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CLIMATE CHANGE, PUBLIC HEALTH, AND THE LAW edited by Michael Burger and Justin Gundlach

Published by Cambridge University Press, 2018, 468 pp., £85.00, hardback.

When I first heard about the publication of this book in October 2018, my immediate thoughts were ambivalent. On the one hand, the time for releasing such a volume could not have been better, given the increasing and large-scale negative impacts of climate change on public health and the absence of works that comprehensively addressed these impacts from a legal perspective. On the other hand, however, the task of filling this gap in the literature seemed exceptionally tedious and too monumental – if not impossible – to achieve. Indeed, how can we expect the law to consider the impacts of climate change on public health when it continuously fails to properly address its major anthropogenic driver – the ever-increasing greenhouse gas (GHG) emissions? Besides, is it even possible to legally address every single impact of climate change on public health? Last but not least, having an immense fortune of working at the intersection of environment, health and law, and knowing how the complexities and interdisciplinarity of these fields can substantially reduce one's understanding of the subject, I could not help wondering how the book's topic would be narrated to a wider circle of professionals. Delving into the book revealed that the contributors were perfectly aware of these challenges and addressed them in the best possible way.

The book is comprised of thematically grouped contributions and focuses on the United States (US), a jurisdiction interesting in many contrasting ways when it comes to climate change. Historically the largest contributor to global GHG emissions and the world's largest economy, the US is highly vulnerable to various climate change impacts across all of its regions. Furthermore, while a number of climate change policies have been adopted at the state level, all attempts to introduce comprehensive legislation at the federal level have so far failed. Most recently, in November 2019, the US submitted its formal notification of withdrawal from the Paris Agreement to the United Nations, following Trump's announcement to withdraw from the Agreement in June 2017 (although the US could rejoin the Agreement in the future following the change in administration). In light of these factors, a paradoxical situation is in place, where one of the most developed countries in the world struggles to catch up with the escalating threats posed by climate change to its citizens' health.

The first part of the book situates these threats in the context of rights and duties, particularly those arising in the sphere of the public health sector. The applicability of the rights approach to environmental protection and public health, while existing outside the US, is rather unclear within it. This is partly due to the fact that the US does not recognize a constitutional right to health. Hence, the regulatory measures that primarily come into play to protect public health are more specific than mere rights and duties. As discussed in the second part of the book, these measures include the disease surveillance system (Chapter 5) and the built environment (Chapter 6). However, neither of these measures are fully prepared to address public health vulnerabilities resulting from multiple climate change-triggered

hazards, as may be perceived from the third part of the book, discussing two primary impacts of climate change, namely heat (Chapter 7) and sea level rise (Chapter 8). For instance, in light of both heat and sea level rise, one of the major goals to achieve is adaptation planning in the built environment, by adapting the built environment to extreme precipitations, flooding or wildfires and related public health vulnerabilities, thereby improving the adaptive capacities of rural and urban populations. The problem is that the existing governmental approach to adaptation planning is outdated and usually fails to take the risks of climate change properly into consideration. The book provides several examples where such measures have led to damages and resulted in litigation processes. The discussion on litigation initiated by landowners in New Orleans who sought to recover damages for flooded property during Hurricane Katrina as a result of the US Army Corps of Engineers' failure to properly design and maintain a channel between the city and the Gulf of Mexico, provides a pertinent example (at 151-153).

To make matters worse, while the impacts of heat and sea level rise affect public health directly, they also create multiple secondary threats, such as the spread of infectious diseases (Chapter 9) and the disruption of the food system (Chapter 10), which is itself a 'significant source of GHG emissions' (at 283). People affected by these impacts may therefore have little choice but to migrate to safer places. Unfortunately, the process of migration entails significant health risks on its own (Chapter 11). Furthermore, just like in case of heat and sea level rise, all these secondary threats also require a highly coordinated regulatory response that may be difficult to achieve given the fragmented nature of the US public health system. Although the role of the federal government in public health emergency preparedness and response is growing, local and state authorities are the ones that predominantly exercise public health powers. In this regard, disease surveillance, information-sharing and control may be one of the most problematic regulatory areas, as a much more coordinated effort from both state and federal agencies will be required in the face of the anticipated disruptions caused by climate change-induced spread of diseases. From a legal perspective, yet another concern consists in reconciling individual and collective interests that may easily clash when it comes to the abovementioned disruptions, especially with regard to disease control. The opposition to the use of pesticides and vaccination or voluntary exposure to disease-carrying pests illustrate such tensions.

Finally, the fourth part of the book addresses the issue of developing environmental laws and climate action to meet the growing challenges to public health. The key factors discussed here are the need to balance public health co-benefits and co-harms of climate change mitigation measures and building a public health risk assessment-based approach to climate change adaptation measures. For example, pollution control statutes usually apply different standards to the protection of public health they impose. Climate change, however, is replacing the established baselines, rendering these standards obsolete. Obviously, a revision of the existing standards, especially the federal air quality legislation, is needed to keep up with this process but it is unclear how and when that could happen given the current federal policy. The deregulatory nature of the latter poses a major setback, rolling back or even eliminating federal climate change mitigation and adaptation measures, hence a policy course correction 'will only come from accumulated courtroom defeats or legislation' (at 381). True enough, action can still be thriving at the state level, although, as it is clear from the book, state action alone cannot suffice when dealing with the public health dimension of climate change.

Overall, the way the book is structured and presented is laudable, as it provides a clear understanding of how climate change affects public health, what the legal implications of those impacts are and how the existing laws could be improved. It reveals a sobering fact that the current US regulatory system is unprepared to adequately address all the challenges. It also demonstrates that much needs to be done in order to improve the situation, as multiple factors have to be considered when integrating the response to public health threats posed by climate change into the existing legal framework.

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