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## Climate Change and Violent Conflict in the Sahel and Lake Chad Basin

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### Abstract

The purpose of this article is to analyse how climate change is a major threat to security in the Sahel and Lake Chad basin. The region is already experiencing the effects of climate change, such as more frequent droughts, floods, and desertification and to expatiate how these effects are leading to food insecurity, water scarcity, and displacement, which are in turn creating conditions that can lead to violent conflict, using the descriptive cum exploratory research design. The paper relied on qualitative data collected from secondary sources. Findings in the paper revealed that, the link between climate change and violent conflict is complex and there are many other factors that contribute to conflict in the region. However, climate change is a major threat that can exacerbate existing tensions and make it more difficult to resolve conflicts peacefully. The paper recommended measures to address the threat of climate change and violent conflict in the Sahel and Lake Chad basin, it is important to take a comprehensive approach that addresses both the root causes of conflict and the effects of climate change: investing in sustainable development and climate adaptation programme, promoting peacebuilding and conflict resolution, providing humanitarian assistance to those affected by climate change and building the resilience of communities to the effects of climate change, by taking a comprehensive approach, which is possible to mitigate the threat of climate change and violent conflict in the Sahel and Lake Chad basin to build a more peaceful and sustainable future for the region.

**Keywords:** Climate change, violent conflict, Sahel, Lake Chad, sustainability.

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## Introduction

The Sahel and Lake Chad basin are two regions that are particularly vulnerable to the effects of climate change. These regions are already experiencing increased temperatures, droughts, and floods. These changes are having a devastating impact on the people and ecosystems of the Sahel and Lake Chad basin. Climate change is contributing to the increased frequency and intensity of violent conflict in the region. There is increasing body of evidence that the adverse effects of climate change increase both the risk and severity of violent conflict (Laity, 2009). The specific ways in which these effects impact violent conflict is, however, caused by international, local, economic, political, and social dynamics. While climate change is not the only cause of violence and conflict, it can have both direct and indirect consequences for local, national, international, and even regional security. The Sahel is a hotspot of climate change and insecurity. Varied geographies, which means changing temperatures, rainfall patterns and extreme weather events will have different impacts across the region, worsening livelihood conditions, increasing migration and changing pastoral mobility patterns, tactical considerations by armed groups, and elite exploitation of local grievances all play a role in how the physical effects of climate change increase the risk of violent conflict in West Africa (Van Baalen & Mobjörk, 2018). Generally, the choices that individuals and communities make in adapting their livelihoods to the effects of climate change can increase the risk of violent conflict, while changing migration can accentuate conflict risks in less climate-exposed areas (Lucherini, 2018).

Conflicts are often triggered by competition for scarce resources, such as water and land (Ehiane & Moyo, 2022). Climate change is also making it more difficult for people to cope with the effects of conflict, such as displacement and food insecurity (Oli et al., 2018). Examples of how climate change is contributing to violent conflict in the Sahel and Lake Chad basin: In 2017, a severe drought in Niger led to a conflict between herders and farmers over access to water and grazing land. In 2018, a series of floods in Chad displaced hundreds of thousands of people and exacerbated tensions between ethnic groups. In 2020, a locust infestation in Mali led to a food crisis that contributed to an increase in violence (Ngoran et al., 2015).

Arising from this backdrop, the region is already experiencing the effects of climate change, such as more frequent droughts, floods, and desertification and to expatiate how these effects are leading to food insecurity, water scarcity, and displacement, which are in turn creating conditions that can lead to violent conflict. The focus of this article is to analyse how climate change is a major

threat to security in the Sahel and Lake Chad basin. This paper provides a brief background to climate change in the Sahel and Lake Chad region (section II), proceeds to discuss about the Sahel, Lake Chad and the issues of violent conflict as it relates to the region (section III), concludes with implications for future research and recommendations (section IV).

### Literature Review

Climate change is the long-term alteration of temperature and typical weather patterns in a place. It may cause weather patterns to be less predictable. Climate change could cause more extreme weather events, such as heat waves, droughts, floods, and storms. The main cause of climate change is human activity, such as the burning of fossil fuels, which releases greenhouse gases into the atmosphere. Greenhouse gases trap heat, causing the planet to warm (Shivanna, 2022). The effects of climate change are already being felt around the world, and they are expected to become more severe in the future. These effects include rising sea levels, melting glaciers, more extreme weather events, and changes in plant and animal life. Climate change is a serious threat to the planet and its inhabitants (Abiodun et al., 2020). We need to take action to reduce greenhouse gas emissions and mitigate the effects of climate change, such as rising sea levels that are threatening coastal communities around the world, melting glaciers causing water shortages in many parts of the world, more extreme weather events, such as heat waves, droughts, floods, and storms, are causing widespread damage and loss of life, changes in plant and animal life are disrupting ecosystems and food webs. In order to mitigate the effects of climate change, switching to renewable energy sources, such as solar and wind power, improving energy efficiency in our homes and businesses, reducing our reliance on cars and driving less, planting trees, which absorb carbon dioxide from the atmosphere (Olabi & Abdelkareem, 2022). Adaptation measures to help communities includes building sea walls to protect coastal communities from rising sea levels, developing drought-resistant crops to help farmers adapt to climate change, building early warning systems to help people prepare for extreme weather events. It is important to note that climate change is not the only factor driving conflict in these regions. However, it is a significant contributing factor, and it is likely to play an even greater role in the future.

## The Sahel



Source: Extracted from the Britannica on the Sahel, August 2023- Sahel region in Africa

The Sahel is a semi-arid region in Africa that stretches across the south-central latitudes of the continent between the Atlantic Ocean and the Red Sea. It is bordered by the Sahara Desert to the north and the Sudanian savanna to the south. The Sahel covers an area of about 3.053 million square kilometers (1.181 million square miles) and is home to about 100 million people. Sahel is a region of great cultural and linguistic diversity (Makinde et al., 2022). The people of the Sahel speak a variety of languages, including Arabic, French, and Hausa. The Sahel is also home to a number of different ethnic groups, including the Fulani, the Tuareg, and the Songhai. The Sahel is prone to droughts, which can have a devastating impact on the region's economy and environment. The Sahel is home to a variety of plant and animal life. The most common plant types in the Sahel are grasses, shrubs, and trees. The Sahel is also home to a variety of animals, including antelope, gazelles, lions, elephants, and giraffes (Harmon, 2015).

The Sahel region is known for its turbulent, and an unstable part of the world and democracy is currently in retreat there. Violent Islamist groups have gained ground by controlling territory and conducting attacks in the tri-border region between Mali, Niger and Burkina Faso. The mutinous soldiers in Niger have cited this worsening security situation as a reason for their uprising, although Niger was handling the insurgencies far better than Mali and Burkina Faso before their own coups. The growing unrest has led some to believe that only harsh military crackdowns can solve the problem, hence the popular support that the coup seems to enjoy in some quarters. However, it is far from clear that a military junta would have greater success in tackling the insurgents than the recently ousted government. The takeovers in neighbouring countries have not made much

difference. Adding to the instability in the region, climate change is causing desertification to spread southwards from the Sahara into the Sahel. It is far estimated that temperatures in the Sahel are rising faster than anywhere else in the world (Pineschi, 2022).

### Lake Chad



Source: Extracted from the free Encyclopedia, August 2023- Lake Chad Basin Map

The Lake Chad Basin covers an area of about 2,300,000 square kilometers (890,000 square miles) and is shared by seven countries: Cameroon, Central African Republic, Chad, Libya, Niger, Nigeria, and Sudan. The basin is home to about 30 million people (McKinney, 2022). Lake Chad is the largest lake in the basin and is a major source of water for the region. The lake has been shrinking for many years due to climate change, over-exploitation, and pollution. In the 1960s, Lake Chad covered an area of about 25,000 square kilometers (9,700 square miles). Today, it is only about 1,350 square kilometers (520 square miles) in size. The Lake Chad Basin is a large endorheic basin in Africa, centered approximately on Lake Chad. It has no outlet to the sea and contains large areas of semi-arid desert and savanna. The drainage basin is approximately coterminous with the sedimentary basin of the same name but extends further to the northeast and east.

The geographical space spinning around the Lake plays a substantial role in the shared narrative that portrays the broader Sahel as a cradle of economic underdevelopment, environmental ruin, inter-communal violence, jihadism, unchecked migration, and extreme violence (Krätli & Toulmin, 2020). Such a dominant perspective is challenged by a growing body of research looking at the complex interaction among the Lake's specific environmental conditions and the



political initiatives adopted by national, regional, and international actors active in the area. Lake Chad, a basin without access to the sea, located in the Sahel on the southern fringes of the Sahara Desert and straddling different climatic lines (Cunliffe, 2023). The Lake's environment has grabbed international attention due to the shrinking of the area covered by its waters, the Lake a shallow lens of water whose depth hardly goes beyond 3–4 metres in those portions it still covers – has dramatically decreased over time. The reasons for the decrease have been argued overtime, but some researchers describe how the area has always been affected by a significant climatic variability due to such factors as but not limited to changes in rainfall patterns, rising temperatures and evaporation(Cunliffe, 2023).

Climate change is having a devastating impact on the Lake Chad basin. The lake has shrunk by over 90% since the 1960s, (Micklin, 2007) and it is projected to continue shrinking in the future. This is due to a combination of factors, including climate change, increased irrigation, and population growth. The Lake Chad basin is a major source of food and water for millions of people. The shrinking of the lake is a major threat to the livelihoods and security of the people of the region.

Thus, having several negative impacts on the people and environment of the region. These include:

1. Water scarcity: The shrinking lake is reducing the availability of water for drinking, irrigation, and other uses.
2. Food insecurity: The loss of fishing grounds and agricultural land is contributing to food insecurity in the region.
3. Migration: The loss of livelihoods and resources is forcing people to migrate to other areas.
4. Conflict: The competition for scarce resources is increasing the risk of conflict in the region.

### Climate change in the Sahel and Lake Chad

Lake Chad, whose shrinking, allegedly caused by global warming, the shrinking of Lake Chad has had a devastating impact on the people and environment of the region. The lake is a major source of fish and other food, and its shrinking has led to food insecurity and malnutrition. The lake also provides water for irrigation and drinking, and its shrinking has led to water shortages. With the new threat, which is already under scrutiny, it now faces a new threat, having become the arena for a conflict between the bordering states and Boko Haram – with the local population caught in the middle. The history of human settlement in this area helps to explain how the jihadist group established itself. Once subjected to military conquests, the Lake region has found itself accommodating economic

and environmental migrants, and armed insurrections have sometimes developed there.

The humanitarian situation in the Lake Chad region remains extremely critical. Violent conflicts are also one of the main drivers of vulnerability and displacement in the area: across the region, in September 2020 5.2 million people are severely food insecure and more than 2.8 million are displaced, while more than 1,100 schools have been shut due to insecurity. The local population remains vulnerable both to attacks and to forced recruitment by extremist groups like Boko Haram (Romita & Sthoeger, 2022). Furthermore, some of the region's people have taken to criminal activities for survival, such as increasing cattle rustling. In the last years, rustling has been associated with Boko Haram which resorts to this practice for raising funds.

Historically, the Lake Chad basin, in its broad multi-country sense, has endured numerous invasions, motivated by a mix of religious ambitions, desire to impose political authority and to forcibly take control of the local economy. In this situation, the islands in the lake were places to both live and take refuge for populations insubordinate to political authorities (Scot & Ku, 2018). The lake's recent history is characterised by population mixing. In the twentieth century, its resources attracted new settlers – which fuelled economic growth but also sparked competition for control of the lake and the areas subject to seasonal flooding, a tendency that has been exacerbated by the current conflict. The governments of the countries in the Lake Chad Basin are working to address the problem of the shrinking lake (Lauria, 2022). They are implementing water conservation measures, such as planting trees and building dams. They are also working to reduce pollution and to improve the management of the lake's resources. The future of Lake Chad is uncertain. However, with the cooperation of the countries in the basin, it is possible to save the lake and ensure its continued availability for the people of the region (Pineschi, 2022).

The Sahel is also facing a number of challenges, including climate change, desertification, poverty, and conflict. Climate change is causing the Sahel to become drier, which is leading to desertification and food insecurity. Poverty is widespread in the Sahel, and many people are unable to meet their basic needs. Conflict is also a major problem in the Sahel, and it has displaced millions of people. Despite the challenges, the people of the Sahel are resilient and resourceful. They are working to address the challenges facing the region, and they are committed to building a better future for themselves and their children. Climate change is causing a number of problems in the Sahel and Lake Chad basin, including but not limited to:

1. Desertification: The Sahel is a semi-arid region that is already experiencing desertification. Climate change is expected to accelerate this process, leading to less vegetation and more dust storms.
2. Drought: The Lake Chad basin is also experiencing droughts more frequently and severely. This is making it difficult for people to grow crops and raise livestock, which is leading to food insecurity and poverty.
3. Flooding: Climate change is also causing more flooding in the Sahel and Lake Chad basin. This is displacing people and destroying homes and infrastructure.

These problems are creating conditions that are conducive to violent conflict. For example, people who are displaced by drought or flooding may be more likely to join armed groups to survive. Additionally, competition for scarce resources, such as water and land, can lead to conflict. There is a growing body of evidence that shows that climate change is contributing to violent conflict in the Sahel and Lake Chad basin (Nagabhatla, et al., 2021). For example, a study by the International Peace Institute found that the risk of conflict in the Sahel is 2.5 times higher in areas that are experiencing severe drought (Skah & Lyammouri, 2020). There are several things that can be done to address the climate change-conflict nexus in the Sahel and Lake Chad basin.

### Climate Change and Violent Conflict

Africa is one of the most vulnerable continents to the effects of climate change. The continent is already experiencing the impacts of climate change, such as rising temperatures, more extreme weather events, and changes in rainfall patterns (Hope, 2009). These changes are having a devastating impact on the people and ecosystems of Africa, such as rising temperatures: The average temperature in Africa has been rising at twice the global rate. This is leading to more heat waves, droughts, and heat stress. Loss of biodiversity: Climate change is threatening the biodiversity of Africa (Pereira, 2017). Many species of plants and animals are being forced to adapt to changing conditions or they are going extinct. The impacts of climate change are having a significant impact on the people of Africa. Millions of people are being displaced by climate change, and many more are facing food insecurity and water scarcity. Climate change is also exacerbating existing inequalities in Africa, as the poorest and most vulnerable people are the ones who are being affected the most (Swain & Jägerskog, 2016).

The relationship between climate change and violent conflict is complex and there is no single causal pathway. Some of the most at-risk regions for climate-related conflict apart from the Sahel and lake Chad basin include: Sub-Saharan Africa one of the most vulnerable regions to climate change. The region is already experiencing the impacts of climate change, such as droughts, floods, and food



insecurity. These impacts are likely to worsen in the future, increasing the risk of conflict. The Middle East is another region that is vulnerable to climate change.

The region is already experiencing water scarcity and desertification. These impacts are likely to worsen in the future, increasing the risk of conflict over resources. South Asia is also a region that is vulnerable to climate change. The region is already experiencing monsoons and cyclones. These impacts are likely to worsen in the future, increasing the risk of conflict over resources (Eckstein, 2009). However, there is growing evidence that climate change is a contributing factor to violent conflict in many parts of the world:

Climate change is a threat multiplier that can exacerbate existing tensions and conflicts, leading to violence. Climate change can contribute to violent conflict in several ways, including:

**Creating new security threats:** Climate change can also create new security threats, such as food insecurity, water scarcity, and mass migration. These threats can increase the risk of conflict, as groups of people compete for scarce resources.

**Undermining state authority:** Climate change can also undermine state authority, as governments struggle to cope with the impacts of climate change. This can create a power vacuum that can be exploited by armed groups (Jackson, 2007).

**Decreasing access to resources:** Climate change can lead to changes in rainfall patterns, droughts, floods, and other extreme weather events. These changes can make it difficult for people to access the resources they need to survive, such as food, water, and land. This can lead to competition and conflict between groups of people.

**Disrupting livelihoods:** Climate change can also disrupt people's livelihoods, such as agriculture and fishing. This can lead to poverty and displacement, which can increase the risk of conflict.

## Conclusion

The relationship between climate change and violent conflict in the Sahel and Lake Chad Basin is complex and multifaceted. The region faces significant challenges that exacerbate both environmental and security issues. The Sahel and Lake Chad Basin are particularly vulnerable to desertification and prolonged droughts. These phenomena reduce arable land and water availability, critical resources for the predominantly agrarian and pastoral communities. Lake Chad, once one of Africa's largest freshwater bodies, has dramatically shrunk over the past few decades. This reduction impacts fishing, agriculture, and water supply, leading to heightened competition for these diminishing resources. Climate change disrupts traditional farming and livestock rearing practices, leading to

food insecurity and loss of livelihoods. This economic instability can drive people towards illicit activities or joining armed groups as alternative means of survival. As people move in search of better living conditions, this leads to increased pressure on urban centers and other regions, potentially sparking conflicts over resources in these new areas. Resource scarcity often exacerbates existing ethnic and communal tensions. Competing groups may clash over access to land and water, leading to violent conflicts. Many countries in the Sahel and Lake Chad Basin have weak governance structures, which struggle to manage the impacts of climate change effectively. This lack of capacity can lead to a breakdown in law and order, making it easier for militant groups to operate. Militant groups, such as Boko Haram in the Lake Chad Basin, exploit the vulnerabilities caused by climate change. They capitalize on the grievances of marginalized populations, offering protection or resources in exchange for support. Economic desperation and social fragmentation make it easier for extremist groups to recruit new members. Promises of financial stability or ideological alignment can attract those affected by the hardships brought on by climate change. Various international organizations and regional bodies are working to address both the immediate humanitarian needs and the long-term development challenges in the region. Multinational security initiatives aim to combat militant groups and stabilize the region. However, these efforts often need to be balanced with development and humanitarian strategies to address the root causes of conflict. The climate change-conflict nexus is a complex issue, but it is one that needs to be addressed urgently. The Sahel and Lake Chad basin are already experiencing the effects of climate change, and these effects are likely to get worse in the future. If we do not act now, we may see even more violent conflict in this region.

### Recommendations

The Sahel and the Lake Chad basin is a complex and challenging environment. However, by taking action to address climate change, we can help to protect this vital resource and the people who depend on it by:

1. Reducing greenhouse gas emissions: This is the most important thing that can be done to address climate change. Investing in renewable energy sources can reduce reliance on natural resources that are becoming scarce due to climate change.
2. Promoting climate-resilient agricultural practices can help communities adapt to changing environmental conditions and reduce competition over resources.
3. Improved water management systems, including the restoration and sustainable use of Lake Chad, are crucial for ensuring water security.
4. Improving water management: This includes investing in water conservation and irrigation efficiency.

5. Promoting sustainable agriculture: This includes planting drought-resistant crops and using less water-intensive irrigation methods.
6. Providing climate change adaptation assistance: This includes helping communities adapt to the impacts of climate change, such as by building sea walls to protect coastal communities from rising sea levels.
7. Investing in adaptation: Countries in the region need to invest in adaptation measures to help them cope with the effects of climate change. This includes measures such as building dams to store water during the rainy season, planting drought-resistant crops, and developing early warning systems for droughts and floods.
8. Promoting peacebuilding: Peacebuilding efforts need to be integrated with climate change adaptation efforts. This means addressing the root causes of conflict, such as poverty and inequality, as well as the immediate drivers of conflict, such as competition for scarce resources.
9. Strengthening institutions: Countries in the region need to strengthen their institutions to be better able to manage the challenges of climate change and conflict. This includes improving governance, rule of law, and security.
10. While there are many national, regional and international humanitarian efforts to alleviate at least some of the humanitarian needs of IDPs and refugees in the Sahel region, the displacement crisis requires a lasting solution. As the displacement crisis is a result of the armed conflicts and effects of climate change, Sahelian States along with regional and international organizations need to work together to solve these underlying causes of displacement.

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