Prologue

All conflicts happen in environmental contexts. And the conduct of conflict always includes environmental factors. Still, the actors involved in shaping both conflict and its aftermath can be surprisingly unaware of them. As a trained military officer, I was prepared to operate and thrive in a range of austere environments. But my experience of war taught me that I actually knew very little about ecosystem functioning and the ways in which human ecology and the ecologies of war collide.

I first arrived in Afghanistan in February 2011 as an infantry platoon commander in the service of the US Marine Corps. I was just 25 years old and in charge of forty Marines partnered with another forty-five Afghan National Army soldiers. "Environmental" concerns and considerations at the start of my time primarily centered on how to use the terrain to our advantage and mitigate any operational insecurities it might yield our adversaries. This was how I was trained and, therefore, it was my natural starting point. Despite being trained in geography, ranging from human use of the environment to process geomorphology, I had a rather limited view of what the environment in conflict really was – I had no sense of its real complexity and importance.

Over the unfolding days, weeks, and months of nearly a year in Helmand, I quickly learned how to think about the environment in conflict tactically and operationally. I did not yet have the language or concepts that will emerge in this book, but I was gaining lived experience and an understanding of the environment through the trial and error of everyday living in conflict contexts. It was a rough introduction to the actions of environmental peacebuilding – another concept I would only learn of later.

I lived at a location on the banks of the Helmand River, in what was termed the "green zone" because of its lush vegetation, which contrasted starkly with the dry desert that began only a kilometer away from the river's edge. While the area was lush, its primary vegetation was human-produced in the form of crops fed by

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gravity irrigation systems that siphoned water from the Helmand River to intermittently flood the fields. Sluice gates, controlled gateways often made of mud but sometimes of metal, were used to turn the flow of water on and off in the circuited canals and were key control points for this orchestrated process. The water process was directed and managed by the *Myrab*, the village water manager. The Myrab of the village was also a Mullah and was looked to as a lead elder. With one eye and one arm missing from his time fighting against Russian forces in the 1980s, he commanded respect from all and became my daily companion. The water he controlled produced the cash crop of the area: poppy for opium production. Our hours and hours every week spent sitting with the village elders' council drinking chai, building relationships, and discussing the challenges of the area would be my single most formative time spent understanding the environment in conflict, and my single most important action for serving the human security needs of the village I was tasked with supporting: the people sitting with me daily in our shura and the communities they represented.

My appreciation for the environment of conflict arose through the complex daily dynamics in Helmand: the water system's interconnecting communities creating dependencies and the need for collective action; opium production as a critical livelihood but also an illicit crop; food insecurity at the interface of the lush and harsh environs of the green and brown zones; and more. I would spend a second year in Afghanistan in a nearby location, working at a district scale rather than at the village or community level, but with very similar environmental dynamics. To overlook them and focus only on conventional military operations approaches would have been folly, even though many people did anyway, or at least did not have the same appreciation for the importance of environmental aspects in conflict.

One aspect of the environment that our logistically oriented, rather than operationally focused, members regularly engaged with was waste management. We used a lot of stuff. A *lot* of stuff. And the resulting waste was substantial. But hauling it out for processing was deemed a risk, since logistic supply lines were prime targets for planting improvised explosive devices – that most common form of attack in our area of operations – and thus any "unnecessary" convoys were avoided. So, burning waste became the norm. The "burn pits," as they were called, smoldered daily, including everything from human waste (all of it collected in wag-bags tossed right into the pit) to radio batteries (stacks every day). Everything was burned and then breathed in by those around, both on and off our posts. Like other environment-in-conflict dynamics I was exposed to at the time, I would only understand the implications of this one in time, and much later than aspects such as the environment as a trigger of violence or the environment as degraded through military operations.

My time in Afghanistan is the primary driver for this book. I have since worked in many emerging, ongoing, or post-conflict contexts and continue to. But it was in

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Afghanistan that my appreciation for the environment in conflict was forged, yet remained woefully incomplete. I had not sought or been given the tools to think about the complexity of the issue and understand the many ways in which they intersect.

In those early days, I had a sense of environment as trigger and the environment as a mechanism of control, but thought of them as working much more deterministically than reality bears out, as will be made clear in Chapters 2 and 5, respectively. I also saw firsthand how the environment can be degraded by military and conflict actions but did not have a full appreciation of the ecosystem services and human needs impacts this can yield in the long run, nor did I grasp the immense costs of remediation and the lasting environmental risks. I worked directly in supporting governance, at the village and then the district level, decision-making around development priorities such as the importance of natural resource management for water and food security to provide stability, but did not appreciate the need to address contamination and other environmental management issues. In general, perceiving the environment as a vector of violence only became clear to me long after leaving Afghanistan, when I began training as an environmental management professional. This perception was consolidated with the emergence of health challenges for myself and thousands of other veterans whose wartime exposures fall under the Sergeant First Class Heath Robinson Honoring our Promise to Address Comprehensive Toxics (or PACT) Act, legislation intended to address environmental exposures affecting US military veterans. I note that no such support is provided to the many thousands more who lived just on the other side of the Hesco walls (the big, sand-filled cages that lined the perimeter of every North Atlantic Treaty Organization (NATO) position in Afghanistan), downwind of our burn pits.

The framework laid out in this book was forged in firsthand experience, through trial and error, and refined in light of the immense knowledge produced by the incredible scholars and practitioners working on these critical topics. It is designed to enable effective decision-making, whether those decisions are made by professionals programming a conflict intervention or by citizens who will vote on policies that will impact environment-conflict contexts.

Rates of violent conflict and complex environmental risks are rising globally – simultaneously and often together. It can be overwhelming and disheartening to engage these issues. But they must be engaged. Everyone has a stake in it. This environment in conflict framework is intended to help make this clear and to be a starting point in this essential process. In changing contexts and at various levels, the framework presented here can assist in making informed and comprehensive decisions.

The motto of the military unit I first deployed to Afghanistan with was “make peace or die.” It always seemed an open question to me whether that meant “make

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peace or be *killed*," directed at the adversary, or "make peace or die *trying*," meaning that our task was to make peace or die in the process. I generally assumed it was the latter, but I later learned that this assumption put me in the minority. Whatever its originally intended meaning, this same motto seems to fit well with our task as we face the myriad environmental risks present today. Peace simply must extend to the human-environment relationship – we must make sustainable peace or die. To say so is not fatalism. Human and environmental flourishing are intertwined such that both are simultaneously supportive. This relationship is as much an opportunity as it is a risk. And, indeed, humans have lived out their relationship with nature for thousands of years in a way that has often capitalized on the opportunity it presents. The proposed framework is intended to serve as a starting point to reconcile unnecessarily juxtaposed challenges – to parse complexity and find win-win opportunities for promoting human and environmental flourishing. This is a lofty task, to be sure, but it is one that our global challenge calls for. So we press on, simply, to make peace.

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