

Climate of Conflict:

Can Climate Change Cause Violent Ethnic Conflict?

Emely Vanegas

California State Polytechnic University, Pomona

In the 1990s, Thomas Homer-Dixon first posed the question on the relationship between climate change and violent conflict outbreak. While he was the first person to propose the idea, it was not until former Secretary General Ban Ki-Moon wrote a piece about the atrocities in Darfur, Sudan, that a greater emphasis was put on the topic. Since then, the debate on the nature of the relationship has yet to yield any conclusive results. The purpose of this study is to examine the claim that climate change does play a factor in the outbreak of violent ethnic conflict. The goal will be to determine the relationship between climate change and violent ethnic conflict outbreak in Darfur, Sudan, and Northern Nigeria. Both regions have seen a spike of drought and violent ethnic conflict in recent years, and this study will work to understand the relationship of both variables in the region. Through the Most Similar Systems of case study methodology, this study will aim to fill in the gap of previous scholarship and establish a clear understanding on the relationship between climate change and ethnic conflict.

During the latter half of the 1990s, a Canadian political scientist by the name of Thomas Homer-Dixon posited his theory about the connection between environmental stressors and violent conflict outbreak. He argued that there is a link between the outbreak of violent conflict in vulnerable regions and the growing environmental stress caused by climate change. This led to a discussion on the effect that climate change could possibly have on violent conflict, resulting in many scholars disagreeing with Homer-Dixon's theory. In the end, not much came from his proposal and the world moved forward, especially considering the

lack of concern over how climate change could affect the globe in the coming years. In 2007, this changed when former Secretary-General Ban Ki-Moon claimed that the atrocities that were occurring in Darfur, Sudan, were due to climate change.

The fighting that was occurring in the region of Darfur was understood to be part of a larger ethnic conflict exacerbated by the Sudanese government; but Ban was proposing a different take. This once again opened the discussion on the idea of there being a relationship between climate change and violent conflict outbreak. On the surface, the conflict in Darfur revolved around ethnic tensions

Created by Emely Vanegas, Department of Political Science, California State Polytechnic University, Pomona. Correspondance concerning this research paper should be addressed to Emely Vanegas, Department of Political Science, California State Polytechnic University, Pomona. Email: eavanegas@cpp.edu

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between the Arab population and the non-Arab population of the region. While that is something many assumed to be the crux of the problem, there was an ongoing debate as to whether the war in Darfur stemmed from an even more complex problem. This discussion also extended to other regions in the world, where ethnic conflict is a problem for the populations of vulnerable regions. The increase in climate-related disasters and their consequences has led multiple groups to look at the relationship between climate change and violent ethnic conflict.

In 2010, the US Joint Forces Command, a former Department of Defense subsidiary, released a report titled Joint Operating Environment (JOE) which detailed the growing concern of “natural disasters” colliding with civil unrest (UNODC, 2020). Following the JOE report in 2014, a committee of retired Pentagon leaders filed their own report on the dangers that climate change is posing across the globe. In their report, they named climate change as a catalyst for conflict with a special focus on vulnerable regions (“Four-Star Warning: Generals Dub Climate Change a Security Risk”, 2014). They also stressed the importance of acting soon, as the problem was only expected to grow without a definitive plan to tackle climate change globally. Those reports strengthened the claims made by Ban Ki-Moon in his 2007 article and prompted more scholars to take a closer look at the effects that climate change was potentially having on violent conflict outbreaks.

With this basis, this paper examines the nature of the relationship between climate change and violent ethnic conflict outbreak. In the last few decades, there has been considerable increase in climate change research that takes into consideration what could happen once the world reaches a critical turning point. The emerging research and articles that discuss the unforeseen effects that climate change has produced, from climate refugees to increase in diseases like asthma due to poor air conditions, has shown that it is imperative to understand how climate change is tied to other aspects of life. This idea has been applied to vulnerable regions across the globe where limited resources and diverse ethnic groups living in close proximity to each other can be affected much more differently

and violently by climate change.

There are multiple examples of countries that are constantly falling prey to the growing problem of climate change. From countries in Africa to the United States, climate change has become a problem for every nation. The difference lies in how it affects different countries, with each having different conditions from one another. Africa, a continent with multiple landlocked countries and dry weather, is a perfect example of a region that has become susceptible to the negative effects of climate change. The main concern when it comes to these negative effects is the outbreak of violent ethnic conflict.

As previously stated, signs of this negative relationship could be seen in Darfur, Sudan, a country that has struggled for years over violent ethnic division. Years of rising temperatures, decreased rainfall, and added growing tension between Arab and non-Arab populations could possibly have been the perfect catalyst for the atrocities that were committed there. While taking into account the other factors that played a role in the conflict, the focus on how climate change negatively impacted this vulnerable region is one of the key aspects of this research. This paper will look at how years of growing tension between the farmers and nomadic herders of Darfur was possibly pushed to the breaking point in 2003, when the fighting first broke out, to the ongoing conflict of today. Ethnic conflict is the main concern for the fighting in Darfur, but as the former Secretary-General claimed, it is possible that it all started because of the effects that climate change had in the years leading up to the conflict in the region (Ban, 2007). Although it is easy to dismiss all these variables happening at the same time as a coincidence, there have been other countries that exhibit the same sort of characteristics as what occurred in Darfur.

Northern Nigeria is a vast region within Nigeria, the most populated country in Africa. Much like Darfur, there seems to be a growing connection between climate change and the violent ethnic conflict that plagues the region. With the insurgence of the jihadist group known as Boko Haram, scholars have not analyzed how climate change has exacerbated the conflict that occurs within their area of control. Despite the fact that Nigeria has

a coastline, they are still troubled by the increasing temperatures and lack of rainfall in the north. Northern Nigeria is another prime location to understand how climate change and ethnic conflict outbreak may be tied together. Understanding the relationship between climate change and violent ethnic conflict outbreak to see if climate change is the main perpetrator in the cause of these conflicts is the aim of this study.

Thomas Homer-Dixon brought a new perspective into this field of study and sparked an abundance of discussion for research to be conducted, but ultimately, it was not given much attention. Later in 2007, Former UN Secretary General Ban Ki-moon wrote an article discussing the crisis in the Darfur region of Sudan and how it could have been caused by worsening climate conditions in the region. Once again, this revived a look into what Homer-Dixon alluded to in the 90s: the link between climate change and violent conflict. Since then, a wide variety of research has been conducted to test this hypothesis, and each with their own interesting results.

Literature Review

Undoubtedly climate change poses a great threat to humanity; but the question remains if it is the cause of instability within impoverished countries that could lead to violence. The growing support for the argument that climate change is fundamentally changing the traditional idea of national security is often the center point of these discussions and has been met with multiple world leaders attempting to mitigate the effects of climate change. This coupled with the writings of Homer-Dixon and Ban shows there is a need for research into the threat climate change can pose when it comes to violent conflict outbreaks. The scholarship produced to understand this link, like previously mentioned, has provided multiple perspectives and the need to analyze where it currently stands.

“Threat Multiplier”

There is a growing consensus that climate change is becoming a “threat multiplier.” (Baysal & Karakas 2017; Causevic 2017; Gleditsch & Nordas 2010; Theisen et al., 2011). A threat multiplier is commonly understood in the national security

community as something that could exacerbate common threats to security. Causevic (2017) discusses how well equipped organizations like the North Atlantic Treaty Organization (NATO) are at handling non-traditional threat multipliers. He claims that climate change is starting to pose a threat to the stability of countries, and that it has a particularly adverse effect on more vulnerable ones. Climate change is not something that is relegated to the environment, as it has the ability to affect economic policies, public health, infrastructure, and international security. These are concerns that NATO must take into account when planning for the future, as climate change has already had a negative impact on food security, weather patterns, access to fresh water, and mass migration.

While Causevic views climate change as a “non-traditional” threat multiplier, Baysal and Karakas (2017), argue that the only way to understand the instability that climate change can bring to vulnerable nations is to look at it through the traditional sense of the threat multiplier concept. They mention that climate change is already affecting the quality of human life in certain regions of the world, mostly countries in the Global South, and that it comes in the form of food insecurity. They argue that this is a cause for instability of countries that are already prone to violent conflicts, which is in the realm of a traditional threat to security interests. Furthermore, climate change is becoming a leading issue across the globe and has prompted an abundance of research to be conducted to look into the link between it and violent conflict. They show that there are proponents and opponents for this argument, but this is something that will be touched upon later. The idea that climate change is not a direct threat itself, but that it can worsen other factors that are directly linked to conflict is a growing concern.

This is a sentiment that is echoed in the work by Gleditsch and Nordas (2010) and Theisen et al. (2011), in which they discuss how climate change will produce a major hazard to peace and security in the coming years. Both articles discuss that as climate change presents itself as a threat multiplier, it is creating food insecurity and volatile situations in vulnerable regions of the world. Gleditsch and Nordas focus primarily on the link between cli-

mate change and conflict and discuss how many have concluded that there is no doubt that climate change is a threat multiplier. For Theisen and company, they claim it is imperative to look at how droughts play an important role in exacerbating conflict. This is a sentiment that is common in other writings that look at climate change as a threat multiplier. With the rising temperatures, it has led to a decrease or disrupted precipitation patterns, which in turn has caused the rise in droughts across the globe.

Droughts/Water Scarcity

Droughts have been looked at as a theory to the rise in conflict in many poverty-stricken regions in the world. Like with Theisen et al (2011), many scholars have looked into the role that droughts could play in creating violent conflict in Global South countries (Barlow & Hoell 2015; Busby et al 2013; Detges 2016; Gleick 2014). In 2007, Ban Ki-moon pointed to droughts as an effect of climate change being the cause of the conflict in Darfur. He noted that it was no coincidence that violence broke out in Darfur in the middle of a devastating drought, and that climate change is going to pose a greater threat in the future.

Water scarcity being a cause of violence in unstable countries is similar to the findings presented in Gleick (2014), where the examination of Syria's conflict is analyzed in correlation to the water scarcity caused by droughts. While water scarcity isn't the sole determinant of why this conflict broke out, it has been shown that there has been a long history of water conflict in the Middle East North Africa (MENA) region which could have directly and indirectly affected the conflict. According to Gleick, since 2008 there has been a reported increase in droughts in the region as precipitation patterns have deviated from historical norms. This could be attributed to the rise of climate change and the effects it is having on the weather in the region. With the rising temperatures and the decline in precipitation, it puts more stress on the local rivers in the region which have become interwoven to the stability of Syria. Gleick concludes that climate change and water mismanagement have played a direct and indirect role in the increase of droughts

and violence in Syria. While this is one area that has shown a linkage between climate change and violence, oftentimes, the results have proven to be inconclusive.

Africa is a region that has experienced a growing number of droughts over the past decades, and as already seen with Darfur, has also been a prime spot of violent conflict. Busby et al. (2013) conclude that sub-Saharan Africa is a vulnerable region to the effects of climate induced violence. After multiple years of research and weather, they conclude that there is a significant pattern to show that countries in the region of sub-Saharan Africa are at a higher risk to be subjected to climate induced violence. They recognize that, oftentimes, the research in this subject has produced inconclusive results, but they have been able to draw up a map that shows vulnerable areas for climate induced violence. With the map, they hope that policymakers will accordingly formulate policies that can help protect these countries in the region of sub-Saharan Africa. While Africa has been analyzed for this sort of research, given its already major instability, other parts of the world have been examined to see if they are affected by climate change induced violence.

Inconclusiveness/Contradiction

The regions of the Middle East and Central-Southwest Asia have experienced major droughts during the winters of 2013/2014 (Barlow & Hoell 2015). With the occurrence of three weather phenomena, the goal was to see if there was a direct link between them and climate change. These are regions with high water scarcity and rely on annual precipitation to help provide clean water. During 2013/2014 there were weather anomalies detected, known as NOA, in the Central and Western Pacific Ocean that affected the amount of water received in the region. After much testing and analysis, it was concluded that the Western Pacific was the only one to have evidence of climate change playing a role in its abnormalities. Barlow and Hoell conclude that more testing and research would need to be conducted before dismissing the role climate change plays in droughts. While they don't focus on violent conflicts, they do agree that

droughts can lead to regional tensions. The lack of a concrete conclusion linking droughts to violent conflict, or tension, is a common theme for many of the scholarship written.

Detges (2016) looks at sub-Saharan Africa, a region known for poor access to water infrastructure and increasing droughts. Like in the Busby et al. (2013) article, there appears to be a link between climate change and the outbreak of violence in the countries of the region. Detges focuses on the transportation and infrastructure of water in the region, as it is used to mitigate the effects of droughts. The conclusion in this article, much like Barlow and Hoell (2015), shows that there isn't a direct connection to climate induced droughts causing conflict in the region. Instead, according to Detges, it is more accurate to say that the lack of a stable transportation infrastructure to move the water is the cause. The weak planning of the government is to be blamed, since they tend to be weak and don't plan to improve upon the infrastructure as it does not directly affect their regime. The only notable time that this was not the case, Detges points out, is in Darfur and suggests that, while there is no conclusive link between violent conflict and droughts, it would be a good idea to fix the problems stemmed from poor infrastructure.

The inconclusiveness of linking climate change and violent conflict is a source of major contention in the scholarship which has led some scholars to claim that there isn't enough evidence to say that there is currently a link. Slettebak (2012) goes over a fifty-year long dataset to examine if there is a link between climate change and violent conflict. Recognizing the effects that climate change can have on conflict prone societies, Slettebak theorizes that it can only increase the risk of these conflicts which double the burden for these societies to reach peace. Weak governments are more prone to civil conflict, according to Slettebak, than that of authoritarian governments because they lack the capacity to control the military and thus, coupled with environmental disasters, would only make the situation worse. He aimed to test if climate change did make these situations more dire in comparison to those who do not have the added effect of climate change.

Slettebak concludes that there is a relationship between climate change and violent conflict, but not in the way many would assume. The research finds that climate change-related disasters contribute to reducing the chances of violent conflict eruption. Although the relationship in Slettebak's research seems contradictory, he urges many to not disregard climate change as a real threat. He also muses that just because it seems there is currently no relationship that incites violence, that can change in the future.

This seemingly contradictory relationship between climate change and violent conflict is something that is further reinforced by research conducted by Theisen (2012). After examining Kenya between the years of 1989 to 2004, Theisen concluded that there is a seemingly contradictory relationship when it comes to climate change and violent conflict. His findings show that during the years that were relatively drier there was a more peaceful effect than years with higher precipitation. This is a finding that is similar to the one in the research conducted by Hendrix and Salehyan (2012). Using the Social Conflict in Africa Database (SCAD) and looking at the years between 1979 to 2008, they claim that rainfall does correlate with civil war and insurgency. The conclusion of their research showed that there was a relationship between precipitation pattern and conflict, in that the years with more rain are more likely to suffer from violence. Hendrix and Salehyan view this as a positive correlation between rainfall and the onset of violence, contradicting what many would assume the relationship to be. Both articles agree that despite the rather contradictory relationship between climate change and violent conflict, that there is a real danger growing and should not be dismissed.

Climate Change Danger

Even with the seeming contradictory evidence or the lack of conclusive evidence, many scholars call for climate change to be taken seriously as it could pose a threat with creating violent conflict in vulnerable areas (Sunga 2014; Hammill & Matthew 2010; Hall 2010). Sunga, motivated by the statement from Ban Ki-moon, states that climate

change should be taken very seriously and be subjected to the same criteria that is applied to other fields of science. This stems with the agreement from the United Nations Environmental Program (UNEP) that climate change did contribute to the problems in Darfur. Climate change is proving to be a risk factor for violent conflicts, which has prompted the need for an early warning system to prevent or mitigate the effects. Sunga urges others to take climate change seriously because it will change the landscape of conflicts.

Similarly, in Hammill and Matthew (2010), they discuss how to integrate climate change into peacebuilding policies which would be integral for the future of post-conflict societies. Since the inception of peacebuilding, it has evolved into understanding how environmental degradation has played a role in violent conflict. This means adapting the process to include climate change, with an example being Rwanda. Here the authors claim that peacebuilding efforts did not take into account the effects of climate change could have on stabilizing a nation, which they state was poorly positioned to manage the risk climate posed. If climate change is integrated into peacebuilding, then it can help to transform post-conflict societies into enduring and sustainable societies. In a response to Hammill and Matthew, Hall (2010), agrees that linking climate change to violent conflict is important to establish lasting post-conflict societies. She urges many scholars to look into the integration of climate change that has already made it into peacebuilding policies and the effects it has had.

Limitations

Some scholars argue that there are still limitations when understanding the link between violence and climate change (Raleigh 2010; Halden 2011). Once again, the lack of conclusive evidence linking climate change and violent conflict is brought up to show that there are limitations to this area of research. Raleigh states that many scholars looking into the link have failed to consider physical vulnerability as a contributing factor to these conflicts. It has been limited in the environmental security research because climate change is growing as a threat, but many scholars have failed

to consider other crucial aspects. Despite many scholars urging for officials to take climate change seriously, the lack of conclusive evidence hinders this process forward (Halden 2011). Currently, Environmental Security Studies (ESS) is facing a burden of having to predict a future issue that no other field in social science must. The lack of conclusive evidence is a major limitation for this research to move forward, with many doubting the existence of a link, but that does not mean that it cannot change in the future.

Finally, one of the major themes in the scholarship on the link between climate change and violent conflicts centers around the idea of resource scarcity (Bretthauer 2015; Butler & Gates 2012; Caruso et al 2016; Mahlakeng & Solomon 2015; Narwaria 2015; Raleigh & Kniveton 2012). In Butler and Gates (2012), they apply the idea that resource scarcity caused by climate change is the true way of understanding the link between climate change and violent conflict. Looking at the region of East Africa, the violence that has erupted from pastoral groups due to resource scarcity has been on the rise because of climate change. This is something that is similarly argued in Bretthauer (2015), where there is a connection between climate change and violent conflict but only if it is understood through the lens of resource scarcity. Resource scarcity is not limited to just pastoral lands, in Caruso et al (2016), the examination of Indonesia's outbreak of ethno-violence from 1993 to 2003 might have been caused by the decline of food availability. Increased temperatures in Indonesia during the peak growing season of rice, a staple crop for the country, gave rise to the scarcity that plagued the country.

This resource scarcity problem will also affect the regions who rely on a particular resource for their livelihood, as seen in the Mahlakeng and Solomon (2015) article. As these resources become more depleted and as populations rise, as seen on the Nile River, this could potentially become a source of conflict. They argue that by the year 2025, conditions may grow dire for the populations living along the river. This is echoed in Raleigh and Kniveton (2012), where they argue that extreme variability in climate can lead to resource scarcity thus causing an increase in conflict. Envi-

ronmental security is changing and with climate change having an adverse effect on resources in vulnerable areas, like South Asia, which could increase the likelihood of conflict (Narwaria 2015).

While some research has proven inconclusive or has shown a contradictory relationship, many of the scholars agree that the link between climate change and violent conflict should be further studied. The effects it could have in the future on vulnerable nations should not be dismissed, and like Ban Ki-moon alluded to, there will be dire consequences if nothing is done to understand this relationship or if nothing is done to fight against climate change. Each scholar has contributed their own unique perspective on how climate change and ethnic conflict is tied together, or if it even is, and understanding those perspectives is imperative to move forward with this study of the relationship.

Methodology

This paper looks to understand how climate change can play a role as the main factor in the outbreak of violent ethnic conflict in vulnerable regions. The methodology for the research within this paper is a strategy that is commonly utilized within the field. This paper will use a qualitative research method that focuses on two case studies to understand the relationship between climate change and violent ethnic conflict outbreak. The main focus of the research being the nature of the relationship between climate change and ethnic conflict, this paper aims to understand if climate change played a catalytic role in the outbreak of those conflicts. While there are many regions across the globe that are vulnerable to both climate change and ethnic division, that would require a much more exhaustive research that is beyond the parameters of this paper. As alluded to earlier, the focus of this paper will be on the regions of Darfur, Sudan and Northern Nigeria.

Specifically, the case study methodology employed will be the Most Similar Design method, where two cases will be picked out because of similar traits and conditions to see if the hypothesis is correct. The goal will be to build upon the evidence provided by past scholars, and analyze the data given to see if climate change is the cause of violent

conflict. The two cases selected for this research will look at how years of growing climate change induced problems have been the main cause in the outbreak of the ethnic conflict within these regions, and how it is a growing pattern that can be seen in other countries across the globe. Furthermore, this means that when examining the findings of the research presented, the independent variable is climate change, and the dependent variable is violent ethnic conflict.

When talking about climate change, there are many different ways that it can manifest to disrupt the lives of people across the globe. From rising air pollution to an increase in storms such as hurricanes, there is a wide spectrum of climate change manifestations. For the purpose of this paper, when it comes to climate change, it will exclusively focus on the rise of yearly temperatures and the decrease of rainfall seen in these regions. With both cases, they are located within the continent of Africa, where temperatures are already very warm and water access is dependent on rainfall. Statistics from both regions show that rising temperatures have been a common occurrence for many decades, and this in turn has also affected the amount of rain for each region.

The conflicts in these regions have been occurring for many years now, with most of the tension rising in the years before the turn of the millennium and continuing until today. Ethnic conflict, much like climate change, can take multiple forms due to its many characteristics or be confused with other forms of fighting. When discussing ethnic conflict in this paper, it will stay focused on violent conflicts that have a clear division between opposing ethnic tribes located in the regions selected, with the notable exception of North East Nigeria. In Darfur, the conflict revolved around the Arab and the non-Arab population that lived in the region. In the case of Northern Nigeria, there are more intricacies, and it is much larger in scope because of the vastness of the entire region that is being covered. The first two regions discussed will be the North West and the North Central, for their similarities with what occurred in Darfur. The next main focus will be on the region that is closest to the Lake Chad Basin, the North East region, that for many years now has seen insurgency from the

group Boko Haram.

From both of these countries, there is a clear pattern when it comes to climate change and violent ethnic conflict. It is also important to note that while both are located within Africa, there are still unique ecosystems that are found within both countries. This shows that the similar characteristics that both have exhibited when it comes to climate change and ethnic conflict is not because of the same ecosystems. Instead, it is these differences when it comes to the makeup of the regions that they are facing similar problems that makes them apt cases to compare. The ethnic challenges that are plaguing these two countries are being looked at and how climate change could have been what started these tensions. With both regions facing rising temperatures and a decrease in rainfall, which has caused a growing water scarcity problem, and has led to the fighting that broke out within these regions.

Darfur, Sudan, is the catalyst for this paper because of the controversy surrounding the cause of the conflict in that region. While many have stated that climate change might have played a role for the atrocities there, Ban Ki-Moon argued that it was the leading cause and sparked a debate on if that could be true. In the years leading up to the violent outbreak that started in 2003, there was a decrease in rainfall and an increase in temperatures. The role that those two factors played will be discussed and analyzed later, but there is a significant relationship between them and the violent outbreak. Darfur was chosen for its already existing concern, provided by Ban Ki-moon, that climate change could have pushed pastoral natives to the brink of war. There is data to suggest that there is a positive connection between climate change and violence in Darfur.

Furthermore, the same two factors will be looked at when understanding what is occurring in Northern Nigeria. In a country as vast as Nigeria, it is easy for many groups to go overlooked or left to fend for themselves. With the growing climate crisis, this leaves ample opportunity for insurgent groups to take advantage of the dire situation to push their own agenda. This is what will be analyzed when it comes to Northern Nigeria, and how it has divided the ethnic groups there. Both regions

show characteristics which have been pointed out by Homer-Dixon in the years before their conflict outbreak, that climate change could possibly be the source of strife.

As climate change continues to grow, the situation is becoming more precarious and dire, making it possible that it will only foster more hostilities. As stated in the literature review, there is growing dialogue on climate change becoming a “threat multiplier” and multiple reports have been put out to show that many leading world figures agree with this assessment. Darfur and Northern Nigeria represent how climate change can and has evolved to affect countries in ways many would have never assumed.

The debate on climate change and the link it could have to violent conflict is a source of great contention in the social science community. There are those who argue that there is no significant relationship, while others argue that there is a significant relationship. Nonetheless, many have tried to answer this question in different ways. With this becoming a burgeoning area of study with the rise of climate change, and the effects it is having in the world, it is only reasonable to assume that it will affect other areas of life. The question this research will aim to answer: Is climate change the cause of violent conflict in vulnerable countries? Which is highly contested in the social science field, due to the lack of conclusive evidence from previous scholars. Yet despite the past uncertainty, there is strong evidence to suggest that what both Homer-Dixon and Ban proposed is not speculative. By understanding and analyzing what occurred (and what is occurring) in Darfur and Northern Nigeria, the gaps of the previous scholarship will be bridged.

Results

Case Study 1: Darfur

Darfur is a western region in the African country of Sudan, and over the last few years it has seen an endless amount of tension and conflict. On the surface, the conflict in Darfur revolves around ethnic tensions between the Arab population and the

non-Arab population of the region. While that is the crux of the problem, there is an ongoing debate if the War in Darfur stems from an even more complex problem. In June of 2007, former Secretary General of the United Nations, Ban Ki-moon, posed a different perspective on what really caused the issues in the region. While ethnic conflict is the main concern for the fighting in Darfur, Ban claims that it all starts because of the effects of climate change (Ban, 2007).

In 2003, conflict broke out within the region of Darfur, located within the tumultuous country of Sudan. Fighting broke out between differentiating ethnic groups in the region, over “hakurat” or land rights (Copnall, 2013). The two conflicting ethnic groups were the non-Arab African population of the region, comprised of the Sudan Liberation Movement (SML) and the Justice and Equality Movement (JEM) on one side of the conflict, and the Sudan government with the help of the Janjaweed, an Arab militia group comprising the other (Copnall, 2013). The fighting between the opposing sides caused hundreds of thousands of deaths, most through an ethnic cleansing of non-Arab citizens at the hands of the Sudanese government (Sova, 2017). Added on top of the genocide, hundreds of thousands of citizens were also displaced, becoming refugees. Over the years, there have been numerous attempts at peace treaties between the two factions, but most have fallen through (Copnall, 2013). At the surface of this conflict, it seems to be nothing more than a fight between Arabs and non-Arabs citizens, but there has been a new approach to finding out the roots of the conflict.

When Ban Ki-moon in 2007 wrote that the fighting in Darfur was actually the cause of climate change, this led to a new outlook on the conflict. Ban wrote in an article in *The Atlantic*, discussing how black nomadic farmers were welcomed into the region to gather resources but once the rain had stopped, they were no longer welcomed (Ban, 2007). In the article by Stephan Faris, he gets a narrative from a local nomadic farmer about how hostilities between them and the locals of Darfur have increased over the last few years. Where once, they were welcomed guests allowed to farm for their own needs after a rainy season, now became enemies who seek to take what little resources the

people of Darfur had left (Faris, 2007). This began around the 80’s, many years before the infamous conflict in the region began, and it seemed that the root cause of it was due to environmental degradation (Faris, 2007). The region was starting to see less rainfall and higher temperatures, which led to less water for their wells and less fertile soil (Faris, 2007).

On top of the tension between the nomadic farmers and the citizens of Darfur, another group was starting to be targeted in the late 80’s. The Arab population of Darfur started banding together against the nomads and the black population (Faris, 2007). They published a manifesto proclaiming their superiority over both groups and went on to clash with them killing around 3,000 people in the region (Faris, 2007). A peace agreement was reached in 1989, but over the years there was still tension and light fighting in the region. When the 2003 war broke out in the region, many chalked it up to the same ethnic lines coming to a clash again (Faris, 2007). The idea that it was ethnic tension between the Arab population and non-Arab population of Darfur was the most compelling root but there have been those who think that it was not ethnic hatred but rather land envy (Faris, 2007).

Over the last few decades, there has been a significant decrease of rainfall in the country of Sudan (Abouyoub, 2012). Projections for the decrease in the amount of rainfall in Sudan lies between the 20 to 40 percent range, with the number seemingly climbing (Funk et al., 2011). Along with Ban Ki-moon, there have been many researchers who have investigated the growing phenomenon that surrounds the drying climate. Around the time that the nomadic farmers were starting to face hostilities, the region of Darfur was already experiencing major declines in the amount of rainfall. Darfur can be broken up into four climatic zones: consisting of a rich savannah in the south, a poor savannah in the middle, an arid zone in the north, and finally a desert area that has very little precipitation and high temperatures (Abouyoub, 2012). Before these major declines were detected, Sudan often received around 500 millimeters of rain during its rainy season between the months of June to September (Funk et al, 2011). This amount was enough to

continue watering their crops and livestock, but in the latter part of the 20th century, drought ravaged the country (Abouyoub, 2012).

The process of desertification has been an issue that has started to plague the region of Darfur. According to the United Nations Environment Programme (UNEP), there is evidence to suggest a strong connection between the rise in conflict and desertification in Darfur (Sunga, 2014). This connection states that the increase in desertification, in a region that is already extremely dry, has made the competition for arable lands dangerous. The competition lies with the nomadic farmers and the settlers in Darfur, which would later be divided between Arabs and black Africans. Even as desertification reached the little land left in Darfur, the divisions intensified, because of the erosion of the soil and sand encroachment (Abouyoub, 2012). The falling precipitation rates and increase in temperatures which, according to researchers, was caused by climate change, led to the desertification in the region. Brewing more tension and drawing up divisions among the ethnic classes, leading many to believe that climate change is a culprit in the region. Darfur is often provided as an example of how climate change can lead to national security risks, and many important figures across the globe are starting to pay attention to it.

In 2007, retired top United States military officials came forward to warn about the dangers climate change can pose (Theisen et al., 2011). In their report, they discussed how climate change can be a threat to national security and how it can be a “threat multiplier” for instability and conflict (Theisen et al., 2011). Many have theorized that this has occurred in Darfur, that the instability from the lack of water has exasperated the conflict in the region. Sudan is in the region of Sub-Saharan Africa, and this region of the world is already crippled by lack of growth for crops and very dry weather (Sachs, 2015). These conditions have made it difficult for farmers to provide for their families, and in Darfur where nomadic farmers had taken to settling in already tough conditions, it could have added to the deteriorating situation. Darfur, being an economically vulnerable society, depends on the rainfall to maintain their agriculture for food and income (Theisen et al., 2011).

Aside from warmer temperatures, another cause of the lack of precipitation in Darfur could be attributed to ongoing deforestation (Farris, 2007). Parts of Sudan typically received heavy rainfall from the months of July to September, which was enough to provide for crops and drinking (Funk et al, 2011). Some of the heavy rainfall was attributed to the expansive forest located within the country, which also contributes to approximately thirteen percent of the country’s gross domestic product (GDP) (Abouyoub, 2012). Over the last few decades, beginning in the 1990s, major deforestation began to occur, and part of that is attributed to climate change. This creates a poverty trap, and the effects were felt throughout the country, and in particular Darfur (Sachs, 2015).

As noted earlier, some of the precipitation in the region of Darfur was attributed to the forest areas of the country. As the country experienced ongoing droughts during the 1970s and 1980s, many trees in the forest went extinct (Abouyoub, 2012). While this affected the amount of rain that Darfur saw, it also negatively affected the soil in the region. The loss of trees eroded the soil, making the already arduous land more difficult to farm on, creating even harsher conditions for settler and nomadic farmers. The nomadic farmers now look inward for more grass and water supplies to meet their needs, which in turn puts strain on the settler farmers who are receiving less and less water every year (Abouyoub, 2012). The growing desertification of Darfur, and of all of Sudan, is considered by some scientists and researchers to be a notable cause of the conflict that broke out in 2003.

Water scarcity is a major problem for countries like Sudan, where dry and high temperatures make finding water a major issue for the citizens. As the years go by, there has been a noticeable rise in temperatures which has worsened the already precarious water situation in the country. A growing number of leaders, scientists, and researchers have stated that situations like the conflict in Darfur could be attributed to climate change. This led many to think of it as the “first climate change conflict” and has given way for research to be done in that area (Sova, 2017). Although many present a good argument in favor of climate change being a cause in worsening the situation in Darfur, there

are still other arguments that show that climate change might have not played a role in the atrocities committed.

Ban Ki-moon raised alarms when addressing the situation in Darfur by stating that human-caused climate change could be at the center of conflict. Scientists have called this new era of time the Anthropocene, where humans have caused major changes to the climate which in turn affects the livelihood across the globe. It puts humans as the source of worsening conditions in the environment, grouping the entire species as one big category without understanding how this happened (Rudiak-Gould, 2015). While climate change is caused by humans, labeling it as the Anthropocene seemingly depicts it as all humans when that is not the case. The citizens of Darfur do not have the means to accelerate the rate of climate change on their own, but other actors in the region do.

The political leaders and capitalists are the ones to blame, according to scholars, for how human made climate change has worsened over the past decades (Rudiak-Gould, 2015). Like previously mentioned, Sudan had an expansive forest which accounted for around thirteen percent of the country's GDP. The forest also provided energy for the citizens, as well as medicine and other valuable resources to maintain their livelihood (Abouyoub, 2012). Between the years of 1990 and 2000, the country lost around 589,000 hectares of forest per year, and it intensified between 2000 and 2005 (Abouyoub, 2012). These massive losses were driven by the commercial lumber and exports industry, as well as production of Arabic honey and gum (Abouyoub, 2012). This left devastating consequences for the people of the country, but left money going to the government.

Sudan, since the late 1980's, had been under the power of a military dictatorship led by Omar al-Bashir. His government is seen as the main driving force for the atrocities that occurred in Darfur, starting in 2003 ("Omar al-Bashir: Sudan's ousted president", 2019). He is accused of war crimes and crimes against humanity for supporting the Janjaweed militias, who attacked the black African communities in Darfur ("Omar al-Bashir: Sudan's ousted president", 2019). His goal has always been to unify Sudan, which is typically divided between

North and South, and his attitude towards Darfur was very aggressive. Reports concluded that he aggravated the ethnic conflict in Darfur, by arming the Arab militias and encouraged them to go after the black farmers ("Omar al-Bashir: Sudan's ousted president", 2019). South Sudan eventually seceded, and with that brought economic hardship to the remaining economy, but this happened years after Darfur. This shows that climate change might not have been a cause of what occurred in Darfur, but rather it was caused by a tyrannical leader trying to push his own agenda at the cost of innocent lives lost.

Sudan has always had a troubled history, with multiple civil wars that have caused many lost lives and displaced many citizens. In Darfur, it was estimated in a census from April-May 2008, that approximately 7.5 million people lived in the region (Abouyoub, 2012). The problem with this number is that it was taken during a period when there was an ongoing military conflict, which made it difficult to get an accurate number. This is a pattern that is typical of the region, which has led many to conclude that the population, despite seeing growth since their independence in 1956, to be largely underestimated (Abouyoub, 2012). This poses a new set of issues that can manifest in many ways, like the way it did in 2003.

The underestimated population size can lead to more people per square mile of land than it could handle. The region of Darfur, which was already suffering from a growing limitation of natural resources, had more strain on its land due to the large population. Estimates of how many people in the region during 2003 were around 6.5 million, which is six times the amount than the time of independence in 1956 (Abouyoub, 2012). When the droughts began to occur, even more people moved into Darfur seeking any form of relief from the drying conditions. This increased the population of Darfur even more and put an even bigger strain on the natural resources of the area. The population even grew during the time of the conflict, contributing to the demographic elements that played a major role in the fighting (Abouyoub, 2012). Overpopulation, like in Darfur, is typical for those regions because of the limited resources people have (Sachs, 2015).

The lands in Darfur are very dry, composed mostly of savannahs, making it already very difficult to farm and irrigate the lands. While there is a rainy season, between the months of June to September, the lands of Darfur are still very dry. The lack of technological advancements makes it difficult for the people in regions like Darfur to overcome this sort of problems (Sachs, 2015). Farmers in the region rely heavily on the rainwater to maintain their crops, because it is the main source of food they have. The lack of infrastructure and technology has hindered their ability to achieve the same levels of food production as seen in Global North countries (Sachs, 2015). This level of food insecurity is what attributed to the conflict in Darfur, because of the added nomadic farmers and the growing settler population, the farming land in that region was already being pushed past its capacity. The conflict in Darfur might have been avoided if there was enough food and water for all the population in the region. The limitations of the land and the misgovernance from the political leaders set up the region for failure in providing enough food and other valuable resources to those who needed it.

In the end, what occurred in Darfur has been attributed to growing climate change insecurity and many have come to agree with that sentiment. If Darfur was just a one-off case, then it could be said that it is all coincidental, but there have been multiple incidents like Darfur across the globe in the years following. One such example can be found in the neighboring country of Nigeria, where its Northern region is experiencing similar events.

Case Study 2: Northern Nigeria

A similar pattern that was observed in Darfur that led to the ethnic conflict has been seen in Northern Nigeria as well. Located off the coast of the Gulf of Guinea in West Africa, Nigeria is the most populated country on the continent and is home to multiple ethnic groups (“African Countries by Population”, 2021). Since the country is vast and home to multiple ethnic identities, to cover the entirety of the country would be a time-consuming undertaking, which is something that cannot be achieved within the scope of this paper. For

that reason, within the bounds of this paper, the focus will be on the Northern region of the country. Even among this vast region, it is broken down even further to three key regions: North West, North Central, and North East. With an approximate population of 90 million people, and with the largest ethnic groups being the Muslim Hausa and Fulani, Northern Nigeria is home to a majority of the country’s population (“Ethnicity in Nigeria”, 2007). Within this expansive region, it has become a prime spot for a similar pattern of climate change effects that were plaguing Darfur.

While there hasn’t been a violent ethnic conflict outbreak that has reached the same magnitude as the atrocities that have occurred in Darfur, there has been growing ethnic tension and division among the population of the region. With the help of insurgent groups, like that of Boko Haram in the North East region, and other smaller ethnic conflicts occurring, there are connections to be analyzed. Aside from Boko Haram, there are growing tensions between the nomadic farmers and those who have a more permanent residence within the region, tensions that can be linked to the growing threat of climate change.

Northern Nigeria is composed of 35 states, all of which make up 35 percent of the country’s total land that is used as key areas of livestock rearing and agricultural production, such as beans, soya beans, millet, sorghum, tomatoes, melons, peppers, and onions (Unah, 2017). Over the last decades many of these states have started to face the issue of desertification, which has affected the livelihood of over 40 million people within the region (Unah, 2017). The process of desertification is attributed to human activity because of the removal of trees and plant cover, which allows for the dryland ecosystem to become degraded (Unah, 2017). This process is mainly common within the North West region of the country, which includes states like Sokoto, Kaduna, Katsina, and various others (“Violence in Nigeria’s North West: Rolling Back the Mayhem”, 2020). Annual rainfall in states like Sokoto averages less than 600 millimeters, which is a miniscule amount when compared to the over 3,500 millimeters along the coast of the country (Unah, 2017). This has led to water scarcity in these states and land competition for the remain-

ing farmland.

In the North West region, over the course of the last few years, the same tension among the predominantly Fulani herders and mainly Hausa farmers has mirrored what occurred in Darfur (“Violence in Nigeria’s North West: Rolling Back the Mayhem”, 2020). Both sides of these conflicting groups have mobilized armed groups for protection against each other, and fears grow for offshoots of Boko Haram to find their way back into the region (“Violence in Nigeria’s North West: Rolling Back the Mayhem”, 2020). In the years before 2010, there were small-scale conflicts between the herders and farmers that were resolved by community-level leaders, but in recent years that has changed because of climate change. In recent decades, the already small rainy season in this region of Northern Nigeria has shortened. What used to be 150 days of the rainy season has been shrunk down to 120 days, which has decreased the amount of arable land (“Violence in Nigeria’s North West: Rolling Back the Mayhem”, 2020).

In tandem with this decrease in rainfall, the tension between the Hausa farmers and Fulani herders has risen considerably. These decreases in rainfall are noted to start around the early 1970s, with many scientists researching if climate change is connected to this pattern in the 1990s (Oladipo, 1993). This coincides around the same time that Homer-Dixon was making his observation about the conflict outbreak in regards to its connection to environmental stressors. This is just one connection of possible climate change induced ethnic conflict, and as vast as Northern Nigeria is there are other examples of this type of conflict.

In the country’s North Central region, there are examples of the same conflict happening due to climate change. Some of the key states that have been experiencing violence are Plateau, Benue and Nasarawa, all of which have conflicts with herders and farmers like in the North Western region (“Northern Nigeria: Background to Conflict”, 2017). Commonly referred to as “The Middle Belt,” North Central Nigeria is home to a wide variety of ethnic and religious groups (Werz & Conley, 2012). Starting in the 2010s, there has been an increase in violence among the groups. The decrease in rainfall and an increase in drought have

also plagued the region, and with it, the outbreak of violence has been rising in tandem. These weather disruptions can be traced back to the 1970s, much like what is occurring in the North West of Nigeria, and it has caused problems between the herders and farmers in those states (Oladipo, 1993; Werz & Conley, 2012).

One such example of violent conflict outbreak in the North Central region occurred in the Plateau state in June 2017 (Nugent, 2018). The violence that broke out in Plateau, which killed 86 people, was due to farmland competition (Nugent, 2018). Desertification has reached the Middle Belt of Northern Nigeria, where an estimated 80 percent of the population rely on natural resources for their livelihood (Nugent, 2018). This process has been exacerbated by man-made climate change and has created instability within the herders and farmers. When examining the breakdown of the ethnic groups of the herders and farmers, it is once again broken down between the division of the Fulani and Hausa ethnic tribes (“Northern Nigeria: Background to Conflict”, 2017). With desertification growing in the region, this causes the herders to push further into farmer lands to rear their livestock but leaves less land for the Farmers.

As mentioned earlier with Darfur, the lack of rainfall and the increase in temperatures has led to drought ravaging the lands and with desertification taking away more arable land every year, it is exasperating the tensions in the region. The annual loss of 351,000 hectares of land since the 1970s has prompted the growing tensions and only been made worse by the governmental response (Ghani & Malley, 2020).

Along with the North Western region, the response to the violence has been to send the already spread thin military to combat the growing violence (Ghani & Malley, 2020). Since many of the groups in this region use their own militias to defend their land, livestock, and people against each other, military intervention has become the government’s response to these conflicts. These interventions only serve to exacerbate the ongoing violence especially considering that the military is already focused on Boko Haram, making a dire situation worse. On top of military intervention, governmental legislation seems to further divide

the herders and farmers. There have been attempts by the local governments within these states to pass legislation that would see the remaining arable land divided between the groups, much to both sides' discontentment (Ghani & Malley, 2020).

The North Central region of Nigeria is experiencing similar problems that its neighbor to the West is exhibiting. Both are seeing an increase in desertification, which is leading to less arable lands in their respective region. With most of the population relying heavily upon agriculture to maintain their livelihood, this has led to a rise in tension among the herders and farmers of the regions. This tension is only exacerbated by the fact that upon examination of the division of herders and farmers fell down ethnic lines, between the Hausa and Fulani ethnic groups that are prominent in those regions. Since the 1970s, the increase of climate change-induced drought and rising temperatures has caused rapid desertification and the outbreak of violence that broke out in the 2010s. While the fighting in this region has been mostly brought on by militias, commonly referred to as "bandits," of the herders and farmers, this is not the same for the final region in Northern Nigeria, the North East region ("Northern Nigeria: Background to Conflict", 2017).

The North East region is home to states like Borno, Adamawa and Yobe and its commonly referred to as part of the Lake Chad Basin because of its location being right next to the once sprawling lake that was one of the major sources of water for the countries near its borders (Stoddard et al, 2020 & UNODC, 2021). Home to approximately 13.4 million people, composed mostly of the Fulani people followed by the Kanuri, the region has faced years of violence at the hands of Boko Haram (Stoddard et al, 2020). Much like the rest of the Northern region of Nigeria and Darfur, these states have seen climate change play a large role in the ongoing violence. Before the onset of violence that began in 2009, the region used to be relatively peaceful with the majority of the population farming for a living (Olukoya, 2019). Following the rise of Boko Haram, the group used climate change-induced scarcity and desertification to their advantage.

Boko Haram is a Jihadist terrorist organization

that was officially founded in 2002 by Mohammed Yusuf with the goals of creating an Islamic State to purify Nigeria of Western ideals (Thurston, 2017). In July 2009, Yusuf was killed by Nigerian security forces and leadership was switched over to Abubakar Shekau, and it was in 2010 under his leadership that the group ramped up their operations (Thurston, 2017). In the years following, the jihadists targeted multiple groups with explosives and killed many people in the North East and Central regions of Nigeria. For the most part, the group is mainly found in North East Nigeria, in particular the Borno state, taking up residence and making life difficult for the people in that state.

As noted earlier, the North East is part of the Lake Chad Basin and in recent years there has been a considerable decrease in the size of the lake (Werz & Conley, 2012). The lake has been reduced to 1/10th the size it once was in the 1960s, and shrinking to this day (Werz & Conley, 2012). The land in that region has also grown to become more arid and with an ever-expanding desert, demonstrating the process of desertification that is happening in the other parts of Northern Nigeria (Werz & Conley, 2012). While this is a common issue that is plaguing the rest of Northern Nigeria, this is not what led to the rise in the insurgency caused by Boko Haram. Nonetheless, the group has used climate change to induce or prolong violence around the ethnic groups in the region of the Lake Chad Basin.

Coinciding with the data previously given, temperature flare ups and rainfall decreases started to affect the Lake Chad region starting in the 1960s. As seen in the previous regions discussed, this fueled tension between the herders and farmers living there. This is coupled with the fishermen that reside by the lake, and with the loss of water, around 25 million people have been harmed by the reduction (Werz & Conley, 2012). These destabilizing effects have triggered ethno-religious violence, made worse by Boko Haram's involvement (Werz & Conley, 2012). The idea of "threat multiplier" can be seen firsthand when it comes to this particular region, as Boko Haram uses the ongoing tensions to its advantage.

Having taken up a more permanent residence in the Borno State since 2015, Boko Haram has been

able to recruit more men into their group. With the control they have towards accessing the lake, they have monopolized the only source of water and food many citizens in North Eastern Nigeria have (Werz & Conley, 2012). Having control of the lake is imperative for organizations such as Boko Haram, as it forces young men to join their ranks in order to survive. The aggression of Boko Haram is targeted mostly at the Christian minority of the Borno State in North East Nigeria, where, before the decrease in water, life was relatively peaceful between the different groups (Werz & Conley, 2012). The promise of access to water, in a region where rising temperatures and decrease in rainfall has made the land more arid, makes vulnerable people susceptible to recruitment to Boko Haram. The combination of the receding water levels in Lake Chad, which has led to the insecurity which has been used by Boko Haram to its advantage, shows how there is a relationship between climate change and violent ethnic conflict.

As the weather continues to change dramatically in Northern Nigeria there will be an increase in vulnerable communities looking for a way to combat climate change. This leaves them open to finding a scapegoat, and in multiple regions of Northern Nigeria that breaks down to fighting between differentiating ethnic groups. In the case of North East Nigeria, the fighting is between religious groups which is pushed by Boko Haram. These conflicts are only made worse with continued negligence by the government, and without any relief soon, it will only grow. Many have already equated the causes of the violence in Northern Nigeria as comparable to what occurred in Darfur, showing that many scholars are seeing the connection between climate change and violent ethnic conflict outbreak. It is important to look at this case to understand how climate change is evolving the nature of ethnic conflict.

Conclusion

When Thomas Homer-Dixon first proposed his theory regarding climate change-induced violent outbreak, many were quick to dismiss this argument; but in the last few years, there has been a growing pattern of instability in vulnerable states

that deal with shifting nature patterns. Many different leading figures across the globe have come to the agreement that climate change is posing a greater threat than what was originally thought. Climate change is creating various other side effects, and one of the most important ones is violent ethnic conflict outbreak in vulnerable regions. This is an idea that was brought back to attention in 2007, when Ban Ki-Moon argued that the conflict in Darfur was a direct result of climate change. Since then, there have been various studies conducted to test the accuracy of this argument.

The literature for this field has shown various points of views and different arguments when considering the relationship between climate change and ethnic conflict. Many have agreed with the sentiment put forward by Ban Ki-Moon, while there are scholars who disagree. There are those who point out the inconclusiveness of the data or the seeming contradiction of the research. Then there are scholars who point out characteristics that are seen in various areas that are becoming affected by climate change. These include the idea of climate change being a “threat multiplier,” growing desertification, increases in drought, and decreases in rainfall. All of these patterns are consistent with the two case studies that have been presented in this paper.

This study has aimed to understand the nature of the relationship between climate change and violent ethnic conflict outbreak. The nature of the relationship is demonstrated using two case studies, one being Darfur, Sudan, and the second, Northern Nigeria, with both regions demonstrating the same characteristics described by previous scholars. In each case, drought began to plague both regions starting in the 1960s and 1970s as a result of climate change. These droughts were caused by the decrease in rainfall, which is the only source of water (with the notable exception of North East Nigeria) for both regions. This helped to speed up the process of desertification in each region, which limited the availability of arable land for both farmers and herders. The lack of land for herders, in both regions, forced them to look for land to accommodate the decrease in land availability. In turn, this meant that they crossed into lands that farmers in the regions used to maintain their live-

lihood.

What resulted was growing tension between the two groups and culminated in outbreaks of violent conflict. When examining the feud between the herders and farmers, it was shown to go further than originally thought. In both cases, herders and farmers came from different ethnic groups in the regions, resulting in violent ethnic conflict, which can be traced to issues that were caused by climate change. The only notable exception is in North East Nigeria, where Boko Haram was not formed because of climate change, but they used it to their advantage to prolong conflict in their region. All these are in line with what many scholars point out as a growing concern when it comes to climate change-induced violence.

There are some limitations to these case studies and some aspects when analyzing this particular topic that were not addressed in this paper. For future research, scholars may want to employ quan-

titative research conducted about this particular issue to help cement the nature of the relationship. Also, looking further into how governments play a role in helping prolong the violence or combat the growing climate change concern. These are areas that will need further research to strengthen the arguments presented in this paper.

While there has been great debate surrounding the idea of the relationship between climate change and ethnic conflict, there has been a growing pattern in vulnerable states that prove there is a correlation. Both Darfur and Northern Nigeria show that climate change is evolving to cause violent ethnic conflict. This growing pattern can already be seen in other regions across the globe and will only continue to grow if climate change is not dealt with soon. Leaving these regions vulnerable to climate change has shown to be deadly, and the violence will only continue to rise if nothing is done to recognize the threat it poses to these regions.

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