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Edited by Michael Burger, Justin Gundlach  
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## CLIMATE CHANGE, PUBLIC HEALTH, AND THE LAW

*Climate Change, Public Health, and the Law* provides the first comprehensive explication of the dynamic interactions between climate change, public health law, and environmental law, both in the United States and internationally. Responding to climate change and achieving public health protections each require the coordination of the decisions and behavior of large numbers of people. However, they also involve interventions that risk compromising individual rights. The challenges involved in coordinating large-scale responses to public health threats and protecting against the invasion of rights make the law indispensable to both of these agendas. Written for the benefit of public health and environmental law professionals and policymakers in the United States and in the international public health sector, this volume focuses on the legal components of pursuing public health goals in the midst of a changing climate. It will help facilitate efforts to develop, improve, and carry out policy responses at the international, federal, state, and local levels.

Michael Burger is the executive director of the Sabin Center for Climate Change Law at Columbia Law School.

Justin Gundlach is a staff attorney at the Sabin Center for Climate Change Law at Columbia Law School.

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# Climate Change, Public Health, and the Law

*Edited by*

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## Foreword

Gina McCarthy

For more than thirty-five years I have worked for environmental agencies at every level of government, for both Democratic and Republican administrations, most recently as the Administrator of the US Environmental Protection Agency under President Barack Obama. Over those years, I have come to realize that most people are unaware that EPA is a public health agency or that human health concerns are at the core of our nation's environmental laws. EPA is not the birds, bunnies, or polar bears agency – although we all love birds, bunnies, and polar bears. EPA's efforts to deliver clean air, water, and land, as well as a stable climate, are all focused on environmental protections that are essential to the health and well-being of American families. Saving lives and avoiding impacts and illnesses is EPA's stock in trade.

Too often of late, the importance of environmental protections for public health has been lost in the political rhetoric that inevitably accompanies the prospect of new or more stringent environmental rules, especially when it comes to climate change action. This is more than just a little worrisome, since climate change is the single greatest threat to human health and our children's future. We need quick, broad, and deep actions in this country and internationally to reduce the carbon pollution that fuels climate change and to adapt to the impacts we can no longer deny or avoid. Given the enormity of the climate change challenge, this effort will require a level of public support and engagement that can only come from a common understanding of the threat that climate change poses, and the tremendous public health benefits that carbon reductions provide.

This book, *Climate Change, Public Health, and the Law*, drives home the connections between environmental protection and public health, and it highlights a path forward in the fight against climate change, in two new and important ways. First, by focusing on the ways climate change impacts

health, the book makes climate change personal, which should inspire greater support for climate action. Second, by surveying the complex relationships between climate change and the responsibilities of the public health sector it highlights not just the need, but also numerous and specific opportunities to take action to protect public health and well-being.

The book examines the real costs of climate change – not how much it would cost to address the problem, but the ongoing and inevitable human toll climate changes exact from the health of our children, our elderly, the poor, and all those most vulnerable to the impacts of pollution, illness, and disease. It uses both a legal lens and a public health framework to articulate the human health threats posed by climate change, explore the challenges associated with government actions, and make the case for the kind of cross-sector, multi-disciplinary response that climate change demands. At a time when the US government has taken a lunch break from its job of protecting public health and welfare, this book should help focus attention on what climate risks really are, and what we should actually be doing about them.

A recent report released by the Yale Program on Climate Change Communication and the George Mason University Center for Climate Change Communication, based on data gathered from a nationally representative survey in the United States back in 2016, revealed that most American's (70 percent) understand that climate change is real and most (59 percent) know that humans are causing it, but that only one in three Americans (35 percent) think global warming is affecting our weather right now, and most see it as a distant threat to future generations (70 percent) or to people in developing countries or the world's poor (62 percent).<sup>1</sup> This suggests that while Americans have accepted the reality of a changing climate, they don't view it as a direct threat to American families today.

This widespread misunderstanding should serve as a wake-up call. Until Americans acknowledge that climate change is an ongoing personal risk to them and their families, we cannot hope to garner the support we need to make the next big leap forward. And, of course, climate change is not about some far off challenge in distant countries, or something that will only be felt by people in some far off time. It's already posing direct and indirect threats to public health in the United States today. As this book makes clear, climate change is, right now, robbing too many Americans of their ability to pursue health, happiness, and prosperity. Climate change doesn't just threaten those who live along our coasts or in low-lying areas prone to flooding; climate

<sup>1</sup> Anthony Leiserowitz et al., *Climate Change in the American Mind* (New Haven, CT: Yale Program on Climate Change Communication, 2017).

impacts aren't limited to hurricanes, forest fires, and droughts – heat waves, infectious diseases, severe storms, and aeroallergens will affect us all. The chapters collected in this volume offer a range of law and policy responses to deal with these threats, across the board.

Using language that is even in tone and clinical in perspective, *Climate Change, Public Health, and the Law* describes how climate change poses broad and ongoing threats to each one of us and to all of us collectively. This clear message is enormously important for the people of this country to hear right now – and that includes people working in the areas of environment, public health, and the law. As citizens of the strongest and most prosperous nation on Earth, we cannot fail to embrace the challenge of addressing climate change with the passion, fervor, innovation, ingenuity, and investment that we have brought to bear in the past when our lives and livelihoods have been at risk. And we cannot allow our country's leaders to stick our collective heads in the sand when it is abundantly clear to the vast majority of us that climate action is needed to keep us healthy and safe and to keep our country's economy strong.

We have made significant progress domestically and internationally over the past two decades in our fight against climate change, and I am proud of the work I performed at EPA to help shape and deliver on President Obama's Climate Action Plan (CAP). EPA set limits on carbon pollution from cars, trucks, landfills, and power plants. We made progress in setting methane limits for the oil and gas production sector and implemented legislation requiring reporting of greenhouse gas emissions from numerous industrial sectors. We considered climate change in programs, permits, and grants, and worked with other federal agencies, as well as states, cities, and tribes to help them adapt to a changing climate. We supported State Department efforts to secure the 2015 Paris Agreement. And as EPA Administrator, I led the US delegation, with the strong support of Secretary of State John Kerry, in the successful negotiation of an amendment to the Montreal Protocol to establish a timeline to phase out the production and use of hydrofluorocarbons, pollutants with a high global warming impact.

Admittedly, it is discouraging to see many of these climate actions facing potential rollback in the Trump Administration. But I am confident that EPA based these final standards on science and the law, and I know each one benefitted from an extraordinary outreach and engagement effort. Ultimately, courts will decide on the legality of any rollbacks, but it is heartening to know that the Trump Administration's denial of climate science and its early efforts to undo federal public health safeguards have reawakened over a dozen states, hundreds of cities, and more than a thousand businesses who have embraced

the goals of the 2015 Paris Agreement and are working harder than ever to provide needed US leadership. These actions are helping chart new courses and continue progress in our fight against climate change, especially with the increasing engagement of the private sector and the growth of clean energy – the fastest growing economic sector in the country. In fact, no matter what actions are rolled or not rolled back, the climate change actions taken during the Obama Administration have substantially paid off for our pocketbooks, not just our health. The clean energy train has left the station and there is no turning back. The energy transition – away from fossil fuels to renewable sources and increasing efficiency – will deliver direct benefits to public health, including thousands of fewer premature deaths, asthma attacks, heart attacks, missed school and work days, and so on.

While progress in the fight against climate change will continue, we are nowhere near the carbon pollution trajectory that science demands. We need deeper and faster reductions, and we need more focus on how to address the inevitable impacts climate change is having, and will have, on us as individuals and on the communities we live in.

My hope is that this book will spark a broader conversation among the public health sector and health caregivers, legal scholars, lawyers, and the American public, about how to respond to the direct and indirect threats that climate change poses to public health. The book provides a unique and useful framework to more effectively understand, communicate, and grapple with the human health impacts of climate change we are experiencing now and can expect to face in the near future.

If my thirty-five years in public service has taught me anything, it has taught me that people take the direct health threat to their children personally. While many of us care about nature, any parent (myself included) would tell you that we live and die for our children. If this book succeeds in raising the visibility of the enormous public health impacts that climate change is already imposing on our children, then maybe we can begin to generate the kind of can-do, must-do, and will-do attitude that I have come to expect in this country.

I know no better way to make climate change front and center than to talk clearly about the threat it poses to our kids' health and future – right here in America, as well as in the developing world, and what to do to meet that threat head on. This book makes the case, in the same way we have made the case, that traditional pollutants in our air, water, and land pose threats to public health. Pollution – including carbon pollution – hurts those most vulnerable – our kids, the elderly, and others – and it denies them their right to live healthy lives. These arguments have been the basis for federal, state, and local laws,

regulations, and policies over the past four decades that have successfully reduced traditional pollutants.

As this book rightly points out, we need the active engagement of all levels of government, and with the American public, to develop and implement multi-sector, interdisciplinary strategies to reduce carbon emissions and adapt to our changing climate. I could not agree more. Climate change is not solely an environmental issue; it is at once a public health, environmental, economic, and national security challenge. That is why President Obama's Climate Action Plan demanded action across all federal agencies, created a climate cabinet to cut through the silos and ensure that multiple agencies were providing input into the design and implementation of each action, and incorporated extensive public outreach and engagement efforts at each step of the way.

This book also examines a number of specific tools and strategies – some that have already been utilized and others to be considered – to reduce risks to human health through carbon emission reductions and investments in adaptation efforts that will protect people and properties from anticipated climate impacts. It uses a public health framing to examine the task of preparing for the health impacts of climate change: how we build the capacity we need to effectively assess the threats, develop policies to reduce those threats, and develop a plan to promote public health, and finally provide assurance that the conditions that allow people to be healthy are restored. It identifies research and governance gaps that must be filled in order to deliver the cross-sector, multidisciplinary approach necessary to address climate change. It also examines ways in which our laws and our courts have been both providing opportunities for climate action and struggling with the unique legal challenges that climate change poses.

Clearly, the time is right for this book and for the larger conversation and work ahead. *Climate Change, Public Health, and the Law* has all the ingredients needed to motivate people to demand action in our country, and it provides a useful approach to engage developing nations in the fight against climate change. For example, supporting actions in the developing world to clean up the air pollution that is choking their cities, causing untold health impacts on those most vulnerable, and limiting their economic opportunities will also inevitably result in carbon pollution reductions that help protect our collective future.

If we work together at home and abroad to amplify the connection between public health and climate change, we will spur cities, states, tribes, and businesses to work together to examine and implement new tools and strategies – informed by science and the law – that can drive human health and

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climate benefits. And we will enable continued US international leadership by opening up productive avenues to clean up significant sources of pollution while advancing a clean energy future in the developing world.

Since leaving Washington, DC, I have become a full-time professor of the Practice of Public Health at the T. H. Chan School of Public Health at Harvard University, and taken on the role of director of the Center for Health and the Global Environment with the goal of focusing increased attention on the intersection of health and climate change. I for one will do what I can to expand the conversation that this book has begun – for the sake of my children’s health and our collective future.