



The Climate Conflict Trap: Examining the Impact of Climate Change on Violent Conflict in Sub-Saharan Africa

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ABSTRACT - As recently as 2019, international security officials reported that international state sponsors of terrorism, such as ISIL, were moving into sub-Saharan Africa. The causal links between climate change and conflict, especially in an understudied and misunderstood region such as sub-Saharan Africa, are often complicated and ill-defined. In reality, climate change does not unilaterally or unconditionally strengthen terrorist organizations and, by extension, civil conflict. The circumstances of climate change impact the trajectory of violent non-state armed groups in sub-Saharan Africa through three primary mechanisms that intersect and interact with one another: natural resource instability, colonialism, and the intensity of intra-state tensions throughout a particular region. Through these three primary lenses, it is evident that, in sub-Saharan Africa, the effects of climate change exacerbate conditions that, in turn, provide a unique, fertile environment for violent non-state armed groups to develop and thrive.

In the early 2000s, fighting broke out in the Sudanese province of Darfur in what would become, as one scholar called it, “the first modern climate-change conflict.” (Mazo 2010, 74) In June 2007, UN Secretary-General Ban Ki-moon declared that human-induced climate change, defined as a long term change in Earth’s average weather patterns, was a key factor in the Darfur conflict and genocide (Nasa 2021). This declaration garnered intense backlash and controversy; to a certain extent, this reaction is understandable. The causal links between climate change and conflict, especially in an under-studied and misunderstood region such as sub-Saharan Africa (SSA), are often complicated and ill-defined (Nunn 2008). Yet, the situation in Darfur is only one manifestation of the complex nexus between climate change and violent conflict. Currently, three out of four of the deadliest terrorist organizations (ISIL, Boko Haram, al-Qaeda) are active in Africa. More generally, non-state armed groups (NSAG) pose a serious, ongoing threat to peace and stability in sub-Saharan Africa (Madeira 2019).

The presence of exploitative NSAGs in SSA is linked to the profound ramifications of climate change for the region (Shepard 2018). The Intergovernmental Panel on Climate Change predicts that temperature increases in the region will likely be greater than the global average (Shepard 2018). As a result of this trend, the region will likely experience increasingly arid conditions, declining levels of rainfall and increasing numbers of weather shocks among other perverse effects. Already high rates of undernutrition, dependence on rainfed agricultural systems, and pre-existing political fragility are just some of SSA’s distinct characteristics that will directly influence the region’s disproportionate experience of climate change (Serdeczny et al. 2017). Additionally, as a formerly colonized region, SSA is especially prone to intrastate conflict along social and cultural lines that may be exacerbated by climate change (Henderson 2008).

Due to academia’s neglect of African political dynamics and the international community’s failure to study and address climate change comprehensively, it is worth attempting

to unpack the question of how climate change impacts violent conflict in sub-Saharan Africa.

Climate change does not unilaterally or unconditionally lead to the strengthening of terrorist organizations and, with it, civil conflict. The circumstances of climate change impact the trajectory of NSAG in sub-Saharan Africa through three primary ways that intersect and interact with one another: natural resource instability, legacies of colonialism, and the intensity of intrastate tensions throughout a particular region. It is quite difficult to demonstrate a direct causal link between climate change and violent conflict. However, through three primary lenses, it is evident that in SSA the effects of climate change exacerbate conditions that, in turn, provide a unique, fertile environment for non-state armed groups to develop.

Natural Resource Insecurity

One of the most obvious impacts of climate change has been its effect on natural resource instability. In recent years, the region has experienced a rise in average temperatures, increased frequency and intensity of extreme weather, and a negative change in the amount of rainfall (Kotir 2011). As a result of these changes, areas suitable for agriculture, the length of growing seasons, and the agricultural yield potential are all expected to decrease. Consequently, those who live in SSA will be at risk of food insecurity and hunger due to decreases in food availability, accessibility, and stability.

Food insecurity itself benefits non-state armed groups in several ways. As food becomes more scarce and the price of food increases, there is a greater risk of protest and rioting among the general population (Hendrix and Brinkman 2011). The reason for this pattern is typically twofold. First, food scarcity and increased food prices increase the likelihood of high social and economic grievances, which may in some cases escalate to subversion of the state through armed rebellion. For example, during the last decade the Islamic State West Africa (ISWA) has preyed upon food insecurity by digging wells, giving out seeds, and even offering protection to herders seeking grazing

lands in an effort to secure a position of power in the region (Madeira 2019). The ISWA, in turn, has been able to leverage their newfound position in a time of food insecurity to gain recruits—a strategy that other non-state armed groups may choose to emulate. Second, the opportunity cost of participation in violent conflict is altered in a context of food insecurity. When food and, as a result, income, is scarce, the formerly high cost of participation in violent conflict decreases, while the benefits increase (Hendrix and Brinkman 2011). Additionally, as jobs in the agricultural sector dwindle as fertile land decreases and weather shocks cause crops to fail, young men from rural areas with limited education and economic prospects, who are disproportionately likely to work in the agricultural sector, have become the people most likely to participate in violent conflict.

It is important to note that natural resource insecurity often acts as both a cause and consequence of violent conflict. Just as scarcity and abundance are potential catalysts for conflict, the resulting destruction and division may lead to more resource insecurity.

For example, competition over resources in areas surrounding Lake Chad has driven violent conflict in the region and, in turn, perpetuated what experts refer to as a ‘conflict trap.’ In recent years, the area has become a stronghold for the Islamic State in West Africa (ISWA), Boko Haram, and Al-Shabaab (a Somali-based affiliate organization of the terrorist organization al-Qaeda), all perpetrators of insurgency against central authorities and terrorism against civilian populations (Stanford University 2019; Schaar 2018). Intensified fighting among terrorist groups and other non-state armed groups related to tensions over natural resources has made it more difficult to deal with the effects of climate change, further perpetuating a ‘conflict trap’ (Madeira 2019). A ‘conflict trap’ intensifies already clustered causes of conflict, such as poverty and poor governance, because existing conflict increases the likelihood of continuation, recurrence, escalation, and diffusion of conflict in the future (Hegre, Nygård, and Ræder 2017). In this way, the ‘conflict trap’ may function in practice

as a conflict snowball, as the containment or continuation of conflict will prevent or perpetuate an exponential growth in conflict over a period of many years (Hegre, Nygård, and Ræder 2017). Consequently, a region entangled in a ‘conflict trap’ will see economic, social, and political resources dedicated and re-dedicated to the perpetuation of conflict rather than climate change relief. The case of Lake Chad demonstrates the way in which climate change exacerbates existing conditions of the local agricultural sector. Lake Chad, located on the border between Chad, Cameroon, and Nigeria, is one of Africa’s largest freshwater bodies and has become a key example of the potential impact that climate change has on non-state armed actors in SSA. In the second half of the twentieth century, the lake has shrunk by approximately 90 percent due to severe droughts. Recent patterns of irregular rains and temperatures have led to food shortages and frustration amongst the forty million people living in the basin who rely on the lake for crop and livestock farming, trade, and fishing (Peyton 2019). This has caused competition over resources, a key contributing factor to the current conflict in the region. Several non-state armed actors capitalized on the aggravation of existing local tensions in the area, yielding high recruitment rates and finding support for their violent efforts.

Natural Resource Abundance

While scarcity remains a significant link between climate change and conflict, recent scholarship has highlighted that resource abundance is also likely to be a key variable in environmental conflict (Selby and Hoffmann 2014). More specifically, existing literature has documented the ‘resource curse’ of abundance; many scholars have demonstrated the high prevalence of oil and other non-renewable resources in sub-Saharan conflicts in particular (Collier and Hoeffler 2005). The ‘resource curse’ asserts that local abundance can lead to conflict by creating incentives for groups to clash, changing state-society relations, and potentially weakening state systems (Selby and Hoffmann 2014).

For example, in Sudan and South Sudan,

there are clear links between relative water abundance and violent conflict. In this case, violent conflict is fought over control of extremely valuable sources of water, for the purpose of agricultural and profitable socio-economic development (Selby and Hoffmann 2014). Since the 1980s, near continuous violence has ravaged Sudan's semi-periphery, an area known for its access to rain-fed agricultural land. One population in this region, the Nuba population of the Nuba mountains, have long been targeted on ethno-cultural grounds and, notably, with the intention of capturing agricultural ground for lucrative cotton production. In the 1990s, at the height of this assault, an estimated 20–30,000 Nuba were deported to resettlement camps and forced to be the labour force in large-scale mechanized farming schemes (Selby and Hoffmann 2014). In Sudan and South Sudan, although there is an abundance of water in particular areas, conflict can emerge from asymmetric access to water between groups. As a result, ethnically based conflict such as attacks against the Nuba population has emerged. The cases of Lake Chad and the Nuba population demonstrate that both food scarcity and abundance, under certain conditions, can be catalysts of conflict. In fact, it is often the way in which NSAGs capitalize on the situations of either abundance or scarcity that determine their conflict potential. While this essay does not seek to prove a causal link between climate change and increased violent conflict, the evidence demonstrates a correlation between climate change and a fruitful environment for the growth and development of non-state actors in violent conflicts.

Colonial Legacies

It is impossible to study conflict in SSA without considering the impact of colonialism and neo-colonialism on the region. The issue of climate change and non-state armed groups is no different; the impacts of climate change in SSA exist within the legacies of colonialism. Due to a legacy of extractive, profit-driven colonial institutions, climate change is likely to have a disproportionately negative effect on working populations in SSA.

As previously mentioned, the 'conflict

trap' predicts that regions experiencing conflict are likely to continue to experience conflict because its ramifications, such as underdevelopment and instability, are likely to be causes of conflict as well. Importantly, conflict in SSA is not only the product of twenty-first century violence. International slave trade and colonialism that began centuries ago continue to impact the trajectory and characterize the nature of conflict in SSA today (Nunn 2008). For example, the drawing of arbitrary state borders on the African continent at the 1884 Berlin Conference by colonial powers continues to have a significant impact on the ways in which SSA populations experience climate change (Henderson 2008). One result of artificial colonial borders is that African international politics are largely characterized by quasi-statehood. As a result of the inherent instability of quasi-statehood, neopatrimonialism has become the norm. Neopatrimonialism is a personalist political system characterized by relationships of loyalty and dependence in which political positions are occupied for the purpose of personal wealth acquisition rather than public service (Henderson 2008). Neopatrimonial regimes invest in repressive state mechanisms and patronage networks, stifling development and consequently making populations more vulnerable to the impacts of climate change. More generally, the effect of colonial legacies often negatively manifest in the modern economic stability of post-colonial states. A 2011 report by the United Nations found that the countries at the most risk of violent conflict are those in which low levels of development, deteriorating economic conditions, or high inequalities among groups are present (Hendrix and Brinkman 2011). Quasi-statehood, neopatrimonialism and stunted economic development are all common symptoms of former colonial states in SSA, thus demonstrating a predisposition to violent conflict in the region.

The Democratic Republic of the Congo (DRC) has also become a quintessential example of brutal effects of colonization and neo-colonialism. Before it was first colonized by Belgium's King Leopold in 1885, the Kingdom of Kongo had been systematically dismantled and exploited in the sixteenth century during the African Slave Trade, setting in motion a long-standing trend

of economic underdevelopment and abuse of power (Nunn 2008). Colonization was built on the exploitative and cruel foundations of the slave trade; mining companies located in the DRC possessed the power of a state and the ruling class was cultivated to benefit Western interests while local infrastructure growth was severely stunted. Unlike the colonial projects in present-day New Zealand, Canada, United States, and Australia, colonization in the DRC was intensely focused on extractivist infrastructure and profitability as opposed to stable rule of law and investment. This goal was not benign; the Belgian colonial powers structured the state so that resources could be speedily transported out of the fertile agricultural land and towards the metropole. This structure has proven to be detrimental to investment and economic progress even long after independence, as Belgium has continued to wield significant power over the DRC government in an effort to serve its own interests. As such, unstable political foundations and extractivist economic structures are just two of the colonial and neo-colonial legacies in the DRC that explain why the DRC has become a fertile ground for NSAGs to thrive.

Now, climate change is expected to increase current vulnerabilities within the DRC largely as a result of the state's weak socio-economic conditions. In terms of solely environmental factors, the DRC's vulnerability to climate change is low. However, its general vulnerability to negative impacts of climate change is high as a result of "household and community vulnerability" (Reliefweb 2019). This type of vulnerability is amplified by conflict itself and can be caused by increased poverty, immobility, and eroding social networks. This demonstrates that SSA's colonial legacies, such as economic underdevelopment and poverty, wield significant influence over the degree of damage that climate change will inflict on a population. As the effects of climate change are expected to worsen under the burden of weak socio-economic conditions and the legacy of colonialism, the world should expect NSAGs to perpetuate the pattern of exploitation in the DRC just as has already been perpetuated in Sudan and South Sudan.

In SSA, where climate change has proven to worsen economic conditions and vice versa, participation in civil war, rebellion, and violent conflict at large has been uniquely primed. Participation in intra-state conflict, specifically among non-state armed groups, is best explained by a given population's grievances and incentives (Hendrix and Brinkman 2011). Grievances and motivations for participation are based on an individual's economic and opportunistic considerations. Those most likely to participate in violent conflict are those who are experiencing hunger or another cause of significant grievance and are faced with availability of valuable commodities, no matter the source. Increased natural resource insecurity, combined with economic and political vulnerabilities enforced by colonial legacies, pave the way for non-state armed groups to more fruitfully prey on SSA populations for recruitment, support, and development.

Intensity of Intrastate Tensions

Interstate war in SSA has proven to be much less frequent than in the West as artificial borders have forced heterogeneous groups into the confines of a single contrived state. Henderson (2008) posits that the fragmented framework of African states has led to greater intrastate wars and low levels of interstate war in his political inversion thesis. This fragmented framework is a result of the borders drawn from the 1884 Berlin Conference and longstanding colonial infrastructure; consequently, conflict within states was made more likely because historical cleavages were not reflected in colonial borders. As such, African leaders face an alternate, more inward-focused elite security dilemma compared to their Western counterparts. Climate change impacts these increased intrastate tensions because, as usable land diminishes, competition between intrastate populations grows more violent (Madeira 2019). This, in turn, impacts the trajectory of non-state armed organizations because it provides an opportunity to recruit potential members and exploit growing anger among local populations.

The effects of climate change have already

benefited terrorist groups in the Sahel region of Africa. The Sahel region is located South of the Sahara desert and North of the arid Sudanian savannas. Two key populations in the Western and Central parts of the Sahel region, the sedentary farmers of the region and the Fulani ethnic group, a majority Muslim group of herders, have generally settled tensions peacefully in the past. However, as usable land has diminished as a result of climate change, competition between the farmers and herders has grown more violent. A more recent decrease in usable land as a result of climate change only adds to the interrelated set of economic challenges and pressures for land, employment, and resources that have plagued the Sahel for many years. The nations of the Sahel, such as Niger, Chad, and Mali, have long been ranked at the very bottom of the United Nations Human Development Index (HDI). Moreover, although Nigeria, which is home to the majority of the Fulani people, has used oil production to garner significant national wealth, the country continues to remain in the HDI's 'Low Human Development Category.'

Nigeria's colonial background partially explains this disconnect between resource-driven wealth and the livelihoods of everyday Nigerian people. Extraction-based infrastructure and the neopatrimonial status quo have created a power vacuum which NSAGs gladly fill. After all, the areas in which violent extremist groups have taken root are the most disenfranchised and disadvantaged in the region. Using ethnic and religious narratives, the Front de Libération du Macina (FLM), a lesser known organization based in Mali with similar goals to the al-Qaeda branch in the Islamic Maghreb, has preyed on these ethnic divisions in Nigeria in order to recruit members of the Fulani (Madeira 2019). This conflict not only demonstrates the impact of exacerbated intra-state tensions on non-state armed groups, such as the FLM, it also illustrates the intertwined nature of the lenses examined in this essay. The ethnic tensions that have benefited the FLM are inextricably tied to the natural resource insecurity issues posed by climate change in the context of colonial legacy.

At the risk of perpetuating Eurocentric

ideals of state building, it is important to note that the Nigerian example must not be interpreted in support of the erasure of ethnic identity (Herbst 1990). Instead, this example demonstrates the impact of divisive colonial legacies and lasting intrastate divisions in the trajectory of non-state armed groups. After all, without colonial legacies that ultimately feed intrastate ethnic tensions, non-state armed groups would not have the opportunity to prey on intrastate divisions under the additional stress of climate change. Thus, through analysis of natural resource instability, legacies of colonialism, and the intensity of intrastate tensions throughout SSA, it is clear that the impacts of climate change have intensified colonially produced ethnic tensions. It is extremely complicated and difficult to demonstrate a direct link between climate change and violent conflict. However, through these three primary lenses, it is evident that in SSA the effects of climate change exacerbate conditions that provide a fertile environment for non-state armed groups.

Conclusion

Through analysis of the relationship between natural resource instability, legacies of colonialism, and the intensity of intrastate tensions respectively, it is evident that in SSA the effects of climate change exacerbate conditions that, in turn, provide a uniquely fruitful environment for non-state armed groups to develop. These three relationships are inextricably linked and do not develop separately from one another. This essay has utilized three primary lenses—natural resource insecurity, colonial legacy, and intensity of intrastate tensions—in order to analyze the ways in which climate change impacts the trajectory of non-state armed actors in SSA. It is important to note that there are countless other lenses through which to examine this issue; these three lenses were chosen as a result of their prominence in existing literature and their broadly applicable nature in analysis. Those researching this topic in the future should consider other, less examined lenses and challenge the analyses of commonly considered perspectives.

Even as terrorist organizations such as ISIL appear to be weakening in the Middle East, as

recently as 2019, Western security officials reported that international state sponsors of terrorism were moving into sub-Saharan Africa. This shift indicates that the issues of climate change, non-state armed actors, and violent conflict, as examined in this essay, will likely continue to rapidly develop in the region in the coming years. In the case of an issue as urgent and tangible as climate change, it is important to be cautious of leaning too far towards one side or another of the analytical spectrum. It is dangerous to diminish the significant role that climate change plays in conflict. Climate change concerns should be addressed as present-day concerns, not afterthoughts of government or political action. Conversely, erring on the side of overemphasizing the significance of climate change in non-state armed groups and African conflict can also be significantly damaging (Peyton 2019). It poses the risk of detracting from the responsibility, accountability, and complicity of the army and state in the trajectory of, and violence inflicted by, non-state armed groups. Nevertheless, perhaps more than ever before, it is imperative to the integrity of conflict analysis to treat climate change as an integral factor in understanding the nuanced and complex nature of intrastate SSA conflicts.

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