A personal approach to addressing climate issues

December 21 2015

Beijing issued its first red alert for hazardous air pollution recently, closing schools and factories citywide. Duke engineering professor Michael Bergin, who has studied the Beijing smog since long before it became front-page news, ignored the headlines.

"When I see that news, I don't even click on it and read it anymore," said Bergin, who studies air pollutants and their effects on human health and the environment.

But Bergin is far from a cynic; his vision for the future includes clearer skies, healthier environments and healthier people, and his work is already part of a solution to air quality issues around the globe.

Bergin was part of the team that helped identify the pollutants that have been yellowing the Taj Mahal, which resulted in policymakers taking quick action to reduce pollution emissions in India. He also studied the sources of smog in China leading up to the 2008 Beijing Olympics.

He finds that what works to engage people most around issues of air quality and climate change is to identify the ways it affects people's lives; positive change can happen quickly when pollution affects cultural heritage like the Taj Mahal or has an impact on children's health.

"Not everyone is receptive to this notion of climate change and humans influencing climate, but nobody wants their kids breathing in a plume of smoke," he said. "What's really cool is that when we look at climate change and air pollution together, we're also definitely going to see health benefits."

Much of Bergin's research rests on the belief that what will be most effective in reducing pollution is accurate information in the hands of individuals who are directly affected by it.

To help people measure and understand the impacts of pollution, Bergin has been researching low-cost sensors that can record information about particles in the air. The idea, he said, is that sensors used outside many individual homes will generate information about air quality on regional scales.

Bergin imagines an online map allowing users to view air quality in their neighborhoods, locate the sources of poor air nearby and understand potential health effects and life expectancy decreases in particular areas.

He hopes communicating this information directly to the public will allow individuals to make informed decisions and evaluate how their lifestyles can be more environmentally friendly.

"This is going to be a really big part of our lives in the next 15 or 20 years, I think," he said. "I'm fairly confident that these sensors will be used in India and China, but it's going to happen here in the US too, and I hope that I'll be part of it."

Perhaps the Beijing red alert will become a catalyst for policy change in China to reduce emissions and improve air quality. But for now, Bergin will continue to work on identifying sources of pollution and developing a sensor system that can bring about change on the ground.

Provided by Duke University

Citation: A personal approach to addressing climate issues (2015, December 21) retrieved 10 April 2024 from https://phys.org/news/2015-12-personal-approach-climate-issues.html