Stanford



Emma Krasovich Southworth

Ph.D. Student in Environment and Resources, admitted Autumn 2022

Bio

BIO

Research Interests:

planetary health | climate extremes | global change | environmental pollution and toxic exposures | disease ecology | environmental data science | causal inference

Emma is a PhD candidate in Environment and Resources at Stanford University's Emmett Interdisciplinary Program in Environment and Resources (E-IPER). She is co-advised by Marshall Burke (Global Environmental Policy) and Erin Mordecai (Biology) and is a Research Fellow in the Global Policy Lab (led by Solomon Hsiang). She is a Stanford Data Science Scholar, NSF Graduate Research Fellow, and Stanford Edge Fellow.

Emma's dissertation research is united by the question: how can we protect human health in the face of intensifying and extreme environmental change? We live in an era where humans are impacting and are impacted by their environment at an unprecedented scale. Natural disasters such as wildfires are growing in size and severity, while tropical cyclones are intensifying and leading to lasting damage. Her research aims to contribute to a body of evidence that measures how extreme climate events lead to environmental degradation, harmful exposures, and disease outcomes as a way to better prepare for and prevent future impacts.

Prior to starting her PhD, Emma worked as a Research Analyst at the Global Policy Lab at UC Berkeley (now at Stanford). During her time at GPL, she was part of a project that aimed to identify land-based sources of non-point source water pollution in national-scale river systems in New Zealand and the US Mississippi River Basin. Emma completed her MPH in global and environmental health science and global health at Columbia University and received a BA in behavioral neuroscience from Colgate University.

When she is not at her desk, you can find her outside - most likely running or hiking up a mountain. She also co-founded a trivia company called aeroTRIV and loves to host bespoke trivia nights to bring communities together.

HONORS AND AWARDS

- Stanford Data Science Scholar, Stanford Data Science (2023 - 2025)
- Graduate Research Fellow, National Science Foundation (2022 - 2027)
- EDGE Fellow, Stanford University (2022 - 2025)

EDUCATION AND CERTIFICATIONS

- BA, Colgate University , Behavioral Neuroscience (2015)

- MPH, Columbia University , Environmental Health Sciences, Global Health Certificate (2017)

PERSONAL INTERESTS

running, trivia, hiking, kayaking, crossword puzzle solving + constructing

Publications

PUBLICATIONS

- **The Influence of Wildfire Smoke on Ambient PM2.5 Chemical Species Concentrations in the Contiguous US.** *Environmental science & technology*
  Krasovich Southworth, E., Qiu, M., Gould, C. F., Kawano, A., Wen, J., Heft-Neal, S., Kilpatrick Voss, K., Lopez, A., Fendorf, S., Burney, J. A., Burke, M.
  2025
- **Harmonized nitrogen and phosphorus concentrations in the Mississippi/Atchafalaya River Basin from 1980 to 2018** *SCIENTIFIC DATA*
  Krasovich, E., Lau, P., Tseng, J., Longmate, J., Bell, K., Hsiang, S.
  2022; 9 (1): 524
- **The effect of large-scale anti-contagion policies on the COVID-19 pandemic (vol 584, pg 262, 2020)** *NATURE*
  Hsiang, S., Allen, D., Annan-Phan, S., Bell, K., Bolliger, I., Chong, T., Druckenmiller, H., Huang, L., Hultgren, A., Krasovich, E., Lau, P., Lee, J., Rolf, et al
  2020; 585 (7824): E7