

Organized and co-hosted a Socio-Environmental Synthesis Center (SESYNC) workshop "Developing Interdisciplinary best practices for the practical use of ecosystem services methods in federal agency decision making" in Annapolis MD, April 2015.

Coordinate and led Federal Resource Management and Ecosystem Services Project meetings with Federal agencies in Washington DC. July 2014

Organized and hosted Federal Resource Management and Ecosystem Services Community of Practice Webinar series - 2013-2014

Individual presentations and webinars (Not included in this CV)