Commentary

Advocating for Health in a Warming World:
A Health Advocate’s Perspective

Rebecca Ruggles

Four years ago, I founded the Maryland Environmental Health Network, with the desire to increase engagement of health advocates on such major public health threats as climate change and toxic trespass. If the term toxic trespass* gives pause, I introduce it here with deliberate intention. It offers both a counterpoint and a parallel to climate change.

Toxic trespass is the ubiquitous presence of known carcinogens, obesogens, endocrine disruptors, and other toxic chemicals in the packaging of our food, the composition of our cosmetics, the treatment of fabrics, and many other daily encounters. We might also apply the term to unregulated forms of air pollution, such as volatile organic compounds spewing invisibly from natural gas compressor stations, to particulates from diesel engine exhaust, and to fracking flowback, the chemical composition of which is never revealed.

The term toxic trespass makes no claim to objectivity. An alliterative and evocative phrase, it references the unfettered industrial and commercial introduction of chemicals that have been untested for human safety, yet are used in ways that result in inevitable human exposures and likely harms. It telegraphs to us that chemicals are intruding on our air, our soil, and our water and that many are unmeasured and undetected, although their action as carcinogens, for instance, has been documented. It is a form of trespass because there is no permission granted, no informed consent, no institutional review board involved. The onus is on society, government, academia, consumers, and community activists to track, investigate, and prove resultant harms. The term calls attention to the violation of rights; by evoking property rights with the language of trespass, it claims not objectivity but legitimacy and a moral dimension.

By contrast, climate change is climate change. Cryptic and bland, by itself it carries no security or equity implications. Unlike toxic trespass, it is already a household word, even among those who deny its existence or its origins. The term climate change suggests no harm, no violation of rights, no moral dimensions.

The welcome substitution of this term for the earlier more commonly heard global warming is an attempt to at least stop signaling a benign warm blanket descending on our globe. That is a step forward. As a society, we are now as familiar with climate change as we once were with nuclear winter and the ozone hole in the stratosphere. But unlike those, climate change is not an inherently scary term. It is a neutral phrase, devoid of value judgments and moral implications. Only those who take the time to educate themselves on what it means are terrified.

I am a health advocate who works to advance state policy on climate change and toxics. Health equity and environmental justice are my yardsticks. I aspire to be objective, to be guided by science. Yet, what I most value about my role, whether I’m addressing threats to drinking water systems from oil trains, pesticide applications in schools, or the

*To the best of my knowledge, this term was coined by Dr. Sandra Steingraber.
intersection of energy policy with air pollution control and greenhouse gas emissions reductions, is my license to address the moral dimensions of the issue. Any conversation about health policy can and should include the question of who is harmed. All health policy conversations can ask, Is the status quo fair? All health professionals can be health advocates, calling attention to the responsibility of society to protect vulnerable people from harm.

In its controversial year 2000 ranking of health status and spending, the World Health Organization found that the United States spent the most per capita for health care of 100 nations but ranked 37th in health status.1 The Commonwealth Fund confirmed this finding in its successive reports from 2004 to 2014: We spend more than other nations and achieve less.2 Americans are ignorant about this (although healthcare professionals usually are not). The insidious notion of our exceptionalism blinds us to the poor bargain we have made with our for-profit healthcare system. For an enormous investment in high tech and specialist services, we are among the unhealthiest people in the world.

Perhaps this in part drives the adoption of health equity as a mantra in the public health community. Local health departments in many cities across the country have a stark metric: disparate life expectancy projections for wealthy versus poor populations in the same region. I live in one of the neighborhoods in my own city that promises I will live 20 years longer than people 5 miles away, in the neighborhood where Freddie Gray lived and died in police custody. Public health analysts and social reformers will point out that we continue to create the conditions of poor health through our paltry childcare systems, paid sick leave policies, and built environments—to name just a few factors. Yet, this chorus largely fails to shape national policy.

In Maryland, where all our hospitals are either nonprofits or government run, the healthcare industry is largely silent on major threats to public health, such as the costs of inaction should we fail to control greenhouse gases. The healthcare industry mostly fails to put its considerable weight behind the protective policies that would address social determinants of health, especially that subset that is driven by environmental conditions. Climate change is already proving costly to the healthcare industry, when catastrophic weather events disrupt hospital operations and insurance programs bear the burden of declines in health status for the most vulnerable.3,4 Yet, this is not the narrative of Maryland’s healthcare advocates. Advocates for health care are not always advocates for health.

Before founding the Maryland Environmental Health Network, I worked for and with federally qualified health centers in Baltimore. Advocates for health care were responsible for increasing the number of our patients covered by insurance, protecting reproductive rights, and expanding our substance abuse and mental health delivery systems. Significant achievements such as these demand focus. Healthcare advocates have much to be proud of in Maryland. I left the field of community health, after decades of addressing the needs of low-income and vulnerable populations, because I began to think harder about social determinants of health. Working to expand services for pregnant women, new immigrants, schoolchildren with untreated asthma, and so many others, was I making a difference? I saw that the environments where our patients lived were fundamentally unhealthy and unsafe. And no amount of patient education, health promotion, or access to the doctor’s office was going to change that.

During my early career, my definition of the environment would not have extended to the city streets. Environmentalists worked, I thought, to protect nature. As my sense of futility in the field of community health was growing, I awakened to a new definition of the environment. I learned that a massive threat to health—and to health equity, which had been the raison d’être for my entire professional career—was developing beneath my radar. I watched Al Gore’s An Inconvenient Truth. The equity implications of climate change began to haunt me. I read Mike Tidwell’s book The Ravaging Tide and learned from him and others that Maryland is one of the states most vulnerable to sea level rise. The immediacy of what was at stake for my own state became clear. This was eventually the impetus for a late career shift to focusing on the science of environmental health and exploring how it might contribute more directly to protective environmental policymaking in my own state.

The Maryland Environmental Health Network is a small outfit: There are 3 of us, supported by our steering committee, funders, and a host of partner organizations, researchers, and activists. To make sense of the huge and overwhelming field of environmental health, and focus where we might have some hope of impact, we assessed the advocacy landscape and evaluated the direction of state policy. We established broad boundaries: toxics and energy policy (including climate). And then within these fields, we focused on leverage points and change processes where raising public health and environmental health voices might be timely and effective. Such moments are plentiful, but they rarely have the impact we hope.

Scientists and policymakers share an inherently conservative streak, but they bring diametrically opposed attitudes toward certainty. To go out on a limb and pass a law that affects someone’s livelihood, the well-intentioned policymaker first wants to be sure of the benefit and to whom. Science can rarely answer this to their satisfaction. Science is valued by policymakers precisely because it can claim to be objective, and yet it tasks itself with identifying the unknowns and articulating the uncertainties. The conversation between the policymaker and the scientist can rapidly move to cross purposes. And that’s the case even when money has not clouded the policymaker’s vision and when the scientist has no conflicts of interest.

To wit, a smart science-minded legislator told us last year, "Don’t talk to me about the precautionary principle; I
want to make policy on hard scientific facts.” Is there any way for us to satisfy him? Defining risk and explaining uncertainty are among the most challenging tasks in translating science for lay people. Yet, if we were to stop qualifying our opinions and recommendations, we would fail to meet our own standards for being true to the science. Most of the time, science is not offering us hard facts.

Naomi Oreskes, in her recent foray into science fiction, The Collapse of Western Civilization, co-authored with Erik Conway, identifies this as one of the root causes of humanity’s failure to protect itself from the known harms of climate change. Looking back from the year 2393, their scholarly narrator charges 21st century scientists with failing to communicate clearly what they knew, in terms that policymakers could act on.

In a recent New York Times column, Oreskes elaborated:

"Typically, scientists apply a 95 percent confidence limit, meaning that they will accept a causal claim only if they can show that the odds of the relationship occurring by chance are no more than one in 20. But it also means that if there’s more than even a scant 5 percent possibility that an event occurred by chance, scientists will reject the causal claim. It’s like not gambling in Las Vegas even though you had a nearly 95 percent chance of winning."

Others have used the more visceral simile that this is like allowing your child to cross the highway alone because there is only a 5% chance she will be hit by a speeding truck. Oreskes says, “But the 95 percent level has no actual basis in nature. It is a convention, a value judgment. The value it reflects is one that says that the worst mistake a scientist can make is to think an effect is real when it is not.” With climate change and toxic trespass, we are almost certainly right now—collectively—making the opposite mistake, and the health consequences will be draconian.

Understanding the mismatch between the decision criteria of science and of policymaking has helped sharpen my focus on the value judgment side of our work at the Maryland Environmental Health Network. It has compelled us to embrace issues of environmental justice and health equity as critical yardsticks against which to measure our work on energy and toxics policy.

For instance, we can help Maryland’s 24 independent school districts eliminate toxic chemicals from their cleaning practices, but we also have to consider that the richest school systems are the farthest along in adopting “green cleaning.” So we pursue a strategy of connecting the leaders in the rich counties to serve as mentors for other counties that are struggling.

The justice and equity lens applied to our work on advocating for clean renewable energy means that we have to work as hard to clean up the definition of renewable energy in Maryland (which comprises incineration) as on increasing the state’s goal for renewable energy. We have to advocate to address the increased truck traffic that comes through a community with a proposed incineration site as well as the point source emissions that will be governed by the incinerator’s air pollution permit.

A looming issue for Maryland is whether to begin permitting hydraulic fracturing sites in our western counties, which are part of Appalachia. Early reports of families losing their health and of rural communities plagued by increased traffic accidents and domestic violence have come in from our neighboring states of Pennsylvania and West Virginia. We viewed these stories, dismissed by some as “anecdotes,” as the sentinel cases that signal the need to invest in research. With partners and some state agency support, we ensured that health effects were partially assessed in Maryland at a critical policymaking moment. Legislators who supported Maryland’s current moratorium were influenced by knowing that the state health department had not been a full partner in the assessment and that many health, safety, and security issues remained unaddressed.

As we’ve matured into a 4-year-old organization, I have understood how complicated and yet essential it is to bring the moral dimension into our work. This is in part because the science will never satisfy us and immunize us from attack. The easy, risk-less policies we’ve had the pleasure of watching be enacted in Maryland are those that sound great but simply codify the status quo—for instance, when we ban a flame retardant that was already being phased out by industry. This work has value in keeping the issues in front of policymakers. But it hardly makes a dent in the toxic trespass problem.

The hard policies, like adopting greenhouse gas reduction goals and accounting honestly for the progress in meeting them, require more than science. I believe the same compelling moral case that creates passion in advocates can give cautious policymakers the cover to do the right thing. And a health professional who speaks about his or her duty to protect vulnerable patients can arm that cautious policymaker in ways no scientist’s data can.

With his encyclical “Laudato Si,” Pope Francis has moved public discourse forward in ways that resonate for an advocate trying to bring science to bear on environmental determinants of health. He speaks of ecological threats as issues of justice and equity, addresses himself to all humanity, and demonstrates that all threats are interrelated and all forms of human welfare are connected. The encyclical is fraught not only with theological refutations of the Christian doctrine of dominance over nature, but also with extensive discussion of the science that, from a religious perspective, can be considered to be modern day “revelation.”

In the extensive commentary on the relationship between poverty and ecological threats, the encyclical attunes to the origins of public health, which began with establishing collective responsibility for disease control. The Pope links environmental stewardship and care of the poor with arguments based in both science and theology. Much of the
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Theology of the encyclical addresses the question of how do we, humanity, care for each other. This is also the central question of public health. The encyclical links a moral interpretation of science to the fate of both humanity and nature:

Concern for the environment thus needs to be joined to a sincere love for our fellow human beings and an unwavering commitment to resolving the problems of society.9[para 92]

There can be no renewal of our relationship with nature without a renewal of humanity itself.9[para 118]

The same mindset that stands in the way of making the radical decisions to reverse the trend of global warming also stands in the way of … eliminating poverty.9[para 175]

A recent Lancet article, “Safeguarding Human Health in the Anthropocene Epoch,” also raises the morality of present-day systems that threaten health. The authors state: “We have been mortgaging the health of future generations to realise economic and development gains in the present.”10[para 1973]

This is a value-laden statement, an indictment of our current systems, and a call to change. The authors offer a dense and sophisticated assessment of the connection between modern technological advances and modern problems:

Alongside the development of public health, the development of agriculture and industry have been major drivers of human success, harnessing the ability of the Earth to provide sustenance, shelter, and energy—underpinning the expansion of civilisation. To achieve the gains in nutrition, health, and energy use needed to reach a population of more than 7 billion people has required substantial changes in many of these systems, often affecting their structure and function at a cost to their ability to provide other vital services and to function in ways on which humanity has relied throughout history. In essence, humanity has traded off many of the Earth’s supportive and regulating processes to feed and fuel human population growth and development.10[para 1973]

This calling attention to the tradeoffs on which our public health, food system, and technology gains are built is another variant on the question the health advocate must ask: Who is harmed?

At a recent meeting of the Maryland Climate Change Commission, as a potentially historic accord was reached on recommending further greenhouse gas reductions in our state, a doctor spoke about her patients with asthma, a biology professor spoke about the future of her students. At other forums, I have heard nurses, community health educators, public health professors, and environmental health scientists speak out. These are critical voices, reminding policymakers of what is at stake. But other health voices are missing: the institutional voices of local health departments, the healthcare industry, community hospitals, and schools of public health. It is no accident that the Maryland Environmental Health Network is not a network of institutions but of individuals. In most cases, the health advocates we mobilize to apply pressure to policymakers speak from their personal experience in health professions, because the institutions for which they work will not take stands.

Decades of effort to reform our US Toxic Substances Control Act, dating from 1976, which would address the need to reduce toxic trespass, may finally be due for a step forward. But it will likely be years before we fully come to our senses about toxic trespass and enact meaningful reforms of our flawed US policy, on a par with the controls and protections already in place in Europe. Meanwhile, as biologist and activist Sandra Steingraber has pointed out, we have more compelling science today on the health effects of pesticides and chemicals in our food supply and in the built environment than we had when we took action on DDT in the 1970s and chlorofluorocarbons in the 1980s. We don’t lack for scientific warnings. We lack the political will to protect ourselves.

My premise is that building political will in our day and age requires health advocacy, because the health advocate is one of the few who can claim to speak both from a stance of deep responsibility and keen understanding of science. This combination is powerful; we who work in healthcare institutions, in the health sciences, in any aspect of public health or healthcare delivery must claim this power. To limit our commentary to what science is sure of or to the self-interests of our institutions is to fail in our most basic responsibility of caring for others.

A commitment to pursuing real health security would surely include both toxics reform and aggressive climate action. The increasingly alarming evidence documents how chemical exposures are implicated in loss of children’s IQ, declines in fertility, and increases in the major epidemics of our times (obesity, asthma, cancer, learning disabilities, autism). These harms are occurring gradually and with stealthy but relentless effects.

By contrast, the political will to address climate change appears to be shifting. Consumer and citizen education may be playing a part, as a resurgence of protests and marches, acts of civil disobedience, and even a hunger strike against the Federal Energy Regulatory Commission are penetrating our awareness.11,12 Naomi Klein, in her recent monumental analysis of our situation, This Changes Everything, says:

… our leaders are not looking after us. … we are not cared for at the level of our very survival. No matter how many times we have been disappointed by the failings of our politicians, this realization still comes as a blow. It really is the case that we are on our own and any credible source of hope in this crisis will have to come from below.12[para 12]

I consider myself one of those “below,” as I have devoted the final chapter of my career to being an advocate trying to change the fundamental premises on which our systems are based. I am no longer working within the healthcare system, although I deeply respect and value the work and
perspectives of those who still do. Their voices, our voices, the voices of health advocates—whether they be PhD researchers, moms and dads, community health activists, hospital administrators, clinicians, or medical educators—can be powerful. Health advocates can call the moral question: Who is being harmed? Klein says:

... in the hot and stormy future we have already made inevitable through our past emissions, an unshakable belief in the equal rights of all people and a capacity for deep compassion will be the only things standing between civilization and barbarism.13(p462)

Health advocacy is an exercise in compassion, driven by concerns for all people, a concern that is as essential in the policy debates as health science, if we are serious about addressing climate change.

It is essential that we communicate properly. We need data we can communicate without exaggeration. We need to be smarter, explaining that a 95% confidence interval could send a child across a busy highway or explaining that today’s anecdotal evidence from families in the war zones of extreme energy extraction points us to tomorrow’s case studies and epidemiologic research.

While the damage being inflicted by toxic trespass rarely makes the news and is often described in anecdotes from the lives of chemically sensitized people, the damage being inflicted on our health from climate change is being documented. Awareness of the health effects of climate change is consistently confirmed in polls of the Maryland general public.14 Doctors report seeing climate-related health effects in their patients.15,16 A University of Maryland study this year found an increased risk of salmonella poisoning associated with precipitation and heat in coastal Maryland populations.17 The National Oceanic and Atmospheric Administration (NOAA) lists Baltimore and Annapolis at the top of the risk list for future flooding.18 Gaps in our understanding of the threat are evident, however, in the lack of alarm bells going off in the hospital industry, the only dim and often transitory awareness that people have of how their drinking water supplies are threatened, and the failure to address toxic contamination of soil from flooding events.

Martin Luther King famously said, “The arc of the moral universe is long but it bends towards justice.”19 But the problem with climate change is that a long slow bend won’t do. Maybe we’ll have a small bend toward toxics protections—and the damage to children’s brains and men’s sperm counts and women’s breast milk will have to affect more generations and more individuals and cost us more as a society before we take action. Damaged and diminished, humanity will survive. Not so with climate and health.

In climate work, a long slow bend toward justice spells catastrophe. In bringing health advocacy to climate change policy, we cannot work slowly. We must speak in value-laden terms now. We must claim the moral dimensions of the problem and not wait for science to give us anything more certain than that.

References

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