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INTRODUCTION

The Fundamentals of Climate Violence

Who, where, what, why, how

THE OLD MAN TOOK HIS TIME TO RESPOND. It was late 2014 and I had come to northeastern Syria with one burning question in mind: Was there any evidence that climate change had contributed to the start of that country's civil war? Right from the get-go, reporting went lousily. With ISIS (also known as the ISIL, the Islamic State, or IS) then on the warpath, people were panicked, never more so than when a rumor spread that the jihadists had broken through Kurdish lines, and my colleague and I were roused in the middle of the night to flee. I felt faintly ridiculous asking about drought while fellow journalists reported on—and embedded with—desperately outgunned defenders. Clearly, a few of my interviewees felt the same, and accordingly they fixed me with some very perplexed looks. Then there was the challenge of finding the right people from the right places. Like needles in a stack of needles, the villagers I sought were often indistinguishable from the hundreds of thousands of other refugees, all bundled into rain-sodden camps and swollen towns across a narrow sliver of land along the Turkish border.

But then I got lucky. After spotting a group of men ogling a herd of grazing cattle, we pulled to the side of the road and got talking. They were all farmers displaced from other parts of Syria, and they—or more particularly, Talal, the older statesman among them—were keen to tell their tale. For many years in the lead-up to the 2011 revolution against the regime of Bashar al-Assad, he and his family had grappled with governmental corruption, as when officials laced state-provided fertilizers with sawdust and sold some of the genuine product on the private market for personal profit rather than passing it on to the intended recipients. And for about three years preceding the uprising, they had reeled from weak rains, which were debilitating enough in themselves but utterly destructive when fused with regime larceny. The very idea, Talal said, that they were being sabotaged by an unscrupulous state when they most needed its help was a “final indignity.” So, when anti-regime protests began, he and his similarly outraged friends and relatives were among the first in their area to join—and a little later, in the case of a few of them, among the first to take up arms. The rest, as they say, is history. “Bad rains, bad government, bad times,” Talal told me, withholding his surname. “We could not continue.”*

This is the story of climate-related violence, and it is already far more common than you might imagine. In large chunks of Africa and Central

* This is a much-simplified version of a complex tale. According to the dominant climate-conflict narrative in Syria, years of drought in the run-up to 2011 had sparked a mass migration of battered villagers to cities, where they struggled to adapt and so were particularly inclined to join anti-regime protests. And that may be at least partly true. But in interviews across several trips to the country’s northeast, farmers gave me a slightly different account. That drought hit even harder than it otherwise might because of corruption and state incompetence. If only Damascus had not handicapped them so, perhaps they would have been better placed to cope with both poorly conceived subsidy reforms and a vicious array of climate shocks. Among many other grievances, farmers’ sense that the regime was undermining them amid unprecedented hardship was an insult too far.

Asia, climate stresses are fueling fights between farmers and herders. In the Middle East, South Asia, Latin America, and beyond, these changes are intensifying everything from gang warfare in urban neighborhoods, to “old school” piracy in the coastal waters of Bangladesh. Across many of the world’s most vulnerable landscapes, climate change and other environmental furies are merging with other, better understood destabilizers, such as corruption, to undermine dozens of countries that can ill-afford additional crises. And that is just the here and the now. As these stresses and shocks come thicker and faster, rapidly changing conditions threaten to apply the kind of pressure that even the richest of places might struggle to withstand.

The Heat and the Fury is an attempt to unpack this “new” violence. Through a range of intensively reported examples, I will try to impress upon you that there are fewer and fewer forms of instability or out-and-out violence that are not at least partly connected to climate or wider environmental woes—and relatively few communities that are not potentially susceptible to warming’s violent “entreaties.” Because, while climate-related violence is cutting deepest in poor countries, it will, in some form at least, come for “us.” As explored in the latter stages of this book, climate is already contributing to everything from increased aggression against women in Europe, to declining military readiness across much of the Western world.

Through an investigation of the muddled, under-the-hood mechanics of this form of violence, I will try to show that climate’s contribution to instability can be considerably more complicated—and almost always more nebulous—than is popularly understood. Since the 1990s and especially since the early 2000s, scholars of climate security, as this field is called, have done extraordinary work illuminating the risks that a warming world poses for peace and stability. However, there is still a lot more to uncover.

From chapter 1 onward, we will explore how climate and environmental drivers can hurl extra fuel onto already-smoldering fires, as per the most widely accepted characterization of climate's contribution to violence, but also how climate change is simultaneously burrowing, termite-like, through the supports that individuals, communities, and nations turn to in times of crisis. What happens, for instance, when drought hobbles a farming village, and its leaders—the ones who used to arbitrate disputes—head for the hills (or, more accurately, the city), leaving the poorest and most vulnerable residents to try and resolve their troubles among themselves? What happens when a person becomes so beaten down by his circumstances that he resorts to behavior that can only be described as wild or deranged?

Many of my interviewees have mused, in seemingly genuine bewilderment, as to why their farmer cousins or pastoralist neighbors took up arms in improbable circumstances. “It’s a form of insanity,” a young man in Burkina Faso suggested of a nearby village’s decision to pick a fight over farmland that it could not hope to win. Amid the dislocation, exhaustion, and sense of powerlessness that climate change can unleash, I think there is something to that.

Crucially, for a book that is meant to be constructive rather than voyeuristic, I will hint at what makes some places more vulnerable to violence than others. As climate security scholars frequently emphasize, climate change need not fuel instability, and in many of the hardest-hit areas it has not. Why, for example, has climate contributed to conflict in Somalia but so far mostly spared the similarly afflicted Somali region of Ethiopia next door?¹ Hint: It has a lot to do with governance. Though I yo-yo in my personal assessment of our prospects for avoiding intense climate-related violence, I am heartened by how much can be done to prevent these shocks from spilling into bloodshed, even as temperatures continue to climb. For all its focus on the messy present and potentially

much messier future, I—and I hope you, too—see this book more as a call to arms than a cheerless requiem for our planet.

The Heat and the Fury is grounded in a decade of environmental reporting from over thirty countries, including frequent visits to every place that figures prominently in the book, and countless hours being bounced around the back roads of four continents. The scores of dirt- and sweat-stained notepads that emerged from that work tell the stories of soldiers, scientists, spies, farmers, government officials, and many others who have been kind enough to share their insights over the years. It is through their often-bitter experiences that I have come to understand climate's capacity to wreak havoc. It is largely through them that I will tell this tale.

But throughout this period, I have also depended on the scholars who have cut a long and, until recently, relatively lonely furrow developing the climate security field. Although I like to think that I am on top of my beat now, I did not come to it as a committed, or even half-informed, environmentalist. I grew up between Washington, DC, and the UK and had a love of wilderness, but no more than a superficial interest in its upkeep. It was not until I moved to Egypt at the beginning of 2013 and began to clock both the scale of environmental and climate trouble and how little political or media energy was being devoted to covering (or stifling) the story that I really became invested in the field. Out of an instinct for self-preservation as much as a sense of journalistic fascination, I have been motivated to try to articulate the severity of the climate crisis ever since. And what tells that story most forcefully than the violence it is leaving in its wake?

The journey to produce this book has not always been smooth. Along the way, there have been more bouts of food poisoning than I care to remember—or than you surely would care to hear about—as well as

frequent games of cat and mouse with authorities, and a number of the sort of security scares that one might expect of a hands-on exploration of violence. In one instance, while returning from an interview in one of the fast-expanding slum districts of Basra in southern Iraq in 2015, I noticed that the taxi driver whom I had engaged to drive me between meetings that day was behaving oddly. First, he began to nervously finger the gun that he kept lodged by the gearbox. Then he obsessively scanned his wing mirrors. After two men—“cousins who needed a ride,” he insisted—jumped into the back seats, I understood what he had in mind. Leaping out of the car at the next traffic jam, I weaved through the backstreets, the “cousins” trailing for the first bit, and sprinted as quickly as I ever did through school and college track and field. That evening, in an interview with the police chief, I learned that a local militia, one that was fittingly chock-full of recent migrants from the countryside, had noted my presence. “They’re desperate,” he said. “They saw you as money.”

Yet through it all, I have had constant reminders of the importance of this subject. One of the most pointed came the day before that terrifying Basra incident. I had traveled about an hour north of the city to one of the region’s fast-crumbling farming villages. There, I met an old man, Abu Mohammed, who lay in bed, struggling to breathe. He had no more than a sputtering fan to cool him, despite the humid 110-degree-Fahrenheit heat. Iraq’s severe year-round electricity outages are even more pronounced in the summer when air-conditioning demand overloads the grid. And he had had no functioning refrigerator for his many medicines since the family’s harvest had failed the previous year, depriving them of the funds to pay for generator fuel. After a brief, uncomfortable chat, I left him in peace. About an hour later, while conducting interviews next door, I heard a great wail from his daughter. He had had a massive, fatal heart attack that the doctor was adamant could have been avoided had he been living in more hospitable conditions.

On some level, it could be tempting to question what is new about climate- and environment-related violence. After all, conflict connected to water is as old as civilization itself, with some of the first recorded clashes fought between Sumerian city-states around 4,500 years ago, only miles from where Abu Mohammed took his last breath. I read a lot of environmental history, and natural landscapes have figured prominently as drivers, as victims, and as weapons of war over the millennia. According to one prominent theory, ancient Rome's rise owed a lot to a centuries-long period of warmer, rainier, and hence prime crop-growing conditions, which allowed the empire to produce much more food for its tens of millions of people than the period's farming techniques would otherwise have allowed. The violent famine- and plague-ridden fall of the empire's western portion may have turned in part on the end of that climactic idyll a few hundred years later.² According to another, rich rains may have facilitated the advance of Genghis Khan's Mongol horde across the steppe to Europe in the thirteenth century, the pasture lush enough to support unprecedented numbers of horses and the troops they carried.³

But while the parallels with past perils are clear, I hope readers will emerge with the sense that we are now up against a different beast, or at least one that is striking in different ways with more complex ramifications across a more challenging political landscape. Decades of progressively fiercer warming means that more people have less access to resources, or at least less consistent access to them, while at the same time they must confront rampant extreme weather-fueled disasters, such as floods and fires. These cascading risks are merging with other day-to-day challenges to overtax coping mechanisms and fuel poverty of a sort that is hardly conducive to happy, well-ordered societies. "In the past, summer was summer, and winter was winter, but now everything's

mixed up,” said Awad Hawran, who grows mangoes, sugarcane, dates, and watermelons on a one-and-a-half-acre plot alongside the Nile in Sudan. “It’s hard to continue farming when even the desert and weather are against you.”⁴

None of that immiseration necessarily leads to violence, but climate change is desperately unequal in its application of pressure. In my experience, troubles are more likely to emerge in places where some people are suffering mightily from climate-related stress, such as farmers or villagers in general, at the same time as others are getting by just fine or even prospering. It is that relative disparity in fortunes and government responses, a mirror of wider inequalities, that, much more than the poverty itself, can fuel dangerous degrees of resentment. “*We* suffer the most. *They* get all the help,” I have frequently heard communities and individuals say of another. Mohammed Atiyeh, a farmer and activist in a dangerously parched part of Jordan, perhaps put it best. “In a country that might run out of water,” he said, “there is regulation only for the weak and poor.” His own crops, already ailing from weak rains and feeble river flow, had been withered by the water hoarding of a politically connected neighbor.⁵

All the while, a half century or more of intense environmental degradation has combined with prolific population growth to maximize the impacts of these stresses. Climate-induced drought is a challenge. Climate-induced drought is significantly more challenging when it strikes communities that are already reeling from pollution, groundwater depletion, and other very “prosaic” ills. In these instances, minor manifestations of climate change can be enough to pitch struggling people into violence—particularly if they feel that corruption or other forms of state action or inaction are hobbling them at their time of greatest need, à la Syria. “Even a mosquito can make a lion’s eye bleed,” an Arab proverb goes.

It is no coincidence that many of the worst climate-related security crises are unfolding in precisely the places that are also battling severe non-climate-related environmental woes. Nor is it an accident that I have chosen to mention plenty of the latter in this book, many of which are either overlooked despite their often greater significance, or incorrectly lumped under the banner of climate change. Climate change is often considered “sexier” by donors and hence talked up by aid recipients too. Sometimes, the distinction between the two is seemingly lost on scientifically illiterate elites.

(Though not necessarily a challenge in absolute “Malthusian” terms, given that we seemingly do have the capacity to provide for eight billion people and counting, booming populations are reducing many communities’ and states’ margin for error—and sometimes sparking aggressive or erratic behavior from authoritarian governments who fear that climate change could compromise their sourcing of sufficient food and water in the future. As a measure of just how swiftly the global population has mushroomed, the number of people who could be displaced by climate change by 2050 is roughly equal to the total who lived on Earth around the time of Jesus’ birth—about 200 million.)

Vitaly, climate change is not playing out in a political vacuum, and the world that spawned it and that is, in turn, now suffering from its fallout is arguably more geopolitically complex than at any time in recent history. After a peaceful-ish hiatus through the 1990s and early 2000s, the number of armed conflicts of any sort is at its highest since the Cold War and the number of intra-state conflicts in particular is possibly at its highest since World War II, while the quantity and quality of democracies has wavered badly across the board.^{6,7} There are more displaced and hungry people now than at any time since 1945. There is more state mismanagement, or more accurately perhaps, there are more complex issues for more states to mismanage. Almost like a faceless,

nameless cartoon villain, climate change is stealing into communities where people are already divided, institutions weak and discredited, and officials reviled, and stomping its metaphorical boot on wounds that often need little encouragement to widen or reopen.

There is a good deal new about this book too. Because while *The Heat and the Fury* owes an enormous debt to the academic and security communities that have dominated the climate security space since its inception, it is also written as something of a reaction to the not-always-accessible fare they have often produced over the years. At the same time, some media have been guilty of hyper-sensationalizing accounts of budding water wars and other supposedly inevitable disasters. In attempting to walk the line between the scholarly and the simplistic, I have put together something that I hope will appeal to a wider audience than the climate security field has previously enjoyed.

I have also heard frequent suggestions that we need more real-world illustrations of how you go from X climate stress or shock to Y violence. By writing a book based almost entirely on original reporting, I have tried to fill part of that gap. And by venturing into places and subjects that are less frequently covered, I have sought to expand the web of climate-conflict examples beyond the most-documented. Through the so-called Streetlight Effect, there can be a tendency for researchers to focus on the safest, most accessible, and linguistically familiar locations.⁸ In this regard, I hope there is still plenty to interest those who have been in this field for significantly longer than I have.

Above all, this is one of the first books of its kind—if not *the* first—to explain on a very granular level how climate change interacts with and sometimes intensifies *other* drivers of conflict. Indeed, if you are new to this subject but have already heard about climate and conflict, your knowledge is likely related to Syria—and the discussion with which

I began this introduction. Almost since that conflict began, there has been an energetic back-and-forth in academia about the precise nature of climate's role in triggering the initial revolution. That is all highly worthy in light of the policy implications, and important, given the tendency of (ex)leaders from Assad himself to former Nigerian president Muhammadu Buhari to use climate change as a convenient means of explaining away violence that is often of their own creation. But, to my mind, the “death by a thousand cuts” nature of climate change and the overlapping “polycrises” with which so many communities are now wrestling renders that something of a red herring.

For example, climate can help push long-standing public anger over issues such as state brutality or inequality and corruption into violence—and all in ways that can make it impossible to gauge where one stressor ends and another begins. To that end, *The Heat and the Fury* does not attempt to quantify the magnitude of climate change's contribution to violence (nor, of course, to attribute to climate shocks all, or even most, of the chaos described in this book), but merely to show that it is almost always part of the mix. Again, I feel that a decade-plus of relevant ground-based reporting has given me the capacity to do just that. Ultimately, this book is as much about poor governance and the messy mosaic of other destabilizers as it is about climate change itself.

Climate security can seem like the most intractably insoluble—and hence depressing—of topics. For one, we know that good governance is pivotal in preventing climate stresses from spilling into bloodshed, as you will read throughout the book. Yet those very same stresses are also kneecapping governments' capacity to govern well, thereby reducing states' ability to act when their services are most desperately required. You want to help the victims of widespread flooding in Pakistan—and

overcome mounting popular fury in the process? Try doing that when those waters have also washed away the very roads and bridges that you need in order to distribute aid, as happened when up to a third of that country was inundated in late 2022.

You want to “climate-proof” farming communities, whose livelihoods are among the most vulnerable to climate change and whose prevalence can be one of the clearest markers of possible climate-related violence? Good luck with that when technical innovations tend to kill farm jobs and accelerate migration to the cities, which can itself unleash new security challenges. For example, police in Kathmandu already report more frequent fistfights among competing day laborers on construction sites. Officers do not relish the prospect of more turmoil as displaced rural Nepalis continue to pour into the city.

Even well-intentioned attempts to address climate change can prompt as much trouble than the initial challenges, if not more—a concept called *backdraft*. It is clear that large-scale electrification will be pivotal to weaning our economies off oil and gas. But that will require an awful lot of new mining for battery components in troubled countries such as the Democratic Republic of the Congo, which is tricky to envisage without considerable violence. It is possible, too, that we will eventually need to turn to exciting, if still very unproven, carbon-capture technologies to rein in warming. Can we do that without opening a whole new Pandora’s box of trouble? At a TED climate summit in Scotland in 2021, an exercise dedicated to gaming out the possible ramifications of

* Scholars Josh Busby and Nina Von Uexkull have identified three characteristics that they deem particularly likely to contribute to climate-related conflict. In addition to a large percentage of the population engaged in agriculture, they noted that places with histories of recent or ongoing conflict (and so with plenty of existing cleavages for climate stresses to exacerbate) and exclusive political systems (which are frequently unresponsive to climate-related crises) are uniquely vulnerable to this form of violence.

countries using cloud seeding and other forms of geoengineering rapidly descended into war.

There is a deep unfairness to much of this as well, one that goes beyond the fact that it is those who contributed least to climate change who are most vulnerable to its violence. In the long run, some of the most significant climate chaos might emerge from climate-battered states failing to meet citizens' expectations. Those mismatches can undermine authorities' perceived legitimacy and fuel anti-statism, even if the lost or reduced services—regular water supply, superior roads, and so on—are largely a product of recent developmental advances. In other words, climate might punish with violence states that have enjoyed some success in raising living standards, while sparing those that have failed to progress.

Nevertheless, there is still a big question mark as to how much violence climate change will eventually fuel. And a lot of that, beyond issues of governance, boils down to the as-yet-unknowable extent to which the planet actually warms. For every incremental shift toward higher temperatures or more extreme rainfall, some regions could see a 14 percent increase in group-on-group violence, according to one (very contested) study.⁹ The amount of warming will determine whether one billion or possibly even three billion people live outside the “human climate niche,” the range of conditions that have served us so well, according to another.¹⁰ For all the complications inherent in decarbonization (which I will also get into), there is little doubt that meaningful climate action—and meaningful climate action alone—can stifle the worst of this form of violence. As faint a hopeful note as that might initially seem, the grand reality is that most of this remains in our hands.

The Heat and the Fury is ambitious and wide-ranging and, I hope, very readable. But there are plenty of things it is not. For one, this book is

more a series of snapshots of the violence that climate change is leaving in its wake than a systematic exploration of the climate security field—and most certainly not of the climate domain in general. There are plenty of key stories that are not told or not told in any depth, such as the instability that could emerge from the prolific mining of rare-earth elements, or the tussle for resources and strategic positioning in a thawing Arctic. There are plenty that are overrepresented. You will read a lot about water, which, as scientist Jay Famiglietti says, “is the stealthy messenger that delivers the bad news about climate change to your town, to your neighborhood, and to your front door.”¹¹ Since 2001, about three-quarters of all natural hazards have been water-related.¹² I will repeatedly revisit the uncertainty that climate change brings, a complication that may be generating more violence than does absolute scarcity, despite the latter’s greater celebrity.

You may note a limit to the geographic range of these stories. Having been based in Cairo for almost six years and then Athens, Greece, for six and counting, my reporting has naturally been centered on the Middle East as well as North, East, and West Africa, with frequent forays into South Asia and Eastern Europe. I have not worked in other current or potentially climate-violence-heavy hotspots, such as Latin America, Southeast Asia, and Southern and Central Africa. Adamant as I have been about basing everything on my own research, these other regions remain largely untouched in this book. Fortunately, in reporting terms, climate-related violence is even less equitably distributed than “regular” climate change impacts. In their grimly perfect marriage of severe climate stresses and dreadful governance, I have had a lot to work with on my doorstep.

Progressing through these chapters, you may also perceive an occasionally blinkered-looking focus on *physical* security at the expense of other, arguably more-serious forms of climate-related fallout—that is,

spotlighting violence among some Sahelian herders and pastoralists at a time when many more people there are going without sufficient food for similarly climate-related reasons. But there are two explanations for that. The first is that this book would have bloated into an unmanageable mess without a relatively tight focal point. The second is that most books about climate change have explored the subject through the prism of food access, justice, human rights, migration, and so on. And so they should. (Insofar as those subjects relate to security, they come up plenty.) However, I am trying to tell a slightly different kind of story that may appeal to a slightly different readership, which requires a slightly different framing. As Jonathan Franzen writes, “The paradox of nature writing is that to succeed as evangelism, it can’t only be about nature.”¹³ Sometimes it has got to be about violence and war.

Finally, in an attempt to produce something that is compelling for a wide audience, I have also excised a lot of jargon and alphabet-soup-like acronyms, kept statistics to a relative minimum, and trimmed a bunch of country-level context. In doing so while simultaneously deploying frequent anecdotal evidence rather than important contextual studies, this book could come across as somewhat lightweight. The plural of anecdote is not data, after all. But I have almost always taken whatever studies exist into account. Owing to my fixation on un- or under-covered research angles, there often have not been any to cite. Additionally, I argue that the messy interplay between climate change and other drivers of conflict is generally impervious to quantitative study, requiring instead the kind of very “human” stories that I have tried to deploy throughout. For more-detailed, nuts-and-bolts descriptions of climate security, I have provided a list of relevant books and papers in a bibliography at the end.

This brings us to the journey that you are about to begin! These chapters could be read in isolation, each effectively a standalone investigation

with its own “cast of characters” and plot, but there is a narrative arc throughout, and I would love for you to follow it. Just as climate change builds on other challenges to complicate the lives of millions, so I have tried to sequence these chapters in such a way as to show the cascading nature of climate-related security risks. For lack of a better, less-grim way of putting it, I want the sense of violence to close in on you. Each chapter explains how varying manifestations of climate change are combining with very different socio-economic-political contexts to fuel different forms of violence. More practically, I have tried to fold in relevant science along the way—and generally try not to repeat myself.

Chapter 1 is a years-long investigation in Iraq, where water shortages formed a rich backdrop for ISIS to recruit and conduct its terror operations. Chapter 2 takes you to Bangladesh. There, merciless pirates are making fat profits by kidnapping displaced farmers and holding them for ransom—or worse. Then on to the Nile basin (chapter 3), the scene of a possible conflict between Egypt and Ethiopia centered on a mega-dam, and Nepal (chapter 4), where the state’s inability to keep the taps flowing in a water-rich nation may spell its downfall. Chapter 5 is set in Africa’s Sahel. Based on reporting across a half-dozen countries, this chapter delves into violence between farmers and herders, who are attacking one another across a drier, less predictable landscape. From there, we will begin to explore some of the violence arising out of *responses* to climate change.

Struggling villagers in Jordan have traditionally leaned on the government for army jobs during lean farming times. But as conditions worsen and public coffers empty, that quick fix is crumbling, with dangers big and small for the country (chapter 6). Chapter 7 is located in Sudan, where drought-wary foreign nations are buying up farmland to secure their food future—at local people’s expense. Chapter 8 makes clear that the West is neither safe from direct climate violence, particularly against

women, nor invulnerable to the possible fallout from our attempts to mitigate and adapt to warming temperatures. Finally, this book will culminate with a hopeful chapter 9. Because even though climate change is tearing plenty of states and communities apart, it can also in certain circumstances help bring them back together. Through a whirlwind tour of environmental peacebuilding successes, many in the countries that we will have visited beforehand, I will emphasize that there is some reason for optimism.

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