Preface

At the time this book is in production, the COVID-19 pandemic is ravaging the globe. And while this specific event occurred after the completion of the writing of this book, the underlying threats and vulnerabilities discussed could not be more relevant to the ongoing response, recovery, and prevention of this and future pandemics, as well as other megadisasters.

The biothreats chapter of this book (chapter 1) covers how diseases with pandemic potential are emerging from the way we are developing and living our lives, especially as we are living in closer proximity to animal hosts of diseases. This is amplified by our global interconnectedness, which supports the rapid spread of disease. At the same time, we are slower to respond to biothreats because of insufficient early detection and intervention systems, as well as disparate authorities and inconsistent funding for public health and healthcare preparedness nationally and globally. Compounding this, global just-in-time
supply chains make surging to the demands of a pandemic nearly impossible.

We are experiencing all of this with the emergence of COVID-19, most likely from a live animal and seafood market in Wuhan, China, and rapid spread of the virus across the globe. Inefficiencies in testing, confusion among disaster authorities, and supply limitations are all playing out as expected, and how our systems were destined to respond. There are silver linings though. The limited public-private partnerships that have been built in anticipation of an emerging pandemic are making strides in the development of countermeasures, and the sporadic surges in pandemic preparedness funding in years past have produced some planning templates to help guide our response. But we are not as prepared for this response as we should be. And the human and economic fallout will be felt for years to come.

In addition to the threat from the pandemic itself, there are logistical issues with essential supplies such as protective equipment for frontline healthcare workers and medical equipment that will literally be the difference between life and death for many infected with this novel coronavirus. There are new pressures on our infrastructure as people fortunate enough still to be working are suddenly thrust into work-from-home settings, creating greater dependence on electronic communication systems. Disparities in access to the Internet and reports of security intrusions into some of these systems highlight the strain on our infrastructure and our cybersecurity.

This pandemic is also overlapping with increases in seasonal flooding and other extreme weather threats. All of these threats
are made more severe by climate change and our ongoing development in vulnerable areas. This potential for cascading disasters only increases the likelihood for megadisasters to form, as each disaster contributes to the severity of others happening simultaneously. And the duress of the COVID-19 pandemic on fragile nation-states across the globe has also created new anxieties about broader instability among nuclear powers, and the potential for bad actors to exploit this crisis to do harm.

But this book should not be viewed as a treatise on the events used to illustrate our underlying threats and vulnerabilities. It is more broadly about how we systemically contribute to these threats and vulnerabilities. We are not suffering outsized impacts from COVID-19 because of a lack of preparedness for a novel coronavirus, but rather from oversimplifying and thus downplaying the threat of pandemics more generally, and through myopic development policies that don’t adequately capture the complexity and uncertainty of the world we live in.

There are undoubtedly more disaster events that we could have cited, and there will certainly be more that occur into the future. But they all largely point to the same flaws in our thinking, and limitations in our approaches to preventing and managing megadisasters. However, we do have the ability to rethink our readiness, so that we are prepared in the face of uncertainty. If we break the cycle of rigidity in our thinking, and lean into the variability and complexity of the world we live in, we can build more resilient and sustainable societies into the future.