

Petrochemicals, air emissions, and the law

HAQAST Massachusetts, June 2024

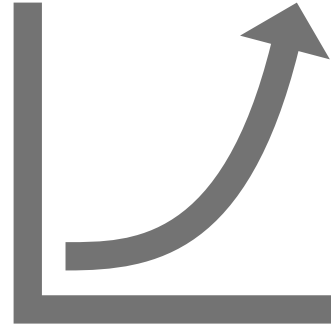
Libby Mohr, Senior Data Analyst

EDF's Petrochemicals Initiative





Climate and air pollution

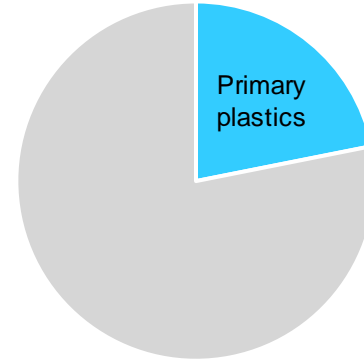


**4.2% annual
growth**

Fortune Business Insights (2024). Petrochemicals Market Size, Share, & Industry Analysis. Report #: FBI102363. Retrieved from <https://www.fortunebusinessinsights.com/petrochemicals-market-102363>



Climate and air pollution



25-31% of remaining
future carbon budget
needed to limit warming
to 1.5°C

source Karali, N., Khanna, N., & Shah, N. (2024). Climate Impact of Primary Plastic Production. *Lawrence Berkeley National Laboratory*. Report #: LBNL-2001585. Retrieved from <https://escholarship.org/uc/item/12s624vf>



Climate and air pollution



Extreme weather



Climate and air pollution



Extreme weather

Start-up, shut-down and malfunction (SSM) emissions



What is the anatomy of weather-related SSM emissions events?

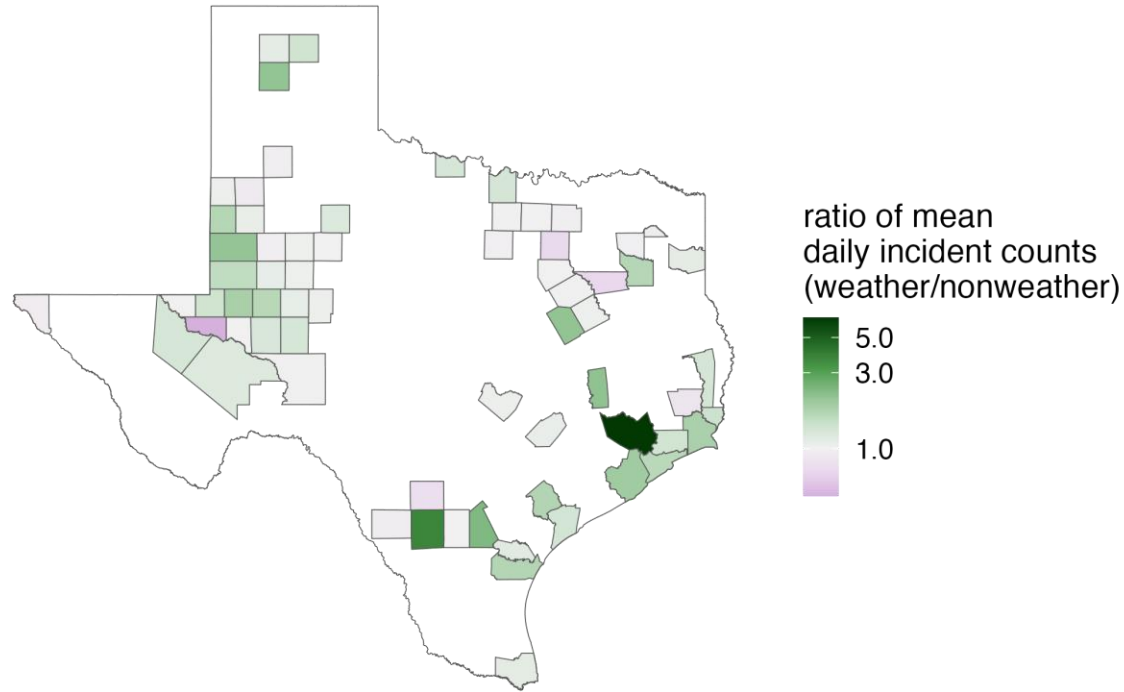


Climate and air pollution



Extreme weather

Weather-related SSM events are more likely to occur simultaneously at multiple facilities in the same county





Which satellite data products might we use to detect SSM emissions?



The University of Texas at Austin
Environmental Clinic
School of Law



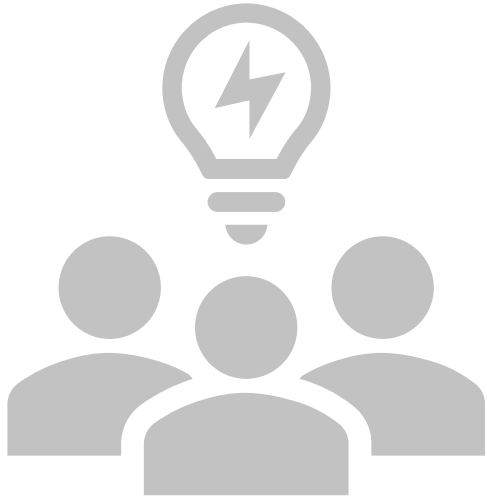
**Environmental
Defense
Fund**

**Using Air
Pollution Data
in Legal Actions**



Legal Standing

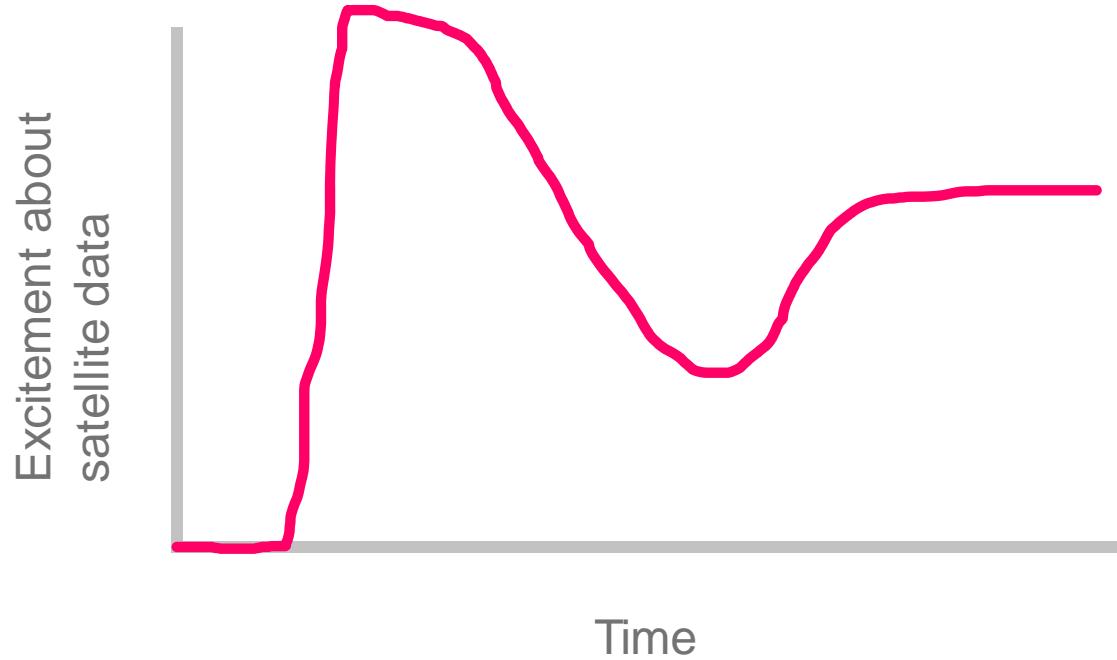
1. Injury to the plaintiff
2. Injury was caused by the defendant
3. Injury will be redressed by a favorable decision



Are there existing examples where satellite data has been used in air-quality related legal proceedings?

What kinds of scientific demonstrations are needed for satellite data to hold up in court?

My Personal Journey



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Thank you!