

Environmental Defense Fund Careers

2017 Lorry Lokey Fellow - Environmental Health

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Fellowships • Boston, Massachusetts

Description

Environmental Defense Fund (edf.org), a leading international nonprofit organization, creates transformational solutions to the most serious environmental problems. EDF links science, economics, law and innovative private-sector partnerships. Connect with us on [EDF Voices](#), [Twitter](#) and [Facebook](#).

Are you interested in exploring a career at an internationally-recognized environmental organization? By joining EDF as a Lokey Fellow, you can be part of a vibrant workplace that welcomes diverse perspectives, talents and contributions, where innovation and a focus on results are a way of life. The Lokey Fellowship program started in 1992 as an internship opportunity. Since then, the Lokey endowment has added over 22 interns and 18 fellows to Environmental Defense Fund. We are seeking environmental leaders to join us, advance our work, and cultivate the skills and relationships needed for a successful career working for the environment. Lokey alumni have gone on to important leadership positions, both within and outside of EDF.

EDF's Health Program is committed to improving the public's health by dramatically reducing exposure to toxic chemicals increasingly linked to chronic disease risks on the rise in the U.S. population. We work on a range of legislative, regulatory, scientific and market-oriented projects aimed at protecting health. In coordination with EDF's Natural Gas program and Office of the Chief Scientist, the Health team is studying the public health impacts of air and water pollutants from unconventional natural gas development.

Overall Function

The Lokey Fellow will be a key team member and will work across a variety of programs within the organization, providing analytical and research support to strengthen the program's ability to produce rigorous qualitative and quantitative analysis informing EDF's efforts to advance advocacy to protect the health of children and vulnerable populations in communities. The Fellow will conduct research and analysis on a project designed to investigate potential associations between the environmental impacts of unconventional natural gas development and adverse health outcomes. The Postdoctoral Fellow will be based in Boston and will report to Ananya Roy, Sc.D., Health Scientist, in the Health Program.

Description of the project:

Over the past fifteen years, the United States has experienced a major expansion in unconventional natural gas development (UNGD), characterized by new technologies in horizontal drilling and/ or hydraulic fracturing. It has grown from 7% to 67% of the US natural gas output, over 2000 to 2015.

Clearing of land for well pads and construction of access roads results in heavy traffic and noise pollution. Drilling, venting and flaring, processing, gas leaks, and diesel emissions from transportation and onsite equipment contributes to local air pollution, including silica, particulate matter, nitrogen oxides, volatile organic compounds and ozone. Also UNGD produces large amounts of wastewater, or produced water, containing hundreds of chemicals – a combination of formation or connate water, fracturing fluid flowback, and other production-related chemicals.

All of these present potential health risks to exposed populations. Emerging evidence from epidemiological studies indicate that populations living in the vicinity of UNGD activity have poorer health, higher rates of asthma exacerbations and worse birth outcomes. Yet, most studies are limited by the lack of quantitative population assessments of pollutant exposures and the contribution from UNGD.

To address these important data gaps, EDF is collaborating with Prof. Joel Schwartz at Harvard University to use satellite retrievals of air pollutants to assess spatio temporal trends associated with UNGD activity and community health in Pennsylvania.

The Lokey Fellow will work directly with the existing EDF science team and its partners to produce peer-reviewed papers and policy guidelines. The Fellow's individual work program will be developed based on his or her experience, interests, and the program's priorities

Key Responsibilities

- Conduct geospatial statistical analysis of pollutant trends
- Assisting in and producing research peer reviewed papers, reports, briefings, and white papers
- Prepare talks or posters for academic and non academic audiences
- Coordinating with team members and partners
- Refine review of literature

Qualifications

- PhD or equivalent from Stanford University in environmental sciences, epidemiology, bioinformatics, statistics, geographical information systems (GIS), exposure sciences, civil and environmental engineering, atmospheric sciences, meteorology or related course work or professional experience.
- Strong programming skills, including analytical, computational and spatio-temporal statistical analysis skills. Proficiency in geostatistical analysis of large datasets is a plus.
- Programming experience in Matlab/ Python/ R/ SAS is strongly desired.
- Working knowledge of Level-2 and gridded satellite data products desirable, e.g. from MODIS, as well as meteorological reanalysis datasets.

- Excellent writing and analytical skills
- As part of an advocacy team at EDF that necessarily engages a diversity of stakeholders, this person must be willing to work with stakeholders that have a range of views, priorities and perspectives (technical and non-technical).
- A passion for environmental protection, a commitment to rigorous analysis, creativity (and a dose of pragmatism) in the real-world application of scientific theory to practice.

Application Materials

Interested applicants should attach their

1. Cover letter. The cover letter should include an explanation of why the advocate is interested in a career in environmental advocacy.
2. Resume
3. A writing sample demonstrating their research capabilities to the EDF application, preferably an empirical peer-reviewed paper.
4. Contact information for 3 references

Location

Harvard School of Public Health, Boston

Due to the volume of employment applications and queries received, EDF is unable to respond to each application individually. Applicants will be contacted directly if selected as a candidate.

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