Deborah Lawrence

Professor, Department of Environmental Sciences

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## Education

Ph. D. 1992-1998 **Duke University**, Department of Botany

B.A. 1984-1989 **Harvard University,** Biological Anthropology, *Magna Cum Laude*

## Academic Employment

2019-present Director, Environmental Thought and Practice Program, **University of Virginia**

2012-present Professor of Environmental Sciences, **University of Virginia**

2016-2017 Fellow, Center for Advanced Study in Behavioral Sciences at **Stanford University**

2011 Visiting Scientist, **Center for International Forestry Research**, Indonesia

2009 Visiting Professor, **Chiang Mai University**, Thailand

2006-2012 Associate Professor of Environmental Sciences, **University of Virginia**

2005-2016 Director (Co-Director 2005-2011), Specialization in Environmental and Biological Conservation

1999**-**2006 Assistant Professor of Environmental Sciences, **University of Virginia**

* 1. Post-doctoral Fellow at **Harvard University**

## Awards and Honors

**External**

2016 Fellow, Center for Advanced Study in Behavioral Sciences at **Stanford University**

2015 Greenleaf Distinguished Visiting Professor 2015-2016, **Tulane University** (declined)

2010 Superior Honor Award from the **US Department of State** for work resulting in the Copenhagen Accord at the UN Framework Convention on Climate Change

2009 **Guggenheim Fellowship**

2009 **Fulbright Scholarship**, Thailand

2009 Jefferson Science Fellowship from the **National Academy of Sciences**

2009 Sustainability Science Award from the **Ecological Society of America**

1997 American Fellowship from the **American Association of University Women**

1994 **National Science Foundation** Graduate Fellowship

1994 **National Security Education Program** Fellowship

1989 **Fulbright Scholarship**, Cameroon

1989 Recognition of Service in Scientific Training, **Indonesian Institute of Sciences**

1984 **National Merit Scholarship**

**Internal**

2019 UVa Student Council Sustainability Committee, Professor of the Year

2018-2020 Sustainability Faculty Fellow, University of Virginia

2018 Leadership in Academic Matters (LAM), University of Virginia

2015 Cavalier Faculty Achievement Award

2014 Provost’s Award for a Global Program of Distinction in Food, Fuel and Forests

2014 CHARGE fellowship from the University of Virginia

2013 Nucleus Grant for undergraduate teaching in STEM from the University of Virginia

2009 Leadership in Academic Matters (LAM), University of Virginia (declined)

2008 Mead Honored Faculty of the University of Virginia

2000 University Teaching Fellowship from the University of Virginia

1998 The Perry Prize for an outstanding graduate of the Duke Botany Department

1997 Sterns Dissertation Fellowship (Graduate School of Duke University) (declined)

1993 Sally Hughes-Schrader Travel Grant (Duke Chapter of the Sigma Xi)

1993 Duke Center for International Studies Research Grant

## Professional Experience

**Government**

2012-2014 Co-leader, Climate Change Curriculum Development for Southeast Asian Universities, Thailand, **US Agency for International Development** (part time)

2010-2014 Co-founder and Steering Committee member of *SilvaCarbon*, a nine-agency federal program on forests and climate; as Scientific Advisor to International Programs, **US Forest Service**, and the Climate Change Office, **US Agency for International Development** (part time)

2009-2010 Science Advisor,Office of Environment and Global Change and Office of the Special Envoy for Climate Change, **US Department of State** (full time)

**Scientific Organizations**

2020-2021 Steering Committee for the Community Climate Intervention Strategies group, National Center for Atmospheric Research

2018 Invited reviewer, Special Report on Climate Change and Land **Intergovernmental Panel on Climate Change (IPCC)**

**2016 Review Panel,** Earth System Modeling Proposals, **U.S. Department of Energy**

2012-2013Review Panel, Jefferson Science Fellowships, **National Academy of Sciences**

* 1. Invited and US Government reviewer, AR5 **IPCC**

2008-2009 Subject Editor, ***Ecology*** (the premier professional journal in my field)

2008 Working Group on Land-Use Transitions in the Tropics, **The Magrann Conference**,Rutgers University, New Jersey and Columbia University, New York

2008 Working Group on the Demise of Swidden in Southeast Asia, **Hanoi Agricultural University**, Vietnam

2007 Review Panel, Ecosystems Proposals, **National Science Foundation**

2006 Steering Committee of the **International Center for Conservation Analysis and Planning**,Columbia University, New York.

2005-2009 Scientific Advisory Committee of the NSF/Inter-American Insitute **TROPI-DRY International Research Network** for the study of tropical dry forests

2005-2007 Expert Assessor of International Standing (INTREADERS) for the **Australian Research Council**

2005 Reviewer, **Millenium Ecosystems Assessment**

2005 Working Group on Biodiversity and Conservation Value of Agricultural Landscapes in Mesoamerica, **National Center for Ecological Analysis and Synthesis (NCEAS),** Santa Barbara.

2002 Working Group on Biodiversity and Ecosystem Health, **International Society for Ecosystem Health**, Washington D.C.

2000 **Working Group on** Biodiversity and Ecosystem Functioning, **International Geosphere-Biosphere Program and DIVERSITAS**, Paris, France.

**Non-Governmental Organizations**

**2020-present Secretary, Board of Trustees, The Nature Conservancy of Virginia (member of the board since 2013)**

**2018-present National Trustee Council, The Nature Conservancy**

**2018-present Member, Climate Strategies, an international research network on climate policy**

**2018-present Advisory Committee, Wahoos for Sustainability (alumni advocacy organization)**

**2017-2018 Advisory Board, Charlottesville Climate Collaborative**

**2017-2018 Board of Trustees Low Energy Alliance Program of Virginia**

**2015-present Advisory Board, Virginia Environmental Law Review**

**2011-present Consulting on tropical forests, climate change and sustainability for** The Prince of Wales's International Sustainability Unit, The Clinton Climate Initiative, World Resources Institute, The Gordon and Betty Moore Foundation and the Climate and Land Use Alliance (a consortium of Climate Works and the Ford, Packard, Gordon and Betty Moore Foundations)

**2010-2013** Technical Committee on Agriculture, Forestry and Other Land Use, **setting world-wide standards for the land-based carbon market** for the **American Carbon Registry**

## Administrative Leadership Experience

**Environmental Thought and Practice Program (ETP)** College of Arts & Sciences

September 2019-present Director

In Spring 2019, I managed the CEPC process that restructured the interdisciplinary major. The ETP faculty working group was unanimous in recommending to the Dean that I lead the renewal of the program. My tenure as director began six months before we switched to remote learning due to Covid-19. Within that time, I engaged 32 affiliate faculty from 15 departments across the arts and humanities, social sciences and natural sciences, recruited a similarly representative four-person advisory committee, and hired a special assistant who helped to design a new website and launch ETP on social media. I secured a $15,000 curriculum redesign grant from the Center for Teaching Excellence to extend our earlier work. As part of that effort, five faculty designed the new introductory course, the new capstone course and a core course in environmental justice. Collaborating with a graduate student in art history, I am developing an engagement-learning summer session class on the environment in social media. I connected with a documentary film maker to provide a research experience for seven ETP students as she develops stories about our climate future. In addition, I have reached out to local and national organizations to develop paid internship opportunities for ETP students, many of whom have already secured placements for this summer. ETP is growing rapidly, with 20 majors and 65 students in the introductory class.

**Food, Fuel and Forests Global Research Program of Distinction** (pan-university)

2014-2018 Director

I was awarded one of two grants in the inuagural university-wide global research competition out of the Provost’s office. My team included 14 professors from nine departments in five schools at UVA (Law, Engineering, Commerce, Public Policy and the College) plus climate modelers at the National Center for Atmospheric Research. This research collaboration among environmental scientists, economists, ethicists, anthropologists, engineers, social psychologists and lawyers was the first of its kind at the University of Virginia. Many of us developed the successful proposal for the Environmental Resilience Institute; two participants now run it. Many team members are now involved with ERI as it has recently turned to the themes of the Food, Fuel and Forests program: How can we use the land surface to mitigate climate change? What are the tradeoffs between growing food, conserving forests and expanding biofuels? What are the consequences for ecosystems and human well-being? In addition to global modeling on global impacts, the Food, Fuel and Forests program secured over $1 million from the MacArthur Foundation for a regional study in the Great Lakes region of East Africa.

**United States Government**

**Technical Team of SilvaCarbon,** an interagency program of the International Programs Office of the US Forest Service and the Climate Office of USAID

2010-2014 Chair

As I left my post in the climate office of the US Department of State in 2010, I was asked to help start a new interagency program on forests and climate, SilvaCarbon. The steering committee was supported by a much larger technical team. I led the technical team which consisted of 59 representatives of nine agencies (US Forest Service, US Geologic Survey, National Aeronautics and Space Administration, Department of State, US Agency for International Development, Environmnental Protection Agency, Smithsonian, Office for Science and Technology Policy of the White House, National Oceanic and Atmospheric Administration), many of whom were agency scientists. We met monthly by teleconference and more often in person around specific events or projects. I supervised committees drawn from that group ranging in size from six to 15 people, and running from months to years. As chair, I organized five scientific conferences and coordinated the development and implementation of a $1.5 million research plan. In addition, I served as the SilvaCarbon liason with the Forest Carbon Markets and Communities program of USAID and I represented SilvaCarbon to the Global Forest Observation Initiative, established under the intergovernmental Group on Earth Observations (GEO).

**Program in Environmental and Biological Conservation** College of Arts & Sciences

2005-2016 Director

Recognizing the need for a college-level program that recognized the biodiversity crisis, the college convened faculty in Biology and Environmental Sciences to develop one. After serving on the working group, I co-led the initiative with Laura Galloway from Biology, serving as director for Environmental Sciences. I coordinated teaching and advising among ten faculty in Environmental Sciences and five faculty in Biology for 5-25 (average 10) undergraduates each year. In addition to creating and teaching the capstone course, I developed a speaker series and a career development program that included opportunities for undergraduates to interact with conservation experts in academia, think tanks, government, and the private sector.

**University of Virginia**

**Tropical Ecosystem Ecology Laboratory** College of Arts & Sciences

1999-present Principle Investigator, Laboratory Director

Over the past 22 years, I have directed a research group consisting of one or more post-doctoral scholars, several graduate students, several undergraduates and up to eight research assistants in the field. My direct reports have numbered between six and thirteen. I successfully managed two long-term (decade or more) research projects concurrently, one in Mexico and one in Costa Rica. Before that, I conducted long term research in Indonesia. I managed scientific research, logistics, facilities, human resources, local university collaborations, and affairs with the host government at district, provincial and national levels. Overseeing research in remote international field sites has helped me develop a high level of organization, coordination, budgeting knowledge, interpersonal skills, and cultural savvy. Running a wet lab at the University, I also developed a keen understanding of the safety requirements and protocols designed to eliminate the environmental hazards of our research as well as the hazards of toxic interpersonal relationships. Systematic outreach, training, and documentation are critical to a well-functioning laboratory, the productivity of our research enterprise and the well-being of all the students who trust us to teach them. My laboratory has produced high impact, award-winning and interdisciplinary research of interest to scientists, policy makers and the public (see Awards, Publications, Invited Talks and Media Coverage). I am extremely proud of the undergraduates and graduate students I have trained and the work we have done together (see Teaching and Training Activities).

## Efforts to Promote Diversity, Equity and Inclusion

## Coverage in the Popular Press

2021-2022 Organizing the Environmental Science for Environmental Justice seminar series, co-sponored by Environmental Sciences and African American and African Studies.

2020-2021 Served on the Racial Equity and Justice Cluster Hire selection committee, College of Arts & Sciences.

2020 Co-developed a successful proposal from Environmental Sciences for a Race and Environmental Justice position through the Racial Equity and Justice Cluster hires.

2020 Write Climate project worked with 80 URM students in Charlottesville High School (see ‘Teaching’ below)

2019 On an $8,000 Sustainability grant, hired 11 undergraduate research assistants including six students of color and two first generation white students.

2018 As DGS, secured $11,000 from the College DEI Committee to recruit URM graduate students. Achieved buy-in from the faculty, developed first department wide plan, initiated outreach to 67 MSIs.

2017 Reached out to three major Black churches after Unite the Right rally August 12; began a personal relationship with Pastor Bates at Ebeneezer Baptist Church, which is on-going.

2015-2017 Director of DEI for Environmental Sciences

2015-present Mentored seven Black undergraduate women in STEM; provided opportunities as grader or research assistant, helped secure internships, coached on jobs, advised on graduate school applications, gave help and support.

## Other University Service

## Coverage in the Popular Press

**As chair**

2021 Search Committee for Race and Environment hire in Environmental Sciences

2019-present Director, Environmental Thought and Practice Undergraduate major

2018-2019 Director of Graduate Studies for Environmental Sciences

2015-2017 Director of Diversity and Inclusion for Environmental Sciences

2014-2016 Co-Chair, Research and Teaching, University Sustainability Committee

2005-2016 Director, Environmental and Biological Conservation Specialization for Environmental Sciences and Biology undergrads (Co- with Biology 2005-2011)

2013-2016 Chair (2015-2016), Peer Review Committee for Environmental Sciences

2007-2009 Chair, Committee on Equal Employment Opportunity for Environmental Sciences

2006-2009 Chair, Financial Aid Committee for Environmental Sciences

**As committee member**

2019-2021 Expedited Promotion and Tenure Review, College of Arts & Sciences

2018-2019 Re-development of Environmental Thought and Practice, College of Arts & Sciences

2018-2019 General Education Assessment Committee (for the New College Curriculum), College of Arts & Sciences

2013-2020 Global Studies Curriculum Committee, University

2017-2020 Graduate Academic Review Committee, Environmental Sciences

2017-2018 Search Committee for Environmental Politics (Politics)

2015-2016 Committee on Targets of Opportunity, College of Arts & Sciences

2015-2016 Committee on Diversity and Inclusion, College of Arts & Sciences

2015-2016 Steering Committee for the Pan-University Global Water Center

2015-2016 Steering Committee for the Pan-University Resilience Institute

2014-2016 Promotion and Tenure Committee, College of Arts & Sciences

2012-2015 Search Committee for the Kington Chair in Environmental Sciences

2012-2013 Faculty Senate, University

2012-2013 Strategic Fuel Plan Group of the Sustainability Committee, University

2012-2013 Search Committee for Environmental Ethics (Religious Studies)

2012-2013 Search Committee for Environmental Anthropology (Anthropology)

2012-present University Sustainability Committee

2011-2013 Mellon Interdisciplinary Hiring Committee, College of Arts & Sciences

2003-2005 Curriculum Development Committee for Conservation, College of Arts & Sciences

2000-2002 Faculty Working Group on Environmental Policy and Ethics, University

## Teaching and Training Activities

**Post-doctoral Training**

2007-presentMegan McGroddy, Visiting Scientist

2015-2018 Salvi Asefi-Najafabady, Postdoctoral Research Associate

2014-2015 Candida Dewes, Postdoctoral Research Associate

2010-present Karen Vandecar, Postdoctoral Research Associate (intermittent projects)

2006-2007 Tana Wood, Postdoctoral Research Associate

**Graduate Student Training**

(as advisor, in Environmental Sciences)

2022 expected Tara Illgner M.A.

2021 Stephanie Roe Ph.D

2021 Eliza Fisher M.A.

2018 Erin Swails Ph.D.

2016 Phylindia Gant, M.A.

2012 Rishiraj Das Ph.D.

2011 Katherine Tully Ph.D.

2010 Karen Vandecar Ph.D.

2007 Marcia DeLonge, M.S.

2007 Katherine Tully, M.S.

2006 Tana Wood Ph.D.

2004 Lucy Diekmann, M.S.

2003 James Eaton, M.S.

2003-2006 Jennifer Fallon, M.S. (Incomplete)

2002 Tana Wood, M.S.

2002 Keya Chatterjee, M.S.

2001 Larissa Read, M.S.

(as committee member)

2022 expected Allie Leach

2016 Nick Cuba, Ph.D., Clark University

2015-2017 Anam Khan M.S. (Incomplete) Clark University

2015 Scott Appel M.A.

2014 Alley Leach, M.S.

2013 Christine Runyan, Ph.D.

2013 Nancy Sherman, Ph.D.

2013 Jacob Hughes, M.A.

2011 Katherine Burke, Ph.D. Biology, University of Virginia

2009 Rebecca Dickson, Ph.D., Clark University

2008 Sarah Walker, Ph.D.

2007 Elizabeth Ecklund, M.S.

2005 Chris Botanga, Ph.D. Biology, University of Virginia

2004 Laura Schneider, Ph.D., Clark University

2003 Rinku Roy-Chowdhury, Ph.D., Clark University

2003 Francisco Xuluc-Tolosa, M.S., El Colegio de la Frontera Sur, Mexico

2000-2009 Christine Feral , Ph.D. (incomplete)

2001 Sebastian Riedel, M.S.

**Undergraduate Training**

**Research Opportunities**

Advised 12 Distinguished Major theses

More than 70 students conducted non-thesis research research in my laboratory as independent study students or paid research assistants

**Extraordinary Teaching of Undergraduates**

In 2018, I started the *Write Climate Project*, an engagement learning opportunity made possible through a $39,000competitivegrant from the Jefferson Trust**,** $33,000 from the University Committee on Sustainability, and teaching accommodations by the Environmental Sciences Department. Over four years, 103 students have taken the class, learning about climate change, then designing and embarking on a public outreach campaign to engage with the public. We use art to promote understanding, community, and climate action. About 3000 people have shared their climate stories with us. Thousands more viewed the public artwork we displayed for months in front of Alderman. Last year, we worked with eighty 9th grade URM environmental science students at Charlottesville High School, deploying a semester long science-to-art curriculum in their classrooms and hosting them for a campus-wide sustainability tour of UVa. The project has made a deep impression on all the students involved. (see Media Coverage, below)

**Courses Taught at the University of Virginia**

Words on paper: climate change science, policy and art (EVSC 1559, ETP 2559)

enrollment 6-51

An Inconvenient Truce: Climate, You and CO2 (EVSC 1450), enrollment 300

Introduction to Environmental Thought and Practice (ETP 2030), enrollment 63

Tropical Forests and Climate Change (EVSC4559/7559), enrollment 15

Climate Change Science, Policy and the Law (EVSC 4040/7040/LAW 9013),

enrollment 15-30

Pavilion Seminar: This Land is Your Land, enrollment 12

Ecological Footprints (EVSC 498), enrollment 15

Ecosystem Effects of Land Use Change (EVSC 796, EVSC 5559), enrollment 5-7

Ecosystem Effects of Land Use Change Laboratory (EVSC 796L), enrollment 5

Special Topics in Ecology (EVEC 796), enrollment 5

Environmental Decisions (EVSC 494), enrollment 18

Conservation Ecology (EVSC 2220), enrollment 80-150

Conservation Ecology, Advanced Option (EVSC 493), enrollment 1

Conservation Ecology Laboratory (EVSC 493/223), enrollment 1

Seminar in Environmental and Biological Conservation (EVSC 4142/BIOL 485),

enrollment 18-20

### Fundamentals of Ecology (EVEC 320), enrollment 120-160

Fundamentals of Ecology Laboratory (EVEC 320 L), enrollment 90

Tropical Ecology (EVSC 494/794), enrollment 20

Tropical Ecology Laboratory (EVSC 494L/794L), enrollment 10-20

Belowground Ecology (EVSC 494/794), enrollment 15

Undergraduate Seminar (EVSC 494), enrollment 50

Biodiversity and Ecosystem Function Seminar (EVSC 496/796), enrollment 5

Research Methods in Environmental Sciences (EVSC 793), enrollment 8

**Off-grounds Instruction and Training**

International Field Research Experience for Undergraduates in Mexico, Costa Rica, Puerto Rico, and Indonesia from 1998 to 2015 (not formal coursework)

Climate Change Curriculum Development Training 2013, 2014 Bangkok, Thailand with the United States Agency for International Development and US Forest Service

UNESCO Man and the Biosphere Field Training Course in West Kalimantan, Indonesia (Harvard University) 1989

## Sponsored Research

**Pending**

As of 1/2021 **National Science Foundation**—Building a Research Program to Provide Policy Relevant Climate Intervention Strategies to Key Decision Makers. Co-I with Peter Lawrence, National Center for Atmospheric Research. Total: $1,961,000 to UVA: $550,000.

As of 11/2020 **National Science Foundation**--Understanding the Dynamics of Decision Making in Mixed Farming Systems in Response to Changing Water Infrastructure and Climate Change. Senior Personnel with Julie Quinn, School of Engineering and Applied Sciences. Total/to UVA: $1,594,800.

**Awarded**

2018-2021 **Climate and Land Use Alliance**—Biophysical Effects of Forests on Climate, PI. With Woods Hole Research Center and Center for Tropical Agriculture. Total $120,000. To UVA: $71,500.

2015-2019 **MacArthur Foundation**—Applying Comprehensive Earth System Forecasts for Climate Change to Inform Conservation Planning of the East African Great Lakes.

Co-I with Anton Seimon, Appalachian State University and Peter Lawrence, National Center for Atmospheric Research. Total, $1,060,000. To UVA: $236,900.

2016-2018 **UVA Dean’s Office Research Initiatives**—Addressing the Competing Water Needs of Ecosystems and Societies. Co-I with Paolo D’Odorico. Total: $249,000

2014-2016 **UVA Provost’s Office Global Programs of Distinction**—Food, fuel and forests: Effects of climate policy on the whole earth system: climate, ecosystems and people. PI. Total: $165,000.

2013-2016 **NASA**—Operational multi-sensor design for national scale forest carbon monitoring to support REDD+ MRV systems. Co-I. Total $1.3 million. No funding direct to UVA.

2013-2015 **Center for International Forestry Research (CIFOR)**—The effect of climate variability on GHG emissions from tropical peatlands *(Indonesia).* PI. Total:$166,900; to UVA: $62,000.

2013-2014 **Climate and Land Use Alliance** (an initiative of the Packard, Ford, Moore and Climate Works Foundations)—Deforestation-caused climate change and implications for agriculture. PI. Total: $37,000.

2011-2012 **Climate and Land Use Alliance**—Research on degraded lands and land swaps in Indonesia *(Indonesia)*. PI with colleagues at World Resources Institute and Sekala, Indonesia, who were funded separately. Total/to UVA: $54,369

2009-2012 **National Science Foundation (Hydrology)**—Hydrological feedbacks between phosphorus deposition and canopy cover in dry seasonal forests (*Mexico*). Co-I with Paolo D’Odorico. NSF-EAR Total/to UVa: $282,579

2008-2011 **Gordon and Betty Moore Foundation**—Effects of land use change on the resilience of tropical dry forest to hurricane, fire and invasives (*Mexico*). Co-I with Laura Schneider of Rutgers University. Total $989,934; to UVa: $233,024.

2005-2009 **National Science Foundation**— Complex interactions among water, nutrients and carbon stocks and fluxes in tropical rainforest (*Costa Rica*). Co-I with Steve Oberbauer. Biocomplexity of the Environment, CBC 0421178. Total $1,640,000; to UVa: $179,029

2005-2007 **NASA**—Land-cover Land-Use Change: Vulnerability and Resilience of Coupled human-environment systems in the Yucatan (*Mexico*). Co-I with Billie L. Turner. NASA-LCLUC NAG06GD98G. Total $300,000; to UVa: $63,000

2004-2005 **National Science Foundation**—The Vulnerability and Adaptive Capacity of Coupled Human-Environment systems in the Yucatan (*Mexico*). Co-I with Billie L. Turner. BCS-0410016. Total $350,000; to UVa: $39,700.

* 1. **NASA** —The Effects of Landcover/ Landuse Change in the Southern Yucatan Peninsula Region (*Mexico*). Co-I with Billie L. Turner. NASA NAG5-11134. Total $490,000; to UVa: $110,000

2000-2002 **Mellon Foundation**—Vegetation dynamics, species composition and ecosystem processes in tropical second-growth forest (*Costa Rica*). Co-I with Robin Chazdon. To UVa: $54,515

1996-1997 **National Science Foundation**—Dissertation Improvement Grant for Landscape structure, soil fertility and species diversity under shifting cultivation (*Indonesia*). Co-I with William H. Schlesinger. DEB-9623837. Total: $9,462

1994 **Garden Club of America/World Wildlife Fund** Award in Tropical Ecology for Landscape structure, soil fertility and species diversity under shifting cultivation (*Indonesia*). PI. Total: $5,500

1989 **Conservation, Food, and Health Foundation, Inc.** Sustainable Land-use Outside Gunung Palung National Park in West Kalimantan (*Indonesia*). Co-I with Irven DeVore. DeVore was the PI to fulfill Harvard’s requirement that only faculty receive grants. Total: $26,500.

## Publications

(\*denotes work with my advisees)

**Peer-Reviewed Literature**

1. Roe, S.\*, Streck, C. … and D. Lawrence. 2021. Land-based measures to mitigate climate change: Potential and feasibility by country. Global Change Biology. DOI: 10.1111/gcb.15873
2. Swails, E.\*, Hergoualc’h, K., Verchot, L., Novita, N. and D. Lawrence. 2021. Spatio-Temporal Variability of Peat CH4 and N2O Fluxes and Their Contribution to Peat GHG Budgets in Indonesian Forests and Oil Palm Plantations. *Frontiers in Environmental Science.* <https://doi.org/10.3389/fenvs.2021.617828>.
3. L. R. Boysen, V. Brovkin, J. Pongratz, D. M. Lawrence, P. Lawrence, N. Vuichard, P. Peylin,S. Liddicoat, T. Hajima, Y. Zhang, M. Rocher, C. Delire, R. Séférian, V. K. Arora, L. Nieradzik, P. Anthoni, W. Thiery, M. M. Laguë, **D. Lawrence**, and M. Lo. 2020. Global climate response to idealized deforestation in CMIP6 models. *Biogeosciences* 17: 5615–5638. doi.org/10.5194/bg-17-5615-2020
4. Griscom, B., Busch, J., Cook-Patton, S., Ellis, P., Funk, J., Leavitt, S., Lomax, G., Turner, W., Chapman, M., Engelmann, J., Gurwick, N., Landis, E., **Lawrence, D.,** Malhi, Y., Murray, L.S., Navarrete, D., Roe, S., Scull, S., Smith, P., Streck, C., Walker, W., and Worthington, T. 2020. National mitigation potential from natural climate solutions in the tropics. *Philosophical Transactions of the Royal Society B.* doi.org/10.1098/rstb.2019.0126
5. E. Swails\*, D. Hertanti, K. Hergoualc’h, L. Verchot and **D. Lawrence**. 2019. The response of soil respiration to climatic drivers in undrained forest and drained oil palm plantations in an Indonesian peatland. *Biogeochemistry*142, 37–51. https://doi.org/10.1007/s10533-018-0519-x.
6. Marcos H Costa, Leonardo C Fleck, Avery S Cohn, Gabriel M Abrahão, Paulo M Brando, Michael T Coe, Rong Fu, **Deborah Lawrence**, Gabrielle F Pires, Raphael Pousa, and Britaldo S Filho. 2019. Climate risks to Amazon agriculture suggest a rationale to conserve local ecosystems. *Frontiers in Ecology and Environment* 17 (10). doi:10.1002/fee.2124
7. Stephanie Roe\*, Charlotte Streck, Michael Obersteiner, Stefan Frank, BronsonGriscom, Laurent Drouet, Oliver Fricko, Mykola Gusti, Nancy Harris, Tomoko Hasegawa, Zeke Hausfather, Petr Havlík, Jo House, Gert-Jan Nabuurs, Alexander Popp, María José Sanz Sánchez, Jonathan Sanderman, Pete Smith, Elke Stehfest, and **Deborah Lawrence.** 2019. Contribution of the land sector to a 1.5°C World. *Nature Climate Change* 9**,**817–828. https://doi.org/10.1038/s41558-019-0591-9
8. Salvi Asefi-Najafabady\*, Karen L Vandecar\*, Anton Seimon, Peter Lawrence, and **Deborah Lawrence**. 2018. Climate change, population and poverty: vulnerability and exposure to heat stress in countries bordering the Great Lakes of Africa. *Climatic Change* 148: 561. <https://doi.org/10.1007/s10584-018-2211-5>
9. Karthik Teegalapalli\*, Mailappa A S, Nicolee Lyndoh, and **Deborah Lawrence**. 2018. Recovery of soil macronutrients following shifting cultivation and ethnopedology of the Adi community in the Eastern Himalaya. *Soil Use and Management*. <https://doi.org/10.1111/sum.12420>
10. Swails, E\*, Yang, Xi, Asefi, S\*, Hergoualc’h, K, Verchot, L, McRoberts, R. and **Lawrence, D**. 2018. Linking soil respiration and water table depth in tropical peatlands with remotely sensed changes in water storage from the Gravity Recovery and Climate Experiment. *Mitigation and Adaptation Strategies for Global Change*. <https://doi.org/10.1007/s11027-018-9822-z>
11. Nicholas Cuba\*, John Rogan, **Deborah Lawrence**, Christopher Williams. 2018. Cross-scale correlation between in-situ measurements of canopy gap fraction and Landsat-derived vegetation indices, with implications for long-term monitoring of seasonal phenology in dry tropical forests using MODIS data. Remote Sensing*10*(7): 979. doi:[10.3390/rs10070979](https://dx.doi.org/10.3390/rs10070979)
12. \*Swails, E, \*Jaye, D, Verchot, L, Hergoualc’h, K, Schirrmann, M, Borchard, N, Wahyuni, N, and **D. Lawrence**. 2017. Will CO2 emissions from drained tropical peatlands decline over time? Links between organic matter quality, nutrients, and CO2 flux in oil palm plantations and forest on peat. *Ecosystems*. <https://doi.org/10.1007/s10021-017-0190-4>.
13. \*Nicholas Cuba\*, **D. Lawrence**, J. Rogan and C. A. Williams. 2017. Local variability in the timing and intensity of tropical dry forest deciduousness is explained by differences in forest stand age, *GIScience & Remote Sensing*, 55:3, 437 456.
14. \*Teegalapalli, K. and **D. Lawrence**. 2016. Palming off the forests: social and ecological implications of introducing oil palm plantations in north-east India. *Current Conservation* 9 (4): 4-9.
15. B. L. Turner II, J. Geoghegan, **D. Lawrence**, C. Radel, B. Schmook, C. Vance. S. Manson, E. Keys, D. Foster, P. Klepeis, H. Vester, J. Rogan, R. Roy Chowdhury, L. Schneider, R. Dickson, Y. Ogneva-Himmelberger and S. Calmé.  2016. Land system science and the social-environmental system: the case of the Southern Yucatán Peninsular Region Project.  *Current Opinions in Environmental Sustainability* 19: 18-29.
16. \*Wood T.E., Matthews D., Vandecar K., **Lawrence D**.2016*.* Short-term variability in labile soil phosphorus is positively related to soil moisture in a humid tropical forest in Puerto Rico.*Biogeochemistry* 127:35–43 DOI 10.1007/s10533-015-0150-z
17. \*Vandecar KL, Runyan, C, D’Odorico P, **LawrenceD,** Das, R, Schmook B*.* 2015. Phosphorus input through fog deposition in a dry topical forest. *JGR Biogeosciences.*120: 2493–2504 DOI: 10.1002/2015JG002942.
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29. \*Tully, K., and **D. Lawrence**. 2012. Canopy and leaf composition drive patterns of nutrient release from pruning residues in a coffee agroforest. *Ecological Applications* 22(4):1330-1344.
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**Book Chapters and Other Peer-reviewed Articles**

1. Lawrence, D. 2017. Reframing climate change and freedom. In First year 2017: where the next president begins. Miller Center, University of Virginia.
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3. **Lawrence, D**. 2011. Indonesia’s forest moratorium: Analyzing the numbers. Center for International Forestry Research. [http://blog.cifor.org/3272/indonesia’s-forest-moratorium—analyzing-the-numbers/](http://blog.cifor.org/3272/indonesia's-forest-moratorium—analyzing-the-numbers/)
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6. **Lawrence, D**., D. Astiani, M. Syazhaman-Karwur, and I. Fiorentino. 2007. Alternative fallow management under shifting cultivation: does tree diversity affect soil fertility? Pp. 502-514 in Cairns, M.F. (ed.) Voices From The Forest: Integrating Indigenous Knowledge Into Sustainable Upland Farming. Resources for the future. Washington, D.C.
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9. **Lawrence, D**. 2004. Land-use change, biodiversity and ecosystem functioning in West Kalimantan. Pp. 253-268 in Gerhard Gerold, Michael Fremery, and Edi Guhardja (eds.), Land Use, Nature Conservation and the Stability of Rainforest Margins in Southeast Asia. Springer-Verlag, Berlin.
10. **Lawrence, D**., Henricus F. M. Vester, Diego Pérez-Salicrup, J. Ronald Eastman, B. L. Turner II and Jacqueline Geoghegan. 2004. Integrated Analysis of Ecosystem Interactions with Land-Use Change: the Southern Yucatán Peninsular Region. Pp. 277-292 in R. Defries, G. Asner, and R. Houghton (eds.), Ecosystem Interactions with Landuse Change. American Geophysical Union.
11. Bengtsson, J. K. Engelhart, P. Giller, S. Hobbie, **D. Lawrence**, J. Levine, M. Vilà, J. Weiner and V. Wolters. 2002. Slippin’ and slidin’ between the scales: the scaling components of biodiversity-ecosystem functioning relations. Pp. 209-220 in Loreau, Naeem and Inchausti (eds.), Biodiversity and Ecosystem Functioning: Synthesis and Perspectives. Oxford University Press.
12. Vandermeer, J., **D. Lawrence**, A. Symstad, and S. Hobbie. 2002. Effect of biodiversity on ecosystem function in managed ecosystems. Pp. 221-233 in Loreau, Naeem and Inchausti (eds.), Biodiversity and Ecosystem Functioning: Synthesis and Perspectives. Oxford University Press.
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**Project Reports/Other**

1. **Lawrence, D.** 2019. Thanks to UVA for Climate Commitment. Op-ed. [*Daily Progress*](https://dailyprogress.com/opinion/opinion-letter-thanks-to-uva-for-climate-commitment/article_e1768445-38fe-53ad-99f3-696bab2015e7.html)**.**
2. **Lawrence, D**. 2018. Deforestation is tearing through our carbon budget. Invited, [Leonardo DiCaprio Foundation blog](https://www.leonardodicaprio.org/deforestation-is-tearing-through-our-carbon-budget/).
3. **Lawrence, D.** 2015. Rainforests hold the key to taming El Nino’s destruction. Op-ed. [*The Guardian*](http://www.theguardian.com/environment/2015/oct/16/rainforests-hold-key-to-taming-el-ninos-destruction)*.*
4. **Lawrence, D**. and Charles Scott. 2012. Summary of the SilvaCarbon Degradation Workshop. US Forest Service and US Agency for International Development. 35 pages.
5. **Lawrence, D.** and Christa Anderson. 2012. Summary of the SilvaCarbon LiDAR Workshop. US Forest Service and US Agency for International Development. 12 pages.
6. **Lawrence, D**. 2011. Summary of the SilvaCarbon Workshop on Estimating Forest Carbon Stocks. US Forest Service and US Agency for International Development. 10 pages.

## Invited Presentations

**Scientific and Academic venues**

2020 East African Great Lakes Environment Project, Kigali, Rwanda

2020 Wildlife Conservation Society, Kampala, Uganda

2019 Aspen Global Change Institute, Aspen, CO

2019 Environmental Futures Forum, Environmental Resilience Institute

2019 Data Sciences Institute, University of Virginia

2018 Climate Change and Health, Environmental Resilience Institute

2018 Symposium on Irrationality and the Contemporary, University of Virginia

2017 National Center for Atmospheric Research

2017 Bard College, Center for Environmental Policy

2017 Makerere University, Kampala Uganda

2017 Center for Global Health, University of Virginia

2017 Global Water Initiative, University of Virginia

2017 Department of Environmental Sciences, University of Virginia

2016 Center for Advanced Study in Behavioral Sciences at Stanford University

2016 University of North Carolina, Global Research Institute

2016 University of Minas Gerais, Brazil

2015 Invited speaker, Tropical dry forest session, American Geophysical Union, San Francisco

2015 *Keynote Speaker* USAID Conference on Lowering Emissions from Asian Forests, Bangkok

2015 Tulane University, New Orleans

2015 The Nature Conservancy of Virginia, Charlottesville, Virginia

2015 *Keynote Speaker* Climate and Land Use Alliance Meeting, New York

2015 *Keynote Speaker* Forests, Climate Change and Development Conference, British Academy of Sciences, London

2014 Global Forest Observation Initiative, University of Wageningen

2014 National Space Science and Technology Center, University of Alabama, Huntsville

2013 Virginia Polytechnical University, Blacksburg, Virginia

2013 Virginia Commonwealth University, Richmond, Virginia

2013 Cary Institute for Ecosystem Studies, Milbrook, New York

2012 International Society of Tropical Foresters, Raleigh, North Carolina.

2011 Center for International Research in Forestry, Bogor, Indonesia

2011 International Programs Office, US Forest Service, Washington DC

2009 Chiang Mai University, Thailand

2009 Chamela Biological Station, Universitas Autonoma de Mexico

2008 Department of Biology, University of Richmond

2008 Agricultural University of Hanoi, Vietnam

2008 Ecology, Evolution and Environmental Biology, Columbia University

2008 Department of Geography, Rutgers University

2007 Tropical Soils Organized Session, Ecological Society of America

2007 TROPI-DRY Symposium, Association for Tropical Biology and Conservation

2007 Biology Department, Fordham University

2007 Biology Department, North Carolina State University

2007 Fairchild Botanical Garden, Florida

2006 International Center for Conservation Analysis and Planning, Columbia University

2006 TROPI-DRY Conference, University of Alberta

2005 National Center for Ecosystem Analysis and Synthesis, University of Santa Barbara

2005 Biology Department, College of William and Mary

2004 Department of Ecology and Evolutionary Biology, Cornell University

2002 School of Forestry, Yale University

2002 International Society of Ecosystem Health, Washington DC

2002 International Conference on the Stability of Rainforest Margins, Bogor, Indonesia

2002 Appalachian Laboratory, University of Maryland

2001 NASA Land-Cover Land-Use Change Conference, College Park, Maryland

1999 Ecosystems Center, Marine Biological Laboratory, Woods Hole

1999 El Colegio de la Frontera Sur, Quintana Roo, Mexico

1999 George Perkins Marsh Institute, Clark University

1998 Biology Department, Arizona State University

1998 Harvard Forest, Harvard University

1998 Department of Environmental Sciences, University of Virginia

1997 Forestry Department, University of North Carolina

1997 Department of Earth and Planetary Sciences, Harvard University

1997 Environmental Studies Department, Austin College

1994 NATO Records of Biomass Burning Conference, Alvor, Portugal

1994 Center for Research in Biology/Indonesian Institute of Sciences, Bogor, Indonesia

**Policy venues**

2020 Miller Center, University of Virginia

2020 Climate Restoration Webinar, Environmental Resilience Institute

2019 Presidential Ideas Festival, Miller Center

2019 Global Pathfinder Summit, The Presidential Precinct, Charlottesville, VA

2019 Virginia Department of Transportation, at School of Engineering and Applied Sciences

2018 Center for American Progress, Washington DC

2018 Annual Meeting of the Governors’ Climate and Forests Task Force, San Francisco

2018 Science Policy Initiative, University of Virginia

2017 The Nature Conservancy Volunteer Summit, Washington DC

2017 United Nations Framework Convention on Climate Change, Forest Day, Bonn, Germany

2016 Miller Center, University of Virginia

2016 Clinton Climate Initiative, Washington DC

2015 Board of Trustees of The Nature Conservancy of Virginia, Richmond, Virginia

2010 Workshop on Options for an Asian Regional Climate Change Center, USAID

**Public venues**

2021 Climate Strategies

2021 Citizens Climate Lobby

2021 Charlottesville Area Tree Stewards

2021 The Policy Group of Charlottesville

2021 Environmental Sciences Organization, University of Virginia

2021 Student Athletes for Sustainability, University of Virginia

2020 Master Gardeners of Virginia

2020 Piedmont Environmental Council

2020 Between the Columns Spotlight Speaker Series, University of Virginia

2019 National Geographic Summit, University of Virginia

2019 Greenway Symposium, St. Anne’s Belfield Upper School, Charlottesville, VA

2019 St Anne’s Belfield Middle School, Charlottesville, VA

2019 Fry’s Spring Beach Club Dinner Series, Charlottesville, VA

2019 Anthropology Society of Virginia, University of Virginia

2019 Student Council Sustainability Banquet, University of Virginia

2018 Bicentennial Sustainability Summit, University of Virginia

2018 Science Pub Night for CommUnity, Charlottesville, VA

2018 The Village School, Charlottesville, VA

2017 Open Grounds, University of Virginia

2017 Channing House, Palo Alto, CA

2016 50th Reunion, University of Virginia, Charlottesville, VA

2015 TEDx Charlottesville

2015 Tulane University, New Orleans, LA

## Coverage in the Popular Press

## Coverage in the Popular Press

**Media Coverage of Research**

— About research on how tropical forests affect climate and agriculture, published in *Nature Climate Change* (Lawrence and Vandecar 2015)

Wall Street Journal (USA): Q&A: Heating Up the Climate Change Debate

Wall Street Journal Indonesia: Bahaya Besar Penebangan Hutan

Reuters (UK): Tropical deforestation threatens global food production

*Selected online pick-up*Business Insider (USA)

Fresh[news.com](http://news.com) (USA)

Latest News Link (USA)

Reuters Africa (UK)

Standard Digital (Kenya)

Town Hall (USA)

Yahoo News (USA)

Reuters América Latina—Spanish: Deforestación tropical amenaza producción global de alimentos

*Selected online pick-up*

La Jornada (Mexico)

Notiamerica (Spain)

Reuters Brasil—Portuguese (UK): Desmatamento tropical ameaça produção mundial de alimentos

*Selected online pick-up*

Alagoas 24 Horas (Brazil)

[Iberoamerica.net](http://Iberoamerica.net) (Brazil)

Noticias R7 (Brazil)

*O Globo* (Brazil)

Terra Brasil

Washington Post(USA): Report suggests forest-cutting can have an immediate effect on climate

*Selected online pick-up:*

The Age (Australia)

Sydney Morning Herald (Australia)

\*Le Figaro(France): L'impact méconnu de la déforestation sur les précipitations

*Selected online pick-up*

[ePresse.fr](http://ePresse.fr) (France)

MSN (USA)

*O Globo* (Brazil): Desmatamento provoca ‘tsunami atmosférico’ e caos no clima em outros continentes

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National Geographic https://www.nationalgeographic.com/environment/2018/10/ipcc-report-climate-change-impacts-forests-emissions/

Minnesota Public Radio <https://www.mprnews.org/story/2018/10/18/why-forests-are-crucial-for-reining-in-climate-change>

The Guardian https://www.theguardian.com/environment/2018/oct/04/climate-change-deforestation-global-warming-report

Reuters https://www.reuters.com/article/us-global-climatechange-forests/scientists-champion-

forests-as-unsung-hero-of-climate-action-idUSKCN1MF1X4

EcoWatch https://www.ecowatch.com/forests-climate-change-scientists-2610253696.html Common Dreams https://www.commondreams.org/news/2018/10/04/urging-multi-pronged-effort-halt-climate-crisis-scientists-say-protecting-worlds

CBS 19 News https://www.cbs19news.com/content/news/UVA-professor-writes-piece-on-forests-and-global-climate-change-496991021.html https://news.virginia.edu/content/leonardo-dicaprios-foundation-lends-platform-megaphone-uva-climate-expert

Local NPR <https://www.wvtf.org/post/land-management-and-climate-change#stream/0>

UVa Today <https://news.virginia.edu/content/qa-deborah-lawrence-climate-land-and-our-future>

Climate News Network: Forests can bring 1.5°C Paris target closer

*Selected online pickup*

Carbon News (New Zealand)

E&E News: Advocates to spotlight 'forest sink' potential

Guardian (UK): The seven megatrends that could beat global warming: 'There is reason for hope'

Le Monde: Les forêts, poumons de la lutte mondiale contre le réchauffement climatique Scientas (Netherlands): Klimaatakkoord van Parijs is kansloos als we bedreigde bossen niet redden

WBUR: Woods Hole and Paris Accord

Yale 360: Why the Post-Paris Climate Challenge Is Even Harder Than We Thought

**Other media appearances**

[TEDx Charlottesville](https://www.youtube.com/watch?v=Wl1FW5etZX4)

The Guardian <https://www.theguardian.com/commentisfree/2019/nov/27/climate-experts-interview-what-i-learned>

Miller Center <https://millercenter.org/prezfest2019/prezfest-videos/climate-immigration-terror>

Environmental Defense Fund interview <https://drive.google.com/file/d/12JDYDq9LK9hqpmx-01pw-lXsvohlkE6X/view>

Kojo Nnamdi Show WAMU <http://thekojonnamdishow.org/shows/2014-04-16/deforestation-and-climate-change>

ZDF German TV Interview about wood pellet industry, aired 8/5/15 <http://www.zdf.de/ZDFmediathek/beitrag/video/2462902/US-Pellets-boomen-dan>

WVTF Interview about climate impacts of wood pellets http://wvtf.org/post/virginians-critical-wood-burning-energy#stream/0

WTJU Interview about the Clean Power Plan https://soundcloud.com/wtju/powerplan

WINA Interview about Paris climate negotiations http://wina.com/podcasts/local-take-on-climate-talks/

Green Biz Featured in a story on sustainability leadership by Tom Bateman. https://www.greenbiz.com/article/kind-behavior-bedrock-sustainability

##### WINA Interview on Food Fuel and Forests <http://wina.com/podcasts/deborah-lawrence/#sthash.12Xzew3o.dpuf>

WINA interview on the National Climate Assessment <http://wina.com/podcasts/deborah-lawrence-2/>

WTJU interview on Food Fuel and Forests, Soundboard <http://wtju.net/vault> 22:00-30:22

WMRA interview on Food Fuel and Forests<http://wvtf.org/post/map-climate>

WUVA Interview about the release of the IPCC report <http://wuvaonline.com/global-climate-change-reports-still-matter-uva/>

WVTF *UVa Professor Wins ‘Lottery’ – Fellowships and Grant*

UVa Today *UVa’s Deborah Lawrence named a fellow in Jefferson Science, Fulbright and Guggenheim Programs* <http://www.virginia.edu/uvatoday/newsRelease.php?id=8170>

Cavalier Daily on my class “Ecological Footprints.” <https://www.cavalierdaily.com/2009/03/24/trash-talks/>

UVa Today *10 professors win Mead Grants to Foster Faculty-Student Interaction*

**Media about the Write Climate project**

Leonardo DiCaprio foundation: <https://twitter.com/dicapriofdn/status/1085669656579366912>

Interview with The Regeneration Magazine <http://theregenerationmag.com/a/downloads/-/84801ca0aa662921/f81bf7c6a0df19bb>

<https://www.instagram.com/p/BwkqxyCAdEB/?utm_source=ig_web_button_share_sheet>

Featured Climate Wall/Bottle Board on Cavalier Daily front page 4/25/19

Featured on earthday.org website

Cavalier Daily <https://www.cavalierdaily.com/article/2019/04/new-write-climate-club-uses-art-to-inspire-action-against-climate-change>

Cavalier Daily http://www.cavalierdaily.com/article/2018/04/students-launch-exhibit-to-raise-awareness-ofclimate-change

Cavalier Daily http://www.cavalierdaily.com/article/2018/04/write-climate-creates-climate-change-awarenessart-exhibit

Jefferson Trust Newsletter https://jeffersontrust.org/news/august-18-newsletter-words-on-paper-combiningscience-policy-and-the-arts/

##### I speak French (well), Indonesian (fairly well), and Spanish (adequately).

## Languages

## Coverage in the Popular Press