Disconnecting Climate Change from Conflict:
A Methodological Proposal

Emily Meierding, Ph.D
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In April 2014, World Bank President Jim Yong Kim asserted that, "Fights over water and food are going to be the most significant direct impacts of climate change in the next five to ten years. There's just no question about it." Such dire predictions have become commonplace amongst policymakers. They are also articulated by climate change mitigation advocates, who attempt to use the threat of climate conflicts to mobilize political action. A number of widely reported academic studies have also identified linkages between climate change and intra-state armed conflict. Yet, most academic research on climate conflicts has produced ambiguous or negative results. Contrary to statements like Kim's, there is no robust evidence that climate change is linked, directly or indirectly, to violent contention.

Most scholars have responded to these analytical ambiguities by calling for more climate conflict research. Underpinning this proposal is a belief that further methodological refinements, aimed at bringing statistical models closer to theorized climate conflict connections, will produce more consistent and reliable empirical findings. This assumption has some merit; the methods employed in quantitative climate conflict research have improved significantly over the last few years and additional advances could enhance our understanding of the connections between climate change and intra-state conflict. However, maintaining the current research agenda also

comes at a cost. Basic methodological fixes will not address the normative problems that arise from researchers' current framing of climate conflicts. Consequently, this chapter calls for a more radical reframing of climate conflict research. Specifically, it encourages scholars to disconnect climate change and conflict analyses either by removing climate change from conflict studies or by studying the full range of social responses to climate change, without privileging conflict.

This proposal is prompted by two normative concerns. One is that recent methodological adjustments threaten to erase broader responsibilities for climate change and climate change-related conflicts. By shifting the geographical scale of their analyses to the subnational level and focusing on the proximate drivers of civil contention, researchers are producing more compelling conflict models. However, in making these adjustments, they move further and further away from climate change. As a result, blame for climate conflicts is relocated. Violence is attributed to developing countries' local scarcities, rather than developed countries' overconsumption of energy and food resources. This approach frames climate conflicts as "their" problem, rather than "our" fault and removes developed countries' moral imperative to engage in climate conflict prevention.

Secondly, current climate conflict research perpetuates popular beliefs that violence is the modal response to negative environmental change, especially in less developed countries. Even if scholars find little evidence of climate conflict linkages, by framing their studies around armed conflict, they erase alternative social responses to climate change. In doing so, they misrepresent the range of strategies that people employ to manage environmental degradation and scarcity and minimize the agency and creativity of local populations. These tendencies are exacerbated by biased journalistic coverage of climate conflict research. Positive findings of climate conflict

connections tend to receive widespread coverage, while negative findings and critiques are ignored. As a result, academic climate conflict research reinforces problematic environmental conflict framings, even if most scholars are, themselves, producing unbiased work.

The argument is presented in two sections. First, the chapter assesses quantitative climate conflict analyses, noting four shortcomings of early models: problems with independent variable data, dependent variable data, the scale of analysis, and a focus on direct, universal causal effects. The section also identifies methodological fixes that have become increasingly widespread in quantitative climate conflict research, including the adoption of new datasets, geographically disaggregating analyses, and considering intervening variables and conditional effects. The second section highlights the unintended negative consequences of these methodological developments and argues that, to mitigate them, scholars should reframe their analyses, removing climate change from conflict studies or examining a broader set of social responses to climate change. This section also considers the rhetorical consequences of disconnecting climate conflict analyses, concluding that the proposed reframing will not impede climate change mitigation efforts.

The Hunt for Climate Conflict Connections

Popular and academic interest in climate conflicts took off in the mid-2000s. In 2003, a report written for the United States Department of Defense described how "abrupt climate change" could lead to violent contention (Schwartz and Randall 2003). In 2007-2008, a number of policy reports identified gradual climate change as a threat to national and human security (CNA 2007, National Intelligence Council 2008; WBGU 2008). In addition, the connections

between climate change and security were debated in the United Nations Security Council, where many delegates asserted that climate change-induced shortages of water and food could exacerbate instability and lead to violent contention, especially in "fragile states" (UNSC 2007).

At the same time, academic researchers began to take up the question of whether climate change could inspire intra-state armed conflict. A special issue of *Political Geography* was devoted to the topic in 2007. Early climate conflict research built on two existing literatures: one on environmental security and one on civil wars and armed conflicts. Theories were drawn largely from the former; like environmental security research, climate conflict research emphasizes the impact of environmental degradation and resource scarcity. However, methodologically, climate conflict research has drawn more from the latter field. Rather than relying on case studies, as did most environmental security analyses (Baechler 1998; Homer-Dixon and Blitt 1998), many climate conflict scholars adopted the quantitative methods prevalent in civil war studies, especially multivariate statistical analysis, to assess the linkages between climate change and intra-state armed conflict. This chapter focuses on these quantitative analyses, as their findings have received the greatest popular attention.

Many early climate conflict studies essentially incorporated climatological variables into existing civil war models. These climate conflict models evaluated the impact of hydrometeorological disasters or short-term deviations in temperature and precipitation on the frequency of intra-state armed conflict, while controlling for other factors that are commonly found to encourage civil conflict, such as economic performance and population size (Hendrix and Glaser 2007; Burke et al 2009; Nel and Righarts 2008). Other studies tested the direct impact of temperature and precipitation on conflict, without employing socio-economic or political controls (Zhang et al. 2007; Tol and Wagner 2010).

These early analyses produced mixed results. A widely reported study by Burke et al. (2009) identified a connection between warmer temperatures and armed conflict; the authors went so far as to specify the number of deaths that would occur as a result of global warming over the following two decades. However, other scholars challenged the robustness of the Burke et al. finding, observing that it was highly dependent on model specification (Buhaug 2010). Most other early climate conflict studies produced similarly inconsistent results. Within individual studies, some climatological variables were connected to conflict, while others were not. The impact of specific variables also differed across studies. Consequently, assessments of the early literature concluded that relationships between climate change and conflict were far from certain (Salehyan 2008).

There are two possible explanations for authors' failure to identify consistent connections between climate change and intra-state armed conflict. One is that no such relationship exists and climate conflict models were simply revealing that absence. The other is model misspecification. The models that were tested in early climate conflict research deviated significantly from theorized linkages between climate change and intra-state contention. Most researchers expect that, if climate conflicts occur, they are predominantly localized, inter-communal events (Buhaug et al. 2008; Gleditsch 2012). Contentious episodes do not necessarily involve the central state or the entirety of a country. Climate change's impacts are also mediated by social and political institutions; shifting climatological conditions do not automatically cause violent contention, under all circumstances.

Yet, the statistical models tested in early climate conflict research often failed to capture these features. They deviated from theorized climate conflict connections in at least four ways. First, studies were conducted at the national level, rather than the local level. Second, to

operationalize "conflict," the dependent variable, researchers employed datasets that systematically exclude small scale and non-state contention. Third, for their explanatory variables, researchers examined short-term changes in weather, rather than long-term changes in climate. Fourth, analyses rarely considered intervening variables or conditional effects. As a result, it is unsurprising that models failed to produce consistent findings. And it is reasonable to assume, as most researchers did, that the reasons for this failure were model misspecification, rather than the absence of climate conflict connections. The remainder of this section elaborates on each of these problems, as well as the steps quantitative researchers have taken to improve their model designs, bringing theory and empirical analyses closer together.

Scale of Analysis

Analyzing climate conflicts at the country-level is problematic because climatological and hydrometerological conditions can vary widely within a country; one region may experience normal conditions, while another suffers from a severe drought. This variation is even more pronounced in the case of hydrometeorological disasters, such as floods, hurricanes, and typhoons: events that are expected to become more frequent and more severe as a result of climate change. Only some geographical areas will be affected by these disasters. Similarly, conflict events rarely encompass an entire country. Even civil wars can leave portions of states untouched. Smaller-scale conflicts are likely to be restricted to one region, one city, or one village. Given this geographic localization, it is quite possible for a hydrometeorological deviation to occur in one part of a country, while an unrelated contentious episode occurs in

another. A country-level study would mistakenly assume that these events were connected. It would inaccurately identify the contentious event as a climate conflict, biasing results.

To respond to this problem, many researchers have shifted the scale of their analyses. Some have collected data at the level of administrative provinces (Meier et al. 2007; Fjelde and von Uexkull 2012). Others have divided areas under study into 50 km^2, 100 km^2, or 1° grids, collecting data on climate and conflict within each square (Raleigh and Kniveton 2012; Theisen 2012; O'Loughlin et al. 2012; Wischnath and Buhaug 2014). By spatially disaggregating their studies, researchers reduce the risk of false positives; it is more likely that climate events and conflict events that occur within a smaller geographical area are related. However, researchers may not have access to similarly fine-grained data on political and socio-economic factors, so some theoretical mismatch persists. In addition, many researchers have continued to conduct analyses at the country level (Hendrix and Salehyan 2012; Koubi et al. 2012; Slettebak 2012).

Dependent Variables: Capturing "Conflict"

The second methodological problem with early climate conflict analyses was their use of civil war and armed conflict datasets. This reliance was unsurprising, given many researchers' backgrounds in civil war studies and the challenges of collecting new conflict data. However, the datasets are not well suited to analyzing climate conflicts, as they systematically exclude episodes of localized, small-scale, and communal contention. The most commonly employed dataset is PRIO/Uppsala's collection of armed conflicts (Gleditsch et al. 2002). This datasets includes all contests that result in at least twenty-five battle deaths, in which the state was a participant. Any contests that do not meet the battle death threshold or do not involve the central

government or its representatives are excluded. Therefore, all studies that use this data overlook the smaller-scale, non-state contests that are widely expected to be the more frequent consequences of climate change (Hendrix and Glaser 2007; Nel and Ringharts 2008; Tol and Wagner 2010; Hsiang et al. 2011; Theisen et al. 2011/2012; Bergholt and Lujala 2012; Koubi et al 2012; Slettebak 2012; Wischnath and Buhaug 2014). One study, by Burke et al. (2009), exacerbated the mismatch by only examining civil wars: conflicts resulting in at least one thousand battle deaths.

To correct for these omissions, a few researchers have recently employed alternate conflict data. These alternative datasets include a wider range of actors or a wider range of contentious events. Fjelde and von Uexkull (2012) use the Uppsala Conflict Data Program (UCDP) Non-State Conflict Dataset, which retains the twenty-five battle death threshold, but includes conflicts that do not involve the central state (Sundberg et al. 2012). Hendrix and Salehyan's (2012) Social Conflict in Africa Dataset (SCAD) includes a wider range of events: coups, military infighting, violent repression by the government, extra-governmental violence, peaceful protests, riots, strikes, mutinies, and communal conflicts, as well as conventional armed conflicts. Raleigh and Kniveton (2012) and O'Loughlin et al. (2012) use the Armed Conflict Location and Event Dataset (ACLED), which disaggregates armed conflicts into individual violent acts perpetrated by the government, rebels, militias, and anti-government rioters and protesters (Raleigh et al. 2010).

Other researchers have compiled micro-level datasets of conflict patterns in individual countries or regions. Theisen's (2012) study of climate conflicts in Kenya used local news sources to identify acts of inter-group violence and state-perpetrated violence within the country. An early study by Meier et al. (2007) used field monitor reports from the Inter-Governmental

Authority on Development's Conflict Early Warning and Response Network (CEWARN) to collect data on armed clashes, raids, protests, and banditry in Ethiopia, Kenya, and Uganda. The results of such sub-national studies may not be generalizable beyond the included countries. However, by providing a closer match between theory and data, their specific findings are more compelling.

Independent Variables: Weather vs. Climate

Climate change is a broad phenomenon. Its anticipated physical consequences include shifts in temperature and rainfall patterns, such as the timing and location of monsoon seasons, accelerated sea level rise, habitat changes for animals and plant species, and increased frequency and intensity of hydrometeorological disasters, such as storms, droughts, floods, landslides, extreme temperatures, and wildfires. These changes could be gradual and linear or they could be large and abrupt, occurring after a climate system reaches a tipping point. This potential for unexpected, dislocating shifts is one characteristic of climate change that distinguishes it from the resource scarcities that were analyzed in earlier environmental security research, such as shortages of freshwater and arable land (Meierding 2013). Two other distinguishing factors of climate change are the breadth of its effects on the earth's physical systems and its temporal scope; climatological changes are commonly measured over decades or longer.

Climate conflict research has not incorporated many of these characteristics. Most climate conflict studies have examined short term changes in weather, rather than long-term changes in climate. They operationalize climate change as month-to-month or year-to-year changes in temperature and precipitation, or as monthly or annual deviations from long-term

means. Alternatively, a number of studies have examined the impact of hydrometeorological disasters on conflict (Nel and Righarts 2008; Bergholt and Lujala 2012; Slettebak 2012). Yet, while natural disasters and shifts in temperature and precipitation are anticipated consequences of climate change, these studies remain one step removed from the broader concept. They would more accurately be described as "weather conflict" or "natural disaster conflict" research than "climate conflict" research. Other anticipated consequences of climate change have also received little attention in conflict studies. Scholars have not evaluated the impact of accelerated sea level rise, habitat changes, or shifting monsoon patterns on intra-state contention. Nor have the impacts of abrupt, non-linear climatological shifts been assessed.

Some researchers have attempted to study the effects of multi-century adjustments in weather and precipitation patterns. However, these studies face sizable methodological tradeoffs (Zhang et al. 2007; Tol and Wagner 2010). In order to expand models' temporal scope, data must be collected at a continental or global scale. The only available conflict data for these extended time frames are counts of interstate wars. Data on socio-economic and political conditions are also unavailable. To avoid these tradeoffs, Hsiang et al. (2011) employed an alternative measure of climatological shifts: the El Niño Southern Oscillation (ENSO). Thus, the study maintained the country-year unit of analysis that is common in climate conflict research, while using a uniquely climatological explanatory variable. However, such innovations have been rare. Most researchers, recognizing the difficulty of conducting temporally and geographically disaggregated analyses using climatological explanatory variables, have continued to employ short-term weather variation and hydrometeorological disasters as their measures of climate change.

Causal Pathways: Indirect and Conditional Effects

Contrary to the World Bank President's claim that conflict will be a direct effect of climate change, most commentators and analysts recognize that causal pathways from climate change to conflict pass through multiple intervening variables. If climate change inspires conflict, this occurs through its effects on factors such as agricultural productivity, freshwater availability, and migration. Yet, researchers' models often fail to include these intervening factors. Instead, many analysts assess the direct impacts of climate measures on conflict (Hendrix and Glaser 2007; Meier et al. 2007; Nel and Righarts 2008; Burke et al. 2009; Tol and Wagner 2010; Hsiang et al. 2011; Theisen et al. 2011/2012; Fjelde and von Uexkull 2012; Hendrix and Salehyan 2012; O'Loughlin 2012; Raleigh and Kniveton 2012; Slettebak 2012; Theisen 2012).

Some researchers have attempted to capture more of the causal pathway from climate change to conflict by employing two stage least squared (2SLS) models. This analytic technique evaluates the effect of climate measures on conflict via an intervening variable, such as economic growth. The strategy was initially employed as a methodological fix by researchers who wanted to assess the impact of economic growth on conflict but were concerned about endogeneity problems. They observed that, while economic growth could influence conflict, conflict could also influence economic growth. In order to overcome this problem, researchers used precipitation and temperature measures—two truly exogenous variables—as instruments for economic growth (Miguel et al. 2004). Later, this method was adopted by researchers who were explicitly interested in the effects of precipitation and temperature changes, via intervening variables (Bergholt and Lujala 2012; Koubi et al. 2012; Wischnath and Buhaug 2014). The

causal pathway from climate change to conflict, through economic growth, has therefore received some attention. However, other intermediate variables, such as agricultural productivity or migration, have not been employed in two stage models.

Instead, these other variables have received some attention in single stage analyses. Zhang et al. (2007) tested the impact of agricultural prices and agricultural yield on the frequency of conflict in China and Europe over extended time frames. Arezki and Brückner (2011) assessed the effects of high food prices, possibly brought on by climate-related agricultural downturns, on the likelihood of contention. Wischnath and Buhaug (2014b) examine the effect of changing levels of wheat and rice production on conflict in India. Urdal (2008) also conducted a subnational study of conflict in India, assessing the impact of agricultural yields on contention. Other studies examine the impact of water scarcity on internal conflict (Gizelis and Wooden 2010; Böhmelt et al. 2012). In addition, Buhaug and Urdal (2013) test the impact of urban growth, which could be prompted by climate change, on public unrest. Notably, most of these analyses do not frame themselves solely as climate conflict studies. However, authors allude to climate change, noting that it could cause the environmental and social shifts that are the focus of their research.

Another way that researchers have attempted to refine their tests of climate conflict connections is to consider conditional effects. Climate change has commonly been described as a "threat multiplier" (CNA 2007). Its impacts are not expected to be equal in all geographic areas or for all people. Regions and groups that are already physically and socially vulnerable are expected to suffer more from its effects (Raleigh 2010). Vulnerable populations are also expected to be more likely to turn to violence in response to climate change. To incorporate these conditional effects, some researchers add interaction terms to their models. They test whether

climate measures' impacts on conflict depend on factors such as poverty, political access, ethnic marginalization, population density, agricultural productivity, and levels of democracy (Theisen et al. 2011; Fjelde and von Uexkull 2012; Koubi et al. 2012; O'Loughlin et al. 2012; Theisen 2012; Wischnath and Buhaug 2014). Sometimes, these analytical efforts are rather cursory. Nonetheless, by attempting to further specify the conditions in which climate conflicts are most likely to occur, these modifications improve our understandings of the causal processes that could lead from climate change to contention.

Observations

Researchers have made progress towards bringing climate conflict theories and models closer together. A significant mismatch still exists between climate change, conceptualized broadly, and the particular hydrometeorological measures that predominate in climate conflict analyses. However, most recent studies have employed at least one of the other modifications: shifting the geographical scale of analysis, employing more appropriate conflict data, or specifying causal pathways via intermediate variables and conditional effects. Some models include all three adjustments. Yet, recent reviews of climate conflict literature still conclude that cumulative positive findings within the field have been limited. Most studies continue to reveal few strong connections between climate change and violent contention. Moreover, when climate measures are found to have an impact, their influence on conflict often pales in comparison to economic and political variables (Gleditsch 2012; Meierding 2013; Scheffran et al. 2012; Theisen et al. 2013; Kallis and Zografos 2014). Reviewers have nonetheless resisted rejecting the

climate conflict hypothesis. They recommend further research, incorporating the methodological modifications identified here.

Reframing Climate Conflict Analyses

This chapter, in contrast, argues that scholars should pursue a more radical reframing of climate conflict research. By maintaining the current research agenda, quantitative climate conflict researchers continue to frame armed violence as the modal response to environmental degradation and scarcity. This framing erases the alternative ways that individuals, groups, and governments respond to climate change. In addition, by continuing to frame their analyses as climate conflict research, while moving further away from climatological variables and shifting to sub-national levels of analysis, scholars inadvertently transfer blame for climate conflicts from developed countries consumption patterns to less developed countries' environmental scarcities. Together, these two dynamics create an image of climate conflicts as highly localized, almost deterministic events, occurring primarily in less developed countries. This portrayal is particularly influential because of inconsistencies in popular reporting on climate conflict research. Positive results garner headlines, while critiques and negative findings do not.

Climate conflict researchers' tendency to focus on violent contention is understandable, given the field's inheritances from civil war and environmental security studies. Conflict is also normatively important. Since violent contention can induce great human suffering, it is unsurprising that researchers want to understand its causes and dynamics, in order to enhance prevention efforts. The ubiquity of the belief that climate change induces contention also encourages research; scholars have a professional interest in evaluating popular hypotheses.

Moreover, conflict is clearly a political issue and thus an obvious fit with the disciplines of political science and international relations.

However, violence is only one possible social response to climate change. Individuals and groups employ a variety of coping strategies and adaptive measures to respond to shifting climatological conditions. They can collaborate to manage scarce resources, seek alternative employment, temporarily or permanently migrate, collect remittances or aid, change crops, obtain credit, consume savings or food stocks, create community networks and cooperatives, sell livestock, or forage (Ostrom 1990; Raleigh and Jordan 2008; Ellis 1998; Morrissey 2013). These alternative activities are likely to be more common responses to climate change than conflict. Violence is costly and dangerous. It is difficult to organize and retaliation can be severe. Consequently, people are likely to avoid violence, especially when alternative coping and adaptive strategies are sufficient to sustain their lives and livelihoods.

Climate conflict scholars recognize that armed conflicts are rare events, while environmental changes, degradation, and scarcities are widespread. Much of their research has also found few connections between climate change and conflict. Yet, by continuing to frame their analyses around conflict, researchers sustain the impression that violence is the only active response to climatological shifts. In climate conflict models, people can either engage in conflict or do nothing; other actions are unspecified. The use of intervening variables makes the pathways from climatological shifts to conflict appear more conditional; these models demonstrate that violence is not an automatic response to climate change, under all circumstances. However, as the models' only possible outcomes are still "conflict" or "no conflict," these adjustments do little to challenge the perception that violence is a common response to environmental change. Moreover, the models still imply that violence can occur,

fairly deterministically, under some circumstances: in particular, when populations are poor or ethnically marginalized, or when political institutions are weak.

Only a few quantitative studies have included alternative responses to changing environmental conditions in their statistical models and none of these examined climate change, per se. Böhmelt et al. (2012) assess whether freshwater scarcity inspires conflict or cooperation. Slettebak (2012) suggests that climate change-induced natural disasters might lead to cooperation. However, like most climate conflict studies, his model only evaluates the occurrence of conflict.

As a result, a wide range of human responses to climate change are overlooked (Javeline 2014). The omitted activities are also those that cast populations in a more positive light. Behavioral adjustments require ingenuity and determination. By employing non-violent responses to climate change, individuals demonstrate their willingness to modify their activities and lifestyles in ways that do not violate established social codes. Many coping strategies and adaptive activities reveal peoples' capacity for cooperation and altruism, rather than contention and self-interest. These positive qualities are erased when scholars exclude such actions from their analyses. Instead, people's responses to climate change seem quasi-animalistic; in response to scarcity, they fight (Barnett 2000) or they appear to do nothing. This depiction is particularly problematic because much climate conflict research focuses on less developed countries: in particular, states in sub-Saharan Africa. By focusing on conflict and eliminating the possibility of active, non-violent responses to climate change, climate conflict studies risk perpetuating images of savagery or passive victimhood in the face of environmental shifts. To minimize these stereotypical portrayals, researchers should reframe their analyses to examine a wider range of social responses to climate change.

The significance of this reframing extends beyond academia. The topic of climate conflicts has attracted widespread interest amongst policymakers and the general public. As a result, climate conflict research receives significant journalistic coverage. However, reporters tend to favor positive findings and those that reproduce conventional environmental conflict frames: in particular, the "resource war" narrative, which suggests that environmental degradation and scarcity lead directly to inter-group violence. As a result of this bias, studies that identify strong climate conflict connections attract widespread media coverage. Most recently, a "meta-analysis" of quantitative climate conflict research by Hsiang et al. (2013) caught the attention of the popular press. By combining over fifty climate conflict models, the study found that climate change had a positive impact on many different types of contention. However, to reach this conclusion, the study violated a number of standard disciplinary methodological practices (Buhaug et al. 2014). In addition, it presented an exceptionally deterministic view of climate conflict connections by failing to include control variables (Raleigh et al. 2014). Nonetheless, the findings were widely reported, reinforcing popular perceptions that climate change is a direct cause of conflict.

It is unlikely that critiques or negative findings will receive similar coverage. An earlier analysis by Burke et al. (2009) that identified a positive connection between climate change and civil wars received similar media attention, in spite of its significant methodological flaws. However, subsequent critical analyses, which strongly challenged the findings, did not (Buhaug 2010). These inconsistent reporting practices perpetuate problematic assumptions about the prevailing social consequences of climate change, particularly in less developed countries. They also create an image of consensus in the popular media that does not exist in academic debates.

There are significant obstacles to incorporating alternative social responses into quantitative analyses. The largest are data-related; we do not have good measures of these alternate behaviors (Oppenheimer 2013). Non-violent responses to climate change are likely to be highly context specific and therefore not amenable to global data collection efforts. They are also hard to identify, as they are less prominent than violent conflicts and garner far less journalistic attention. As a result, data on alternative responses to climate change would probably have to be gathered locally, through methods like interviews and household surveys. These approaches represent a significant deviation from current disciplinary practices. Such activities are also less overtly political than violent contention, which could discourage international relations and political science researchers. Nonetheless, there is potentially scope for interdisciplinary collaboration between conflict scholars and anthropologists or development specialists.

If quantitative conflict researchers are not capable of or interested in shifting the scope of their analyses to incorporate a broader range of social responses to climate change, they should consider dropping the topic of climate conflicts altogether. As was noted above, researchers' efforts to more accurately analyze the causes of conflict are leading their models further and further away from climate change. Almost no scholars test the impact of purely climatological phenomena on the likelihood of conflict. And some have eliminated hydrometeorological disaster and precipitation and temperature data from their analyses entirely, focusing instead on later variables in the causal chain, such as freshwater availability, agricultural yield, food prices, and urbanization (Arezki and Brückner 2011; Gizelis and Wooden 2010; Böhmelt et al. 2012; Wischnath and Buhaug 2014; Zhang et al. 2007; Urdal 2008; Buhaug and Urdal 2013). Few of the latter set of studies are specifically climate conflict analyses. Yet, most still refer to climate

change as a likely cause of the environmental or social shifts they are studying. This presentation implies that the contentious episodes they analyze are, to some degree, climate conflicts.

The danger of maintaining this linkage, while removing climatological variables and conducting geographically disaggregated analyses, is that awareness of the broader causes of climate conflicts will diminish. Climate change is not a purely local phenomenon. It is caused primarily by overconsumption of energy resources in developed states. Thus, if climate conflicts occur, responsibility rests, to a large extent, outside of the countries experiencing contention. When climate change figures prominently in empirical models, this fact is harder to forget. However, when studies are one or more steps removed from climate change and rely exclusively on geographically disaggregated data, the causes of conflict appear to be purely local: local environmental scarcities, local inter-group hostilities, and local institutional weaknesses. These modeling practices, while enhancing our understanding of conflict, erase broader culpability. This distancing is amplified by climate conflict researchers' focus on less developed states (Mayer 2012). By obscuring the connections between consumption patterns in more developed countries and conflict in less developed countries, these analyses create the impression that climate conflicts are "their" fault. "We" are not held accountable.

Methodologically, however, it is difficult for analysts to include climate variables in their models and conduct convincing tests of specific hypotheses about the causes of intra-state contention. Researchers face a tradeoff: better understandings of conflict or continuing to highlight climate change. This chapter advocates a full break between the two fields. Scholars should conduct conflict studies or they should analyze the social effects of and responses to climate change. This shift would enable conflict researchers to sustain recent methodological improvements, without erasing broader responsibilities for climate change.

This proposal is likely to prompt resistance, both from scholars who are still committed to evaluating the empirical relationships between climate change and conflict and from climate change mitigation advocates, who view climate conflicts as a useful rhetorical device. These advocates use the risk of climate conflicts to highlight the intensity of climate change-related suffering in less developed countries and to engender a sense of threat in developed countries. To accomplish the former, they suggest that climate change has caused or intensified violent intra-state contention in areas such as Darfur, Nigeria, and Syria. For the latter, they connect climate conflicts to population displacements, instability, and terrorism that might threaten developed countries. These strategies garner headlines, yet their efficacy in inspiring climate change mitigation efforts is unclear. Advocates have been linking climate change to armed conflict for at least a decade, yet international political action on climate change during that period has been limited.

There are also alternative, less normatively problematic and more politically effective rhetorical strategies that advocates can deploy in order to inspire climate change action: in particular, emphasizing climate change's broader negative consequences. Conflict is not the only possible negative impact of climate change. Hydrometeorological disasters destroy homes and businesses. Shifting weather patterns undermine livelihoods. Efforts to cope with these events strain national budgets. These consequences impact more and less developed countries. By speaking to widely held concerns (Sarewitz and Pielke 2000), this framing creates a sense of commonality and empathy, rather than reinforcing "us versus them" divides. In addition, these threats are more immediate and tangible to the populations of more developed countries than the supposed dangers of climate conflicts, so they are more likely to inspire political action. Hence,

moving the focus away from climate conflicts should not harm climate change mitigation efforts. Meanwhile, there is much to gain from the shift.

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