

DAVID A. LUTZ - David.A.Lutz@dartmouth.edu

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PROFESSIONAL PREPARATION

Wake Forest University	Winston-Salem, NC	Biology (Honors)	B.S.	2004
University of Virginia	Charlottesville, VA	Environmental Sciences	M.S.	2008
University of Virginia	Charlottesville, VA	Environmental Sciences	Ph.D.	2010

APPOINTMENTS

Dartmouth College	Research Ast. Professor	Environmental Studies	2017 - present
Dartmouth College	Lecturer	Environmental Studies	2014 – present
Dartmouth College	Research Associate	Environmental Studies	2012 - 2017
Wake Forest University	PD Research Associate	Biology	2011 – 2012
University of Virginia	Graduate T.A.	Environmental Sciences	2009 – 2010
University of Virginia	Presidential Fellow	Environmental Sciences	2005 – 2009

SELECTED PUBLICATIONS

1. Rapp, J. M., **Lutz, D. A.**, Huish, R. D., Dufour, B., Ahmed, S., Morelli, T. L., and Stinson, K. A. 2019. Finding the sweet spot: Shifting optimal climate for maple syrup production in North America. *Forest Ecology and Management*, 448(15). 187-197.
2. Finger Higgins, R. A., Chipman, J. W., **Lutz, D. A.**, Culler, L. E., Virginia, R. A., and Ogden, L. A. 2019. Changing Lake Dynamics Indicate a Drier Arctic in Western Greenland. *Journal of Geophysical Research Letters*, 141(4). 870-883.
3. Borsuk, M. E., Mavrommati, G., Samal, N., Zuidema, S., Wollheim, W., Thorn, A. M., **Lutz, D. A.**, Mineau, M., Grimm, C., Wake, C., Howarth, R. B., and Gardner, K. *In Press*. Comparative multiattribute valuation of ecosystem services across a range of regional land-use, socio-economic, and climate scenarios. *Ecology and Society*, 24(2): 11.
4. White, A. S.*, **Lutz, D. A.**, Howarth, R. B., and Soto, J. R. 2018 Small-Scale Forestry and Carbon Offset Markets: An Empirical Study of Vermont Current use Forest Landowners Willingness to Accept Carbon Credit Programs. *PLoS One*, 13(8), e0201967, doi.org/10.1371/journal.pone.0201967.
5. Astrup, R., Bernier, P. Y., Genet, H., **Lutz, D. A.**, and bright, R. M. 2018 A sensible solution for the boreal forest. *Nature Climate Change*, 8, 11-12.
6. Samal, N. R., Wollheim, W. M., Zuidema, S., Stewart, R. J., Zhou, Z., Minneau, M. M., Borsuk, M. E., Gardner, K. H., Glidden, S., **Lutz, D. A.**, Mavrommati, G., Thorn, A. M., Wake, C. P., and Huber, M. 2017 A coupled terrestrial and aquatic biogeophysical model of the Upper Merrimack River watershed, New Hampshire, to inform ecosystem services evaluation and management under climate and land-cover change. *Ecology and Society*, 22 (4:18).
7. **Lutz, D. A.**, Burakowski, E. A., Murphy, M. B.*, Borsuk, M. E., Niemiec, R. M.*, and Howarth, R. B. 2016 Tradeoffs between Three Forest Ecosystem Services across the State of New Hampshire: Timber, Carbon, and Albedo. *Ecological Applications*, 26(1), 146-161.
8. **Lutz, D. A.** and Howarth, R. B. 2015 The Price of Snow: Albedo Valuation and a Case Study for Forest Management. *Environmental Research Letters*, 10(6), 1-12.

9. McDermott, S.M., Howarth, R. B., and **Lutz, D. A.** 2015. Addressing the assumption of carbon neutrality: Analysis of the Northern Forest. *Land Economics*, 91(2), 197-210.
10. Niemiec, R. A.*, **Lutz, D. A.**, and Howarth, R. B. 2014. Incorporating Carbon Storage into the Optimal Management of Forest Insect Pests: A Case Study of the Southern Pine Beetle (*Dendroctonus Frontalis* Zimmerman) in the New Jersey Pinelands, *Environmental Management*, 54(4), 875-887.
11. **Lutz, D.A.** and Howarth, R. B. 2014. Valuing Albedo as an Ecosystem Service: Implications for Forest Management. *Climatic Change*, 124, 53-63. DOI 10.1007/s10584-014-1109-0
12. **Lutz, D. A.**, Powell, R. L., and Silman, M. R. 2013. Four Decades of Andean Timberline Migration and Implications for Biodiversity Loss with Climate Change. *PLoS ONE*, 8(9), e74496. doi:10.1371/journal.pone.0074496
13. **Lutz, D. A.**, Shugart, H. H., Ershov, D. V., Shuman, J. K., and Isaev, A. S. 2013 Boreal forest sensitivity to increased temperatures at multiple successional stages. *Annals of Forest Science*, 1-10.
14. **Lutz, D. A.**, White, M. A., Shugart, H. H. 2012. Sensitivity of Russian forest timber harvest and carbon storage to temperature increase. *Forestry* (86), 283-293.
15. Browne, R., **Lutz, D. A.***. 2010. Lake ecosystem effects associated with top-predator removal due to selenium toxicity. *Hydrobiologia*, 655 (1), 137-148.
16. **Lutz, D. A.**, Washington-Allen, R. A., and Shugart, H. H. 2008. Remote Sensing of Boreal Forest Biophysical and Inventory Parameters: A Review. *Canadian Journal of Remote Sensing* Special Issue: Remote characterization of vegetation structure and productivity: plant to landscape scales, 34 (supp 2), pg. S286-S313.
17. Pitman, N. C. A., Azáldegui, M. D. C. L., Salas, K., Vigo, G. T., and **Lutz, D. A.***. 2006. Written Accounts of an Amazonian Landscape over the Last 450 Years. *Conservation Biology*, 21(1), pg. 253-262.

* indicates research performed as an undergraduate

PUBLICATIONS IN REVIEW

1. Dethier, E. N., Sartain, S. L.*, and **Lutz, D. A.** Heightened Levels and Seasonal Inversion of Riverine Suspended Sediments in a Tropical Biodiversity Hotspot Due to Artisanal Gold Mining. *Proceedings of the National Academy of Sciences*. In Revision.
2. Casson, N. J., Contosta, A. R., Burakowski, E. A., Campbell, J. L., Crandall, M. S., Creed, I. F., Eimers, M. C., Garlick, S., **Lutz, D. A.**, Morison, M. Q., Morzillo, A. T., and Nelson, S. J. Winter weather whiplash: impacts of meteorological events misaligned with natural and human systems in seasonally snow-covered regions. *Earth's Future*. In Revision.

AWARDS, FELLOWSHIPS, AND GRANTS

TOTAL AWARDED: \$8,748,963

1. Automated Tools for Algae Bloom Data Collection and Analysis. *Co-Investigator*. NSF EPSCOR Track-II. 9/1/19 – 8/31/24. **\$5,989,192.**
2. Acquisition of marine multirobot systems for underwater monitoring and construction. *Co-Investigator*. NSF MRI Track-1. **\$557,542.**

3. Dynamic Modeling of Forest Ecosystem Processes and Services in North American Boreal Forests across the ABoVE study region. *Primary Investigator*. NASA ROSES. 5/1/19 – 4/30/22. **\$615,001**.
4. Interactive Effects of Catchment and Climate Change on Water Quality in Forested North Temperate Lakes: Historic Trends and Future Predictions. *Primary Investigator*. NASA Interdisciplinary Science. 8/1/17 – 7/31/20. **\$1,478,539**.
5. Woody Biofuels in the State of New Hampshire: Analyzing the Social and Environmental Impacts of Forest-Based Bioenergy in the Granite State. *Primary Investigator*. Irving Institute for Energy and Society. 1/1/19 – 3/31/20. **\$35, 959**.
6. Quantifying Point-Scale Water Response to Forest Management to Understand the Cumulative Regional Impact. *Primary Investigator*. USDA, Forest Service. 6/19/17 – 12/1/21. **\$39,730**.
7. ECOSERVICE: Approaches for integrated assessment of forest ecosystem services under large scale bioenergy utilization. *Research Associate*. Norwegian Research Council. 7/1/17 – 11/1/17. **\$33,000**.

TEACHING EXPERIENCE AT DARTMOUTH

ENVS 30: Global Environmental Science. W15, W16, Sp17, F17, F18, F19.

BIO7: Putting a Price on the Planet. W17.

ENVS7: Putting a Price on the Planet. W18, S19.

ENVS 55: Ecological Economics. *Guest Lecturer*. W13, W14, W15, W16, W17, W18.

ENGS 41: Sustainability and Natural Resource Management. *Guest Lecturer*. W14, W15, W16.

ENVS 61: Governing the Environment. *Guest Lecturer*. F13, S17.

GEOG 37: Climate for Human Security. *Guest Lecturer*. S19.

PROFESSIONAL PRESENTATIONS:

Interagency Arctic Research Policy Committee Terrestrial Ecosystems Team Meeting (<i>Invited</i>)	Aug. 2019
NASA Arctic Boreal Vulnerability Experiment Team Meeting	May. 2019
Colby College, Environmental Studies Program Evening Lecture Series (<i>Invited</i>)	Mar. 2019
American Geophysical Union Annual Meeting (<i>Poster 3x</i>)	Dec. 2018
Cornell University, Biogeochemistry, Environmental Science, and Sustainability(BESS) Seminar Series (<i>Invited</i>)	Nov. 2017
Colby Sawyer College, Science Pub (<i>Invited</i>)	Oct. 2017
Wake Forest University, Sustainability Seminar (<i>Invited</i>)	Nov. 2016
Ecoservice: Annual Partner Meeting, Oslo, Norway (<i>Invited</i>)	Mar. 2016
American Geophysical Union Annual Meeting, San Francisco, CA (<i>Invited</i>)	Dec. 2015
University of New Hampshire, Earth Sciences Department Seminar (<i>Invited</i>)	Sep. 2015
Plymouth State University (<i>Invited</i>)	Apr. 2015
American Geophysical Union Annual Meeting (<i>Session Convener, Poster</i>)	Dec. 2014
NH EPSCoR Biannual Meeting, Spring	Mar. 2014
American Geophysical Union Annual Meeting	Dec. 2013
NH EPSCoR Biannual Meeting	Nov. 2013
Center for Tropical Ecology and Conservation Annual Symposium Antioch College	Nov. 2013
United States Society of Ecological Economics Annual Meeting	Jun. 2013
World Wildlife Foundation Conservation Laboratory (<i>Invited</i>)	Mar. 2012
CITES – 2009, NEESPI Workshop, Krasnoyarsk, Russia (<i>Poster</i>)	Jul. 2009

NASA Land Cover Land Use Change Annual Meeting (<i>Poster</i>)	Mar. 2009
American Geophysical Union Annual Meeting (<i>Poster</i>)	Dec. 2008
American Geophysical Union Annual Meeting (<i>Poster</i>)	Dec. 2007
NASA Land Cover Land Use Change Annual Meeting (<i>Poster</i>)	Mar. 2007

AD HOC REVIEWER AND PANELIST

Journals: Global Change Biology, Remote Sensing of Environment, Ecosphere, Journal of Ecology, Global Ecology and Biogeography, PLoS One, Climatic Change, Ecological Economics, Risk Analysis, Atmospheric Chemistry and Physics, Canadian Journal of Remote Sensing, Hydrological Processes, Southern Journal of Forestry, Environmental Management, Global Environmental Change, International Journal of Wildland Fire, Canadian Journal of Forest Research, Journal of Applied Ecology, Science of the Total Environment, Ecological Applications, Nature Plants.

Funding Agencies:

NASA Terrestrial Ecology Program:

- Sustaining Living Systems in a Time of Climate Variability and Change (SLSCVC)
- Carbon Monitoring Systems (CMS)

DARTMOUTH SERVICE

Doctoral Dissertation Committee to EEES Graduate Student Rebecca Finger

E.E. Just Fellowship Advisor to Rafael Rosas (F 2018 – S 2020).

Women in Science Program (WISP) Advisor to Vanessa Pinney (W,S 18), Emma Hazard (W, S, 19)

Faculty Advisor: the STEM Collective Living Learning Community (2017-2018)

Faculty Co-advisor to Honors Student Alisa White (W,Sp 17)

Faculty Co-advisor to Junior Year Scholar Hannah Rubin (W, Sp 19)

Research Support to Students Rebecca Niemiec (13), Lisa Rennels (14), Jimena Diaz (14), Catherine Ledna (16), Amber Ahronian (17), Alisa White (17), Nevin Cunningham (17), Meredith Gurnee (BE 17, MEM 18), Shannon Sartain (21), Katie Barton (20).

Dartmouth Second College Grant Management Committee