

Lyssa Freese

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Education

Massachusetts Institute of Technology Department of Earth, Atmosphere and Planetary Sciences. Cambridge, MA. Ph.D. Student in Atmospheric Chemistry focusing on Energy, Policy, Pollution and Climate. Fall 2018-Current.

Georgetown University Edmund A. Walsh School of Foreign Service. Washington, D.C. B.S. Science, Technology, and International Affairs: Health and the Environment. May, 2016.

Work Experience

Anew Global Consulting LLC. Orange County, CA.
Part-time Consultant. *Spring 2018-Fall 2019.*

- Research and write case studies for World Bank, Asia Development Bank, and other international institution projects.
- Assist in preparing and editing grant proposals and reports for international institutions on environmental topics focused in developing countries, specifically China.

China Environment Forum at the Wilson Center. Washington, D.C.
Research Assistant. *Fall 2017- Fall 2018.*

- Researched, wrote, and edited blog posts, op-eds, policy briefs, review papers, and research papers on the most innovative and up-to-date U.S. and Chinese environmental work
- Served as a consultant for Abt Associates Global Methane Initiative research program
- Contributed to research that has a history of influencing policy and instigating new government and NGO led projects
- Prepared workshops and conferences for international scholars and researchers

Environmental Protection Network (EPN). Washington, D.C.
Intern. *Fall 2017- Fall 2018.*

- Organized and researched all articles written by EPN members
- Created and maintained the EPN website, ensuring language is accessible to all audiences

Green Camel Bell. Lanzhou, Gansu, China.
Research Assistant and Educator. *Summer 2017.*

- Developed and marketed an ecotourism program as an alternative economy in the grasslands
- Created environmental course curriculum and trained local tour guides
- Established a database for grassland quality data, as well as a program to continue data collection

Rock Environment and Energy Institute. Beijing, China.
Research Assistant. *September 2016- April 2017.*

- Researched and wrote articles on the economic and environmental impacts of the energy transition in China, Health and Environmental Impact Assessments, and the impact of the U.S. withdrawal from the TPP on the environment.
- Consulted with international organizations and governments to provide a research paper on the coal industry and air pollution policies in China

- Coordinated and managed international roundtables and events, inviting up to twenty international scholars and researchers

Grants, Fellowships and Honors

Martin Fellowship for Sustainability. PhD Fellowship. *Present*

Jack C. Tang (1949) Fellowship. PhD Fellowship. *2020*

NIEHS Training Grant in Environmental Toxicology. PhD Training Grant. *2019-Present*

AMS Summer Policy Colloquium NSF Fellowship. Summer Policy Colloquium run by AMS and funded by NSF. *Summer 2019.*

MIT Presidential Fellowship. Year-long PhD Student Fellowship. *2018-2019.*

NSF Data Science for the 21st Century Fellowship. (*declined*). Two-year PhD Fellowship to pursue studies at U.C. Berkeley. *2018-2020.*

Sixth Tone Environmental Research Fellowship. Summer Fellowship.
“Environmental Protection in the Countryside”. *2018.*

Yenching Social Innovation Forum on Sustainability. Delegate. *2017.*

Georgetown University Environment Initiative. Summer Fellowship.
“Polluting the Internet: ENGO Social Media Strategy and Capacity in China”. *2015.*

Georgetown University School of Foreign Service. Improving the Human Conditions Grant.
“Polluting the Internet: ENGO Social Media Strategy and Capacity in China”. *2015.*

Publications and Writing

Academic Research

Freese, L. M., Eastham, S., Selin, N. Black Carbon Climate and Health Impacts of Coal Power Plant Lifetimes, Locations and Funders through the creation of a Reduced Form Model, in prep.

Freese, L. M., Chossiere, G., Eastham, S., Jenn, A., Selin, N. Nuclear Power Plant Shutdowns have Air Quality and Climate Impacts, in prep.

Garima Raheja, Leatra Harper, Ana Hoffman, Yuri Gorby, **Freese, L. M.,** Brendan O’Leary, Melissa Goodwin, Daniel M. Westervelt. Community-Based Participatory Research for Low-Cost Air Pollution Monitoring in the Wake of Unconventional Oil and Gas Development in the Ohio River Valley - Empowering Impacted Residents through Community Science, in review.

Freese, L. M., Cronin, T.W. Antarctic Radiative and Temperature responses to a doubling of CO₂, <https://doi.org/10.1029/2021GL093676>.

Ranganathan, M., Lalk, E., **Freese, L. M.,** Freilich, M.A., Wilcots, J., Duffy, M.L., Shivamoggi, R., Trends in the representation of women amongst geoscience faculty from 1999-2020: the long road towards gender parity, <https://doi.org/10.1029/2021AV000436>.

Reports, White Papers and News Articles

Freilich, M., Wilka, C., Shivamoggi, R., **Freese, L.**, Heiderich, J., Drake, H. F., Cantine, M. 2019. [“Young Climate Scientists Speak Out”](#). Special Climate Crisis Issue of DigBoston

Goodman, S and **Freese, L.** 2018. [“China’s Ready to Cash in on a Melting Arctic”](#). Foreign Policy.

Freese, L. 2018. [“Why Citizen Science Faces an Uphill Climb in China”](#). Sixth Tone.

Freese, L. 2018. [“How Citizen Science is Helping Save China’s Environment”](#). Sixth Tone.

JiaQiao, Lin and **Freese, L.** 2017. “China’s Coal-based Thermal Power Sector: Compliance of Environmental Standards”. Written for consultation with Centre for Science and Environment, India.

Freese, L. 2017. “The ‘Just Transition’ is not just a simple transition: the complexities of China’s coal phase-out”. Published in Rock Environment and Energy Institute’s Annual Energy Review 2016 and on their website.

Freese, L. 2016. “Polluting the Internet: ENGO Social Media Strategy and Capacity in China”. Senior Honors Thesis at Georgetown University. Advised by Joanna Lewis.

Volunteering and Other Experience

AGU Thriving Earth Exchange. Community Scientist. *Current*

MIT Atmospheric Chemistry Colloquium. Co-founder and organizer. *Current*

EAPS Application Mentorship Program. Co-Chair. *Current*

Diversity, Equity and Inclusion Committee. Graduate Student Representative. *Current*

Program in Atmospheres, Oceans and Climate (PAOC) Colloquium Series. Planning Committee Member. *Current*

Seminar on Racism, Colonialism, and Extraction in Geosciences. Co-creator. *Spring 2021, 2022*

Graduate Climate Conference. Executive Co-Chair. *2020*

Taskforce 2023. MIT EAPS Department taskforce focused on the Department’s Organization, Cohesion, Experience and Diversity. *2019-2020*

PAOC Retreat. Planning Committee Chair. *2019*

MIT SPARK. Weekend long program for middle school students at MIT. ‘Science Like a Girl’ course organizer and teacher. *2019*

Beijing Energy Network. Beijing, China. Executive Board Member. *2016*

Skills, Languages, and Relevant Coursework

Languages: Mandarin Chinese.

Computer Languages: Python, Matlab, basic Julia, R, and Fortran.

Relevant Coursework: Atmospheric Composition in a Changing Earth System; Environmental Modeling and Data Analysis; Climate Diagnostics and Variability; Science, Technology and Public Policy; Atmospheric Chemistry and Physics; Climate Science; Atmospheric Dynamics; Radiation and Convection; Geophysical Fluid Dynamics; Science Policy Bootcamp.