Chapter 9 - Climate Change, Cross-Border Migration and Conflict in West Africa

Babayo Sule
ORCID iD: http://000-0002-3879-4884

Usman Sambo
ORCID iD: http://0000-0002-4529-3850

Abstract

The 21st century is tagged as the era of rapid social change in the history of the globe emanating from the impacts of globalisation which facilitate unprecedented cross-border movement of people and goods among nation-states. Migration driven by climate change is one of the contemporary global challenges faced by Africa, specifically West Africa. West Africa is one of the geographical areas most affected by climate change. This is manifested in the depletion of Lake Chad, changing rain and dry season patterns with attendant consequences, famous among which is cross-border movement. The study examined the effects of climate change on cross-border migration and conflict in West Africa. The study utilised a qualitative phenomenological approach as a methodology. Data were collected from documented sources relevant to the subject matter of study. The data assembled were analysed and interpreted using thematic analytical interpretations. Themes were identified and discussed using empirical tools such as statistical data. The study uncovered that climate change is radically changing global settings, and West Africa is one of the most affected regions for cross-border migration across West Africa. The repercussions of the migration are manifested in the conflict between the migrating pastoralists and farmers, settlement crises, infrastructure deficits and health crises. The study presents plausible policies and models for collective policy designing. The affected countries, the Economic Community of West African States (ECOWAS), the African Union (AU) and other international organisations can play a role in mitigating the harsh effects of climate change. Individual governments and

collectively can handle conflict management concerning those affected by cross-border migration.

Keywords: Climate Change, Conflict, Cross-border Migration, West Africa.

Introduction

Climate change has gradually but persistently altered the global environmental settings for many decades. The change in nature, activities and practices of mankind and other supplementing factors aid in causing excessive emission of gaseous substances and other harmful chemicals, precipitating global warming and the depletion of the ozone layer. The world is facing monumental threats from climate change factors, including flood, drought, desertification, deforestation, threats to the existence of aquatic animals, the disappearance of unique species of animals and useful plants, declining agricultural capacity and productivity, food insecurity and, recently, uncontrolled cross-border migration. It is projected that by 2050 if serious measures are not taken against the continuous threats of climate change, serious environmental crises and societal conflicts may emerge that will threaten human organisation and survival (Jahren 2020). Several efforts by international organisations such as the UN IOM, UNICEF, EU, AU and many others could not tame or successfully check the effects of climate change and migration across the globe. They had succeeded in sending warnings and signals to the key stakeholders and policymakers, but adequate measures were not put in place against the menace (Singh 2018).

Climate change is altering and reshaping the global map through legal and illegal migration. Cross-border movement accentuated by conflicts that emanated from the impacts of climate change is significantly increasing across the globe. UN IOM (2020) reports that the number of global migrants has hit 274 million, reaching more than 350 million by the year 2050. Migration occurs cross-continental, within the continents and regionally within states due to push-pull factors (The World Bank 2022). The US and European countries are the highest recipients of immigrants from Africa, Asia, East Europe, Latin America, and the Caribbean. A significant number of these migrants migrate illegally after being pushed forcefully by conflicts of variant nature such as political violence, ethnic and religious conflicts, banditry, insurgency, and environmental crisis that made survival practically impossible in their habitats (Lieberman *et al.* 2018).

Africa is affected by climate change and cross-border migration. Even though the continent does not have the biggest incidence or frequency, the level of migration and cross-border movement is influential in the political, socioeconomic and cultural settings and changes in Africa in the 21st century (Africa Centre for Strategic Studies 2021). With about 40 million immigrants in Africa (14.58% of the total global migrants), the illegal cross-border movement is alarming, particularly in national security management (Anyorigya 2022). Depletion of Lakes, bush burning, and increasing activities of insurgents and bandits forcefully displaces communities from their native lands into cross-border migration, refugees and IDPs across countries (Teye 2020). West Africa seems to be the most affected because of the explosion of violence and deadly conflicts causing terrible humanitarian crises, displacement and forceful movement across national boundaries (Nshimbi & Moyo 2021).

Cross-border migration is associated with conflicts threatening West African states' national and regional security. There are assumptions that cross-border movements cause conflicts, but conflicts cause cross-border movements too (Behnassi 2017). The victims that are running away from domestic conflicts find themselves sometimes crossing national borders. In this regard, environmental disasters are escalated through the use of explosives and other chemical weapons during wars and violence, and desertion of farmlands by local farmers resulting in declined food productivity leading to food insecurity (Dryzek *et al.* 2011). The emergence of migrants leads to stress on resources and settlement of the targeted destination, thereby overstretching infrastructure leading to collapse and scarcity (Cheshmehzangi & Dawodu 2019). Conflicts emerging from cross-border movements propelled by climate change are affecting the security of West African states. It is pertinent to examine the causative factors and the trends to devise practical policy measures to mitigate the problem (UNOWAS 2018). The study adopted a documented research design method where data were collected from the existing resources on the study subject matter. The collected data were rigorously analysed, critically divested, and systematically interpreted to boost the quality of the body of knowledge in the area of study.

Perspectives on Climate Change

Climate change represents a chain of activities and reactions shaping global ecological and atmospheric conditions. This is caused specifically by emis-

sions of billions of tonnes of CO2 by industrialised countries and other unethical practices of mankind across the globe. The discourse on climate change occupied a significant position and drew important attention after the world had settled from the repercussions of World War II's devastation. It became quite noticeable and an issue of concern (Emanuel 2018). From 1945 to 2006, the number of carbon emissions and other toxins multiplied worldwide, and it is estimated that by the year 2030, carbon emissions will hit 40.2 billion. The menace of climate change was compounded by the emergence of new industrial countries and emerging economies in Asia and East Europe which increased the volume of emissions leading to global warming, Greenhouse effects, depletion of the ozone layer, contamination of the surrounding environment and habitat and accumulated impacts of climate change as recorded in drought, flood, desertification, deforestation, bush burning and other related effects (Siegel 2020). Climate change indisputably manifested in increased atmospheric water vapour, declining snow appearance, melting of ice, and changes in soil moisture, texture and fertility. The available natural resources for utilisation to supply water, food production and energy consumption are overstretched and stressed, which has negatively affected ecological settings, habitats and the environment across the world (Akhtar & Palagiano 2018).

The actions of mankind have successfully altered the water reserve, atmosphere and earth's environment for over 65 million years (Akhtar & Palagiano 2018). However, natural processes are influential in the current changes witnessed in climate change and changing habitats and the atmosphere. The earth does not always remain constant. Climate and biodiversity are essential for supporting the survival of living beings in the earth's environment. Unfortunately, these shared treasures by man and other living beings are under existential threats, which, by extension, can potentially terminate living beings from their habitats (Bush 2020). Climate change is a multifaceted phenomenon with varying effects on the ecosystem because it can invoke human security threats, including water, food, health hazards and other sustenance security. Changes in the world environmental map are witnessed in increasing heavy rainfalls and floods, bushfires and burning, the spread of global pandemics and other environmental changes that are drastically affecting the environment (Mal *et al.* 2018 and Woodward 2021). Several organisations made efforts to justify and sensitise the global society on the authenticity of climate change and the real threats that it poses to the survival of mankind and its neighbouring living beings. The Intergovern-

mental Panel on Climate Change (IPCC) and many scientific research bodies are reporting increased water temperature, ocean currents, ice melting, changes in rainfall patterns, scarcity of drinking water, food security, flooding and desert encroachment. Climate change is observed and reported with scientific data. One of the processes of determining practically the evidence of climate change is the atmospheric temperature measurements which provide strong documentation for climate change since the 1970s. The meteorological weather stations of nation-states, worldwide projects of the International Geophysical Year (IGY), Global Atmospheric Research Programme (GARP) and Global Climate Observing System (GCOS) are all research-based sources that provide valid and scientific data on climate change. According to the reports, the United States and China contribute about 38% of the emissions globally (Ziyadi *et al.* 2019).

Climate change represents a bigger challenge to survival and sustainability for earth's inhabitants because it has cultural, economic, political, and social implications. Central drivers of climate change are the increased incessant demand and energy usage heralded by increasing industrialisation and increased use of automobiles, machines and biofuels. Some natural processes immensely contributed to climate change, such as solar radiation, volcanic eruption, meteorites, and natural Greenhouse acceleration aided by anthropogenic activities that enrich the atmospheric concentration of GHGs (Prager 2020). Other natural processes identified included electromagnetic radiation, the Greenhouse effect, geographical and seasonal variations in energy balance and the earth's radiation balance as fueling climate change. The manmade causes include unethical and harmful practices from increaseing bush burning and bushfires, use of biofuels excessively, increased emissions from automobiles, increased release of toxic waste from industries, use of fossil fuels and other related ones (Morel 2020). One distinguishing view is the Anthropocene and Capitalocene school of thought which believed that the extractive and exploitative nature of capitalist mining companies and explorers jeopardised the host environment and is causing contamination of water, bush burning, global warming and other unethical practices, all in their bid to secure resources from the blessed resources endowed countries at cost for profit. This is seriously causing climate change worldwide, and the policies and alarms on climate are false alarms if the capitalist extractive and mining industries will not desist from their selfish activities (Milanez & Santos 2015; Tsing 2015; Angus 2016; Malm 2016; Acosta 2017; Altvater 2018; Haraway 2018; Moore 2018; Parenti 2018; Shanguhyia 2018; Vetlesen

2019 & Duquette 2020).

Climate change has several implications for global water supply, food security, health, movement, and migration. The increasing temperature from global warming is leading to declining rainfall (Sarkar *et al.* 2019). This affects agricultural and food production and economic sustenance. Water is shrinking, causing pollution, floods, drought, health risks, migration, and food insecurity. Climate change is escalating pressure and competition on global resources with implications of exposing millions of global inhabitants to the risk of food insecurity, conflicts, legal and illegal migration, and a high cost of energy (Cheshmehzangi & Dawodu 2019). Climate change has impacted the ozone layer and other strata of the earth's surface. A good example is global warming affects the cryosphere leading to ice melting, the rise of the sea above the anticipated level, retreat of Arctic Sea ice that changes in glaciers. Global warming affects the ocean in multiple ways, including changes in sea level, sea salinity, dissolved carbon dioxide, and ocean acidification. The biosphere too is influenced by climate change in many ways, such as migration in the North Atlantic, Coral bleaching and ocean acidification (Morano 2018). There is a huge risk and collateral damage to the marine ecosystem if the current environmental apocalypse is not averted as soon as possible, according to Shrivastav (2019), which is another implication of climate change.

Climate change has led to many decades of warming, precipitation and drought, the scarcity in water supply in some communities emanating from the depletion of lakes and sea drawback, severe storms and tsunamis and security threats for mankind. Climate change is making food security a global concern. There is an increasing difficulty in feeding the 7 billion humans, projected to be 8 billion by 2030 and 9 billion by 2050. The Food and Agriculture Organisation (FAO) projected that to meet food demand for all mankind in the year 2050, the annual world production of crops and livestock will need to be improved by 60% more than what was produced in 2006. In developing countries, particularly in Africa, about 80% of the above-required improvement should come from an increased yield, posing a formidable challenge (Behnassi 2017). Behnassi (2017) also agreed that the Global South would bear the burden of the effects of climate change more than other parts of the world because it has security threats in the region emanating from ethnic, religious and political violence that are displacing inhabitants in many regions and borders leading to the crisis of refugees and migration. This is despite the fact that the region is supplying less

contribution to the emissions and activities escalating global warming. Climate change may soon link with security threats and conflicts in Global South (Behnassi 2017). By the year 2080, the production of cereals will decline by 2.2%, according to FAO. Climate change is a serious threat to agriculture globally. The impact is palpable more in developing countries such as Sub-Saharan Africa, which has nearly 70% of its population relying on peasant farming. The alteration in temperature, rainfall, drought, and floods affects agricultural productivity. Climate change can potentially make the earth lose a substantial part of biodiversity in the future. In West Africa, climate change is compounding the already harsh weather of the arid and semi-arid land resulting in drought, which causes famine, economic hardship, mass migration, conflict, and death. The evidence has shown that there was a near absence of drought in the African region in 1500, 1600, 1700 and some parts of 18 centuries. Climate change is attributed to the changes that created the current condition (Fleming 2020).

During the twentieth century, the sea level rose in West Africa, on average by 1.7 mm per year, or 17 cm in 100 years (Mbaye 2019). This trend is quickening, with current estimates projecting around a 30 to 50 cm rise between 1990 and 2100. Beyond causing major losses in coastal infrastructure, this would also expose many human settlements to the risk of inundation (Mbaye 2019). In 2019, 195% more Africans were affected by extreme weather than in 2018. A total of 89 disasters occurred across the continent. Eleven storms affected over 4.5 million people and accounted for 1 300 deaths (Mbiyozo 2021). Most climate-related migration in Africa occurs within countries or between neighboring countries. Over 2.6 million and 3.4 million new weather-related displacements occurred in West Africa in 2018 and 2019. Climate change is projected to increase migration and cross-border movement in West Africa. With 1.7°C global warming by 2050, 17–40 million people could migrate internally to West Africa, increasing to 56–86 million for 2.5°C >60% in West Africa (Anyorigya 2022). By 2050, West African countries could see up to 32 million people moving within their own countries due to climate factors. Niger will see the highest internal climate migrants, followed by Nigeria. Still, smaller countries like Senegal and Benin will have a larger share of internal climate migrants in the next few decades (The World Bank 2022). The World Bank also reported that there will be 86 climate change-induced migrants in Africa by 2050, and West Africa is anticipated to occupy about 50% of the share of the migration. This is because some jobs in agriculture, mining and fishing will disappear

due to the effects of climate change if adequate measures are not taken. This will have a great share of the conflicts that the continent will experience because those stranded migrants that crossed borders may be engaged in crimes or violence, or they may get themselves engaged by other groups due to their conditions and vulnerabilities (Africa Centre for Strategic Studies 2021). Gashaw (2017) presented a different view of cross-border migration in West Africa and other African states. He believed that the arbitrary and improper design of colonial borders by colonial exploiters led to a sharp division among kins and clans of the same ancestral umbilical cord. Any slide setback will make them desire to catch up with their brothers across borders to get assistance.

There were some efforts regionally and internationally to address or counter the challenge of climate change. The first was a Conference held on the environment in 1972 titled 'The United Nations Conference on the Human Environment (UNCHE)', which aimed at awakening the conscience of the global key players in environmental protection and policies (Elliot 2004). The Conference gingered a response which was the birth of the IPCC from the Montreal Protocol spearheaded by the United Nations in 1987. The major concern of the 1987 agreement was a reduction in the industrial chemicals puncturing the ozone layer (Giddens 2009). It was followed by the United Nations Framework Convention on Climate Change of 1992, which came into action in 1994 to stabilise Greenhouse gas emissions at a level that would prevent dangerous anthropogenic interference with the climate system. The Kyoto Protocol was signed in 1997 in Japan to actualize this goal Under the terms of the Kyoto Protocol, the parties or negotiating states agreed to make cuts in carbon emissions measured from 1990 levels (Lieberman *et al.* 2018). The Protocol suffered a setback when the United States refused to sign the attempt in 2001, while Canada withdrew in 2011. The Protocol also neglected mandatory cuts in emissions in emerging economies like China and India, which later became some of the major forces of emissions and global warming (Dryzek *et al.* 2011 and Kalin & Schrepfer 2012).

Nature, Dimension and Pattern of Cross-Border Migration in West Africa

Migration in the 21st-century world is becoming a key policy issue of concern for major global players (Casentini 2022). In many parts of the world, the

increasing resurgence of wars, violence, civil unrest, ethnic and religious conflicts, climatic factors and ecological imbalance, inequality, economic insecurity, and many other causative agents are pushing people to migrate forcefully or willingly (Cudd 2016). Migration and cross-border movements take different forms. In some cases, people move with the intention of permanent stay in their target destination for better means of living. In other instances, it is temporary for conditions such as drought, flood, conflicts, or economic opportunity. Some intervening variables may turn permanent migration into temporary and vice versa. Migration can also be legal and illegal, and it takes place within a state from one region to another, within a continent or intercontinental Several global migration policies have recently been initiated to motivate, discourage, accommodate, or cater to migrants depending on the situation (Haour-Knipe & Rector 1996). Migration is altering the global population structure. There are 1 billion people, about 1/7 of the world's population, who are migrants. Some 258 million people are international migrants, 40 million are internally displaced, and 24 million are refugees or asylum seekers (Corradi 2022). In 2018, there is no longer a single state that can claim to be untouched by human mobility (Danziger 2019). And in 2022, nation-states globally are still battling with internal and external migration motivated by climatic factors and conflicts. Almost all countries of the world are affected by the exodus or being recipients of migrants (Casentini 2022).

In contrast, North America, Western Europe, Australia, and other parts of the world remain the major recipients of this type of migration, mostly resulting from conflicts and climatic conditions (Reed & Keely 2001; Hill 2004; De Blasi 2019; Mbiyozo 2021; Calabro 2022 and Di Pietro 2022). Forced migration is illegal, but it is readily embraced with sympathy. Legislations are made to accord them a status of stay, rights of health, shelter, survival, and even temporary jobs in the case of skilled ones and able-bodied. The acceptance of forced migration and the explosion in global migration is supported by the globalisation of human rights and opportunities and limits of international law and transnational activism (Schmitz 2010).

Cross-border migration is not a new development in the history of mankind. It has been taking place for billions of years since the world is existing and mankind is living on earth (Corradi 2022). However, changes are rapidly reshaping the structure and international systems, like establishing nation-states with demarcated national boundaries, entry and exit permits and restrictions of movement across them (Dal Zotto 2022).

Cudd & Lee (2016) observes that contemporarily, climate change is the most influential factor pushing for cross-border migration more than any other causal factor. Of course, conflicts and wars play a significant role in cross-border migration. Even wars and conflicts are, in most instances, the products of the effects of climate change, such as competition over scarce resources caused by climate change. Brown (2008) reported that by 2050, around 200 million migrants would be pushed out only by climate factors besides the other drivers and numbers emanating from them. The security dilemma is making cross-border migration an inevitable phenomenon that the world has to contain and prepare for. But the main concern is that the migrants alone can constitute a security problem. This is the point raised by McIlwaine (2011) on global migration, but Calabro (2022) has seen it differently, where he opined that the politicisation of migration, cross-border movement and refugee crisis is raising more questions than answers on whether global migration is receiving the deserved attention or is being swept under the carpet leading to the escalating crisis.

Cross-border migration is aided by unmanned or porous borders that naturally exist or are gradually artificialised by war and conflicts, such as Libya, Syria, the West African zone, and other flashpoints, thereby increasing movement across borders more illegal than legal (Morone 2022). Dal Zotto (2022) stresses that illegal migration and unlawful cross-border movement centrally target Europe. He submitted that most of the arrivals into Italy for European destinations by sea are illegal Still, the critical issue is that their right to protection according to international law on migration is blocking Italy's chance of repatriating them back on arrival Further, Dal Zotto (2022) believed that Italy could protect itself. In some cases, the militarisation of borders and rigidity in overprotection enabled the intending migrants to devise alternative strategies for illegal cross-border migration (Schneider 2011). According to Corradi (2022), a good example is the US-Mexico border, in which the militarisation of the Frontera axis, the ineffectiveness of the wall and the pervasive legitimacy dialogue are yielding a process that enables cross-border migration illegally.

The migrants faced several inhumane treatments in their destination despite the legal backing they were temporarily given in some cases. For instance, those who cross national borders face marginalisation, segregation, and urban ghettoisation in America and Europe (Scotto 2022), recruitment through temporary employment agencies in jobs without security and a severance package compensation, living at the will of the sponsors and lack

of legal protection (Di Pietro 2022), criminalisation of illegal migration leading to harsh subjective conditions such as sleeping openly in winter, open defecation, and exposure to rainfall and high risk of deadly diseases (Brocka 2022). Despite the suffering, some measures are being taken to protect the migrants who are crossing national borders even if it is illegal, including taking over unaccompanied minors by UN Migration and the host country that is being crossed for adequate care (Gromek-Broc 2022). There is the provision of the rights to free legal aid for the migrants for effective access to justice as advocated by UN Migration (Favalli 2022). The UN Migration further pushed the creation of borders of identity in times of war and conflict, such as the Syrian exit route to Europe in running away from the civil war, Myanmar's Rohingya designation to India, Pakistan, Bangladesh, Malaysia and Indonesia or Nigerian access route to the Niger Republic for those running away from banditry and to Chad and Cameroon for those displaced by an insurgency of Boko Haram (Casentini 2022). All these measures helped immensely in providing succour to the migrants both legal and illegal for a kind of decent treatment.

All countries are at risk of cross-border security threats that may emerge from cross-border illegal movements. These risks are majorly transferred and political risks, but the risks' nature and level differ from state to state (Krayenbuehl 2001). One of the most affected areas by cross-border migration is West Africa, where conflicts driven by climatic factors such as flood and drought push for legal and illegal internal and external movement (Herbert & Birch 2022). The complexity of the political, economic, and sociocultural history of the Trans-Saharan area indicates that cross-border movements for many centuries succeeded in forming multi-ethnic, divisive, or dispersed ethnic and religious affiliations that still identify with each other even in post-colonial borders (Casentini 2022 and Gromek-Broc 2022). It should be noted that West Africa is the first region in the African continent to encourage cross-border movement and migration through the ECOWAS and the adoption of a common passport, but even with these tremendous efforts, criminals, smugglers, and traffickers are utilising the free border movement for their crimes (Organisation of Economic Cooperation and Development 2017).

The World Bank's *Groundswell* according to UN DESA (2021) reports that climate change, an increasingly potent driver of migration, could force 216 million people across six world regions to move within their countries by 2050. Hotspots of internal climate migration could emerge as

early as 2030 and continue to spread and intensify by 2050. By 2050, West Africa could see as many as 86 million internal climate migrants; East Asia and the Pacific, 49 million; South Asia, 40 million; North Africa, 19 million; Latin America, 17 million; and Eastern Europe and Central Asia, 5 million (The World Bank 2021). The top ten destination countries for migrants in West Africa and as share of the population include Cote D' Ivoire 2,564,857 (9.7%), Nigeria 1,308,568 (0.6%), Burkina Faso 723,989 (3.5%), Mali 485,829 (2.4%), Ghana 476,412 (1.5%), Benin 394,276 (3.3%), Niger 348,056 (1.4%), Togo 279,936 (3.4%), Senegal 279,929 (1.6%) and Gambia 215,659 (8.9%) (UN DESA 2021). By the second quarter of 2020, 90% of the 7.4 million migrants living in West Africa were cross-border migrants. The top ten migration corridors in West Africa are Burkina Faso-Cote D'Ivoire 1,376,350, Cote D'Ivoire to Burkina Faso 562,117, Mali-Cote D'Ivoire 522,146, Benin-Nigeria 377,169, Ghana-Nigeria 238,284, Cote D'Ivoire-Mali 195,271, Mali-Nigeria 172,481, Guinea-Cote D'Ivoire 167,516, Togo-Nigeria 158,262 and Senegal-Gambia 154,739 (UN DESA 2021).

Climate Change, Cross-Border Movement and Conflict in West Africa

Climate change directly links migration and cross-border movement problems in West Africa. This is owing to the region's nature, which has the potential of experiencing climate change effects in declining rural agricultural and coastal fishery productivity, shifting patterns of nomadic pastoralism, migration inspired by floods, landslides, droughts, conflicts over resources and other disasters (United Nations 2019). Africa has 109 international boundaries that are approximately 28,000 miles. Out of these boundaries, less than 25% are restricted or officially recognised and protected. African boundaries are porous, with a low level of effective management and surveillance. The African international boundaries are protected by about 350 official road crossing points, 1 for every 80 miles of the boundary. Some land boundaries in Africa are not crossed by road, rail or waterway like the Central Africa Republic-Congo, Tanzania-the Democratic Republic of the Congo). 109 international boundaries divide 177 cultural or ethnic groups. 20% of African borders are less permeable because of 27 national parks and game/nature reserves. Only 414 roads cross borders in Africa. Sixty-nine roads cross borders with no customs posts. Only 20

African boundaries are crossed by railways, and there are 20 cross-border ferry routes (Okumu 2011).

The West African states are experiencing scorching effects of poverty, with around 50% of the population living in poverty spending less than $1.20 per day (United Nations Human Rights 2021). Temperatures in West Africa are rising 1.5 times faster than the global average. Rainfall in the region is erratic, wet seasons are shrinking, and Lakes, specifically Lake Chad, have depleted by over 95% in three decades (Mbaye 2019). Flooding is becoming more common in West Africa; drought, unpredictable weather, and changing climatic conditions negatively affect agricultural productivity, with declining output and available pastureland decreasing continuously. It is reported (Mbiyozo 2021) that around 65% of West Africa's cultivable land is degraded. The region is experiencing chronic food insecurity due to declining production, with 11.4 million people in West Africa and the Sahel in 2020. More than 40 million people will be at severe food insecurity risk in 2021 (United Nations Human Rights 2021). The number is anticipated by World Bank (2022) in 2022 to be 222 million people in 53 countries emerging from high inflation experienced in almost all countries of the world and the effects of Russia-Ukraine war (World Bank 2022). The World Bank (2022) further suggests that $5 billion to $7 billion is required to intervene in rescuing most vulnerable households in 48 countries while a sum of $50 billion is needed in addressing food security crisis for the next 12 months. About 50 million people in the Sahel and 30 million in West Africa who rely on herding for their livelihoods compete for land resources with farmers, resulting in farmers-herders clashes. Climate change in West Africa encounters poverty, food insecurity, population bulge, gender violence, political instability, armed conflicts, misgovernance and human rights risks making it difficult to survive except through cross-border migration (United Nations Human Rights 2021).

Migration and cross-border movement became the assistance for the affected population in West Africa. For instance, herders in Burkina Faso, Niger Republic, Mali, and other West African states migrated to places like Nigeria and Ghana when the water for their animals shrank on the eve of the rain season departure in their places. Many inhabitants of Northeast Nigeria, Niger, Northern Cameroon, and Chad crossed borders running away from the Boko Haram conflict. Conflict induced by climate change factors in West Africa includes the drivers that set people against each other such as desertification and drought leading to contests over resources and refugee

crisis (UNHR 2021). For instance, a significant cross-border movement is recorded from other African countries into Northeast and Northcentral Nigeria, where communities have experienced climate change effects tied directly to violent conflicts. Such conflicts are known as farmers-herders conflicts, which were influenced by the scarcity of land and water resources aided by climate change which extrapolated into ethnoreligious conflicts that further increased poverty, food insecurity, and lack of access to economic and social rights. The same scenario of cross-border movement in Northwest Nigeria ushered in a violent clash between Fulani pastoralists and Hausa farmers, leading to the displacement of approximately 178,000 people in 2019 (The World Bank 2021).

It is emphasised that there are links between the climate crisis, migration, and conflicts in West Africa, which are intensifying. A significant percentage of the population in the region derived their sustenance from sectors that are climate-related extremes of weather and sea-level rise. This consists of agriculture, fishing, herding and others. As climate change intensifies, it is threatening livelihoods, which fuels conflicts and compels people in the developing world to cross-border movement. Migration is the most feasible coping strategy in West Africa, but it is accompanied by challenges that cause conflicts. Although countries in West Africa are the least carbon emissions contributing only 7.1% of the total global Greenhouse gas emissions (Mbiyozo 2021), they are the hardest hit by climate change impacts resulting from extreme poverty, food insecurity where the Economist Intelligence Unit's Global Food Security Index (GFSI) ranking, Mali is 86, Senegal 87, Burkina 97, Niger 104, and Chad 108 (Mbaye 2019).

Northern Nigeria, Chad, Niger and Mali are the most affected countries. In 2012 alone, more than 6 million people in North-Eastern Nigeria were forcibly displaced due to floods, and more than 500,000 people were displaced in Chad. Lake Chad depleted by 90% in recent years, and about 25 inhabitants in the neighbouring Lake rely on it for survival in agricultural production, fishing, and livestock production. The drastic decrease in Lake Chad's water created food insecurity for over 7 million inhabitants in the area. These climatic conditions contributed to cross-border migration, with around 2.5 million already displaced by Boko Haram conflicts from 2009 to 2020. Cross-border migration from climatic-induced factors will increase in Africa from the population bulge. The total population of Africa is projected to grow from 1.2 billion to 2.5 billion in 2050. The population bulge will overstretch the scarce resources causing

competition over resources and conflicts that will force cross-border migration. These countries are also the most dependent on agriculture in the world. The consequence of these alarming figures is that conflict motivated by climatic changes and cross-border movement is inevitable and will continue to increase in West Africa (Torelli 2017). In another view, Sunday & Okechukwu (2014) argue that cross-border movement in West Africa is associated with cross-border crimes perpetrated in camouflage using the leverage of cross-border migration. Drug peddling, human trafficking, illicit movement of Small Arms and Light Weapons (SALW), money laundering, smuggling in contrabands and other illegal activities are carried out cross-border because of cross-border movement forced by climatic conditions. These crimes and illicit weapons are fuelling armed group violence, leading to cross-border conflicts.

The competition over resources in West Africa, engineered by climatic conditions, escalated violence, and conflict in West Africa, leading to increased displacement and cross-border movement from an estimated 70,000 in 2018 to 1.5 million in 2020. Burkina Faso is the most affected as a staggering increase in the number of IDPs by 100% is recorded from January to November 2020. Nigeria followed with displacement or cross-border movement of the inhabitants of Northwest Nigeria due to banditry, with around 140,000 of them moving to the neighbouring Niger Republic. The region's mass displacement has fuelled the ongoing food security crisis since displaced people have less or no access to farmland and declining agricultural productivity and livestock production. This will fuel further conflict over scarce resources and survival.

Pastoralism is an important sector or occupation affected by climate change, cross-border movement, and conflict in West Africa. It is estimated that pastoralism is the livelihood for around 268 million Africans, and about 60% are located in West Africa. It is observed that there is a direct connection between pastoralism and cross-border movement and conflicts. Pastoralists are affected by armed insurgencies, cattle rustling, conflicts between herders and farmers, state violence, violent crime and gender-based violence. Pastoralists across national borders in West Africa encounter increasing conflicts, including displacing populations, changing herder routes, and increasing the risks of herder militarisation (Herbert & Birch 2022). Pastoralists are both actors and victims of these conflicts in West Africa. Climate change is an important driver that caused the conflict between pastoralists, farmers, and other groups. The decreasing rainfall, declining

agricultural productivity, draining water supply, and forages affect the pastoralists and their herds. For the ECOWAS region, plus Mauritania, FAO statistics approximate a total of 73 million cattle, 4.6 million camels, 110 million sheep and 157 million goats (a total of 267 million small ruminants). The number of pastoralists will likely be in the tens of millions (UNOWAS 2018). A large number of livestock in stock for the West African pastoralists compelled cross-border movement in search of better grazing land and water for their animals' survival (De Blasi 2019). The West African governments could not design a sound policy that would cater to the pastoralist movement, and which can protect farmers' produce from being destroyed by the migrating pastoralists. In the process, conflict emerged, multiplied by the impact of climate change that pushed the pastoralists for survival The farmers experiencing frustration due to declining output are also influenced by climate change (Nshimbi & Moyo 2021).

Conclusion and Recommendation

There is a triangular relationship between climate change, cross-border migration and conflicts in West Africa. The first led to the second, and the second resulted in the third. Adequate statistics were provided by various studies and agencies, which were scrutinised and analysed in this study. Climate change affects West Africa by decreasing water level and supply, declining rainfall, and decreasing agricultural productivity and other economic activities. The impacts of climate change resulted in cross-border movement in search of greener pastures and survival Still, the movement also caused cross-border conflicts and crimes, particularly competition over resources. Thus, this study identified that these three major issues of climate change, cross-border movement or migration and conflicts should be addressed as disentangled phenomena. Therefore, this study recommends that a tripartite policy be designed by West African states and ECOWAS in collaboration with African Union to address the three major issues simultaneously. Secondly, the weak security architecture in West Africa should be restructured, especially in providing enough security personnel on national borders to check unmonitored cross-border movements and crimes. Indigenous adaptation measures and resilience strategies should be devised either individually or collectively by West African countries, which can equip their populace with the means that may counter the harsh effects of climate change, mitigate incessant cross-border migration and minimise conflicts.

References

Acosta, A. 2017. Post-Extractivism: From Discourse to Practice: Reflections for Action. In Cabonnier, G., H. Campodonico & S.T. Vazquez (eds.): *Alternative Pathways to Sustainable Development: Lessons from Latin America.* (International Development Policy series No.9.) Geneva & Boston: Graduate Institute Publications, Brill-Nijhoff. https://doi.org/10.4000/poldev.2356

Africa Centre for Strategic Studies 2021. *African Migration Trends to Watch in 2022*. Washington: Africa Centre for Strategic Studies. https://doi.org/10.1007/978-3-319-61346-8

Akhtar, R. & C. Palagiano 2018. Climate Change and Air Pollution: An Introduction. In Akhtar, R. & C. Palagiano (eds.): *Climate Change and Air Pollution: The Impact on Human Health in Developed and Developing Countries*. Geneva: Springer. https://doi.org/10.1007/978-3-319-61346-8

Altvater, E. 2018. The Capitalocene or Geoengineering against Capitalism's Planetary Boundaries. In Moore, J.W. (ed.): *Anthropocene or Capitalocene? Nature, History and the Crisis of Capitalism*. Oakland: Kairos PM Press.

Angus, I. 2016. *Facing the Anthropocene Fossil Capitalism and the Crisis*. New York: Monthly Review Press.

Anyorigya, D.A. 2022. Climate Change: Eight Facts on Africa from IPCC Report. *CNR Citi Newsroom*. Available at: https://citinewsroom.com/2022/03/climate-change-eight-facts-on-africa-from-ipcc-report/ (Accessed on 5th May 2022 at 04:45 pm.)

Behnassi, M. 2017. Climate Security as a Framework for Climate Policy and Governance. In Behnassi, M. & K. McGlade (eds.): *Environmental Change and Human Security in Africa and the Middle East*. Geneva, Switzerland: Springer Nature. https://doi.org/10.1007/978-3-319-45648-5_1

Brocka, Z. 2022. Criminalisation of Irregular Migration. Between the Domestic Courts and the Court of Justice of the European Union. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-11

Brown, O. 2008. *Migration and Climate Change*. Geneva: International Organisation for Migration. https://doi.org/10.18356/26de4416-en

Bush, M.J. 2020. *Climate Change and Renewable Energy: How to End the Climate Crisis*. New York: Palgrave Macmillan. https://doi.org/10.1007/978-3-030-15424-0

Calabro, A.R. 2022. Introduction: Drawing, Crossing, Deleting the Borders. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-1

Casentini, G. 2022. Borders of Identity: Return Migration and Failure in West Africa. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-23

Cheshmehzangi, A. & A. Dawodu 2019. *Sustainable Urban Development in the Age of Climate Change People: The Cure or Curse*. New York: Palgrave Macmillan. https://doi.org/10.1007/978-981-13-1388-2

Corradi, F. 2022. Irrational Walls: Lessons from US - Mexico Border. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis.

Cudd, A.E. & W. Lee 2016. Introduction. In Cudd, A.E. & Lee, W. (eds.): *Citizenship and Immigration - Borders, Migration and Political Membership in a Global Age*. Geneva: Springer. https://doi.org/10.1007/978-3-319-32786-0_1

Dal Zotto, E. 2022. Defining Migrants, Defining Borders. Arrivals in Italy by Sea in 2011 Between Illegality and Right to Protection. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-5

Danziger, R. 2019. Confronting the Challenges of Migration in West and Central Africa. *Africa Renewal*. Available at: https://www.un.org/africarenewal/magazine/december-2018-march-2019/confronting-challenges-migration-west-and-central-africa (Accessed on 5th May 2022 at 05:03 pm.) https://doi.org/10.18356/3948b070-en

De Blasi, S. 2019. Environmental Migration and Conflict in West Africa. *Security Distiller*. Available at https://thesecuritydistillery.org/all-articles/environmental-migration-and-conflict-in-west-africa (Accessed on 5th May 2022 at 05:11 pm.)

Di Pietro, F. 2022. Migrant Workers and the Sponsorship System. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Inter-*

disciplinary Perspective. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-9

Dryzek, J.S., R.B. Norgaard & D. Schlosberg 2011. Climate Change and Society: Approaches and Responses. In Dryzek, J.S., R.B. Norgaard & D. Schlosberg (eds.): *The Oxford Handbook of Climate Change and Society*. New York, USA: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199566600.003.0001

Duquette, K. 2020. Environmental Colonialism. *Postcolonial Studies* January. Available at: https://scholarblogs.emory.edu/postcolonialstudies/2020/01/21/environmental-colonialism/#: (Accessed on 05th May 2022 at 05:03 pm.) https://doi.org/10.56804/Avishkara.2022.1102

Elliot, L. 2004. *The Global Politics of the Environment*. New York, USA: Palgrave Macmillan.

Emanuel, K. 2018. *What We Know about Climate Change*. Boston: Massachusetts Institute of Technology. https://doi.org/10.7551/mitpress/11722.001.0001

Favalli, S. 2022. The Rights to Free Legal Aid for Migrants. For Effective Access to Justice. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-16

Fleming, R.J. 2020. *The Rise and Fall of the Carbon Dioxide Theory of Climate Change*. Geneva: Springer. https://doi.org/10.1007/978-3-030-16880-3

Gashaw, T. 2017. *Colonial Borders in Africa: Improper Design and its Impact on African Borderland Communities.* Washington: Wilson Centre.

Giddens, A. 2009. *The Politics of Climate Change*. Cambridge: Polity Press.

Gromek-Broc, K. 2022. Unaccompanied Children in the EU. Towards Higher Standard of Protection and Support for 'Children on the Move' Unaccompanied Minors-Immigrants in the EU. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-15

Haour-Knipe, M. & R. Rector 1996. Introduction. In Haour-Knipe, M. & Rector, R. (eds.): *Crossing Borders: Migration, Ethnicity and AIDS*. London: Taylor & Francis.

Haraway, D.J. 2018. Staying with the Trouble: Anthropocene, Capitalocene, and Chthulucene. In Moore, J.W. (ed.): *Anthropocene or Capitalocene?*

Nature, History and the Crisis of Capitalism. Oakland: Kairos PM Press.

Herbert, S. & I. Birch 2022. *Cross-border Pastoral Mobility and Cross-border Conflict in Africa - Patterns and Policy Responses. Evidence Synthesis*. Birmingham, UK: GSDRC, University of Birmingham.

Hill, K. 2004. *War, Humanitarian Crises, Population Displacement and Fertility: A Review of Evidence.* Washington: The National Academic Press.

Jahren, H. 2020. *The Story of More: How we Got to Climate Change and Where to Go from Here*. New York: Vintage Books.

Kalin, W. & N. Schrepfer 2012. *Protecting People Crossing Borders in the Context of Climate Change: Normative Gaps and Possible Approaches*. United Nations: UNHCR.

Krayenbuehl, T.E. 2001. *Cross-border Exposures and Country Risk Assessment and Monitoring*. Cambridge: Woodhead Publishing Limited. https://doi.org/10.1016/B978-1-85573-512-5.50007-4

Lieberman, B. & E. Gordon 2018. *Climate Change in Human History, Pre-History to the Present*. London, UK: Bloomsbury Academic.

Mal, S., R.B. Singh, C. Huggel & A. Grover 2018. Introducing Linkages between Climate Change, Extreme Events, and Disaster Risk Reduction. In Mal, S., R.B. Singh & C. Huggel, (eds.): *Climate Change, Extreme Events and Disaster Risk Reduction Towards Sustainable Development Goals*. Geneva: Springer. https://doi.org/10.1007/978-3-319-56469-2

Malm, A. 2016. *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. London: Verso.

Mbaye, A.A. 2019. *Africa's Climate Crisis, Conflict, and Migration Challenges*. Washington: Brookings.

Mbiyozo, A. 2021. *African Cities must Prepare for Climate Migration*. U.S.: Institute for Security Studies.

McIlwaine, C. 2011. Introduction: Theoretical and Empirical Perspectives on Latin American Migration across Borders. In McIlwaine, C. (ed.): *Cross-Border Migration among Latin Americans European Perspectives and Beyond*. New York: Palgrave Macmillan. https://doi.org/10.1057/9781137001887_1

Milanez, B. & R.S.P. Santos 2015. Topsy-turvy Neo-Developmentalism: An Analysis of the Current Brazilian Model of Development. *Revista de Estudios Sociales* 53,2: 12 - 28.

https://doi.org/10.7440/res53.2015.01

Moore, J.W. 2018. Anthropocene or Capitalocene? Nature, History and the Crisis of Capitalism. In Moore, J.W. (ed.): *Anthropocene or Capitalocene? Nature, History and the Crisis of Capitalism*. Oakland: Kairos PM Press.

Morano, M. 2018. *The Politically Incorrect Guide to Climate Change*. Washington: Regnery Publishing.

Morel, B. 2020. *Real Option Analysis and Climate Change: A New Framework for Environmental Policy Analysis*. Geneva: Springer. https://doi.org/10.1007/978-3-030-12061-0

Morone, A.M. 2022. Containment Policies, Human Mobilities and Phantom Borders. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-4

Nshimbi, C.C. & I. Moyo 2021. West Africa: Borderlands in West Africa are Ungoverned – Why this is Bad for Security. *The Conversation*. Available at: https://theconversation.com/borderlands-in-west-africa-are-ungoverned-why-this-is-bad-for-security-161453 (Accessed on 5th May 2022 at 05:15 pm.)

Okumu, W. 2011. Border Management and Security in Africa. *Borderlands Knowledge Hub*. Available at: https://www.bkhub.org/library/wafula-okumu-border-management-and-security-in-africathe-africa-union-border-programme-june-2011/ (Accessed on 5th May 2022 at 05:08 pm.)

Organisation of Economic Cooperation and Development 2017. *Cross-border Co-operation and Policy Networks in West Africa.* Paris: OECD.

Parenti, C. 2018. Environment-Making in the Capitalocene: Political Ecology of the State. In Moore, J.W. (ed.): *Anthropocene or Capitalocene? Nature, History and the Crisis of Capitalism*. Oakland: Kairos PM Press.

Prager, E. 2020. *Dangerous Earth: What We Wish We Knew about Volcanoes, Hurricanes, Climate Change, Earthquakes, and More*. Chicago: The University of Chicago Press. https://doi.org/10.7208/chicago/9780226541723.001.0001

Reed, H.E. & C.B. Keely 2001. *Forced Migration and Mortality: Roundtable on the Demography of Forced Migration Committee on Population*. Washington: National Academy Press.

Sarkar, A., G.W. van Loon & D. Watson 2019. Introduction. In Sarkar, A.

Sensarma, S.R. & G.V. van Loon, (eds.): *Sustainable Solutions for Food Security Combating Climate Change by Adaptation*. Geneva: Springer. https://doi.org/10.1007/978-3-319-77878-5_1

Schmitz, H.P. 2010. The Globalization of Human Rights Norms: Understanding the Opportunities and Limits of International Law and Transnational Activism. In Jackson, D.W., M.C. Tolley & M.L. Volcansek (eds.): *Globalising Justice Critical Perspectives on Transnational Law and the Cross-Border Migration of Legal Norms*. New York: State University of New York Press.

Schneider, D. 2011. *Crossing Borders: Migration and Citizenship in the Twentieth-Century United States*. Cambridge: Harvard University Press. https://doi.org/10.4159/harvard.9780674061309

Scotto, A. 2022. Migrants and Internal Borders: Rural Ghettoisation in Southern Italy. In Calabro, A.R. (ed.): *Borders, Migration and Globalization: An Interdisciplinary Perspective*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003106517-8

Shanguhyia, M.S. 2018. Colonialism and the African Environment. In Shanguhyia, M. & T. Falola (eds.): *The Palgrave Handbook of African Colonial and Postcolonial History*. New York: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-59426-6_2

Shrivastav, A. 2019. *The Science and Impact of Climate Change*. Geneva, Switzerland: Springer Nature.

Siegel, F.R. 2020. *Adaptations of Coastal Cities to Global Warming, Sea Level Rise, Climate Change and Endemic Hazards*. Geneva: Springer. https://doi.org/10.1007/978-3-030-22669-5

Singh, V.P. 2018. Urbanization and Ecological Sustainability: Sustainable Urban Ecosystems: Problems and Perspectives. In Sarma, A.K., V.P. Sign, R.K. Bhattacharjya & S.A. Kartha (eds.): *Urban Ecology, Water Quality and Climate Change*. Geneva: Springer.

Sunday, O.V.O. & O.R. Okechukwu 2014. Cross Border Crimes in West African Sub-Region: Implications for Nigeria's National Security and External Relations. *Global Journal of Human – Social Sciences* 14,3: 44 - 57.

The United Nations 2019. *Deadlier Conflicts, Climate Change Threaten Cross-Border Herding in West Africa, Delegates Tell Economic and Social Council, Peacebuilding Commission*. Washington: The United Nations.

The World Bank 2021. *Climate-induced Migration and Conflict in West Africa*. Washington: The World Bank.
The World Bank 2022. *Climate Migration in Africa: How to Turn the Tide*. Washington: The World Bank.
The World Bank 2022. *Food Security Update.* Available at: https://www.worldbank.org/en/topic/agriculture/brief/food-security-update# (Accessed on 23 October 2022 at 10:13 pm.)
Torelli, F.M. 2017. *Climate-driven Migration in Africa*. European Union: European Council on Foreign Relations.
Tsing, A.L. 2015. *The Mushroom at the End of the World on the Possibility of Life in Capitalist Ruins.* Princeton: Princeton University Press. https://doi.org/10.1515/9781400873548
UN DESA 2021. *Migration Data in Western Africa*. Abuja: UN DESA.
UNHCR 2021. *The Impact of the Sahel Conflict on Cross-border Movements from Burkina Faso and Mali towards Côte d'Ivoire and Ghana*. Burkina Faso: UNHCR.
United Nations Human Rights Office of the High Commissioner 2021. *Human Rights Climate Change and Migration in the Sahel*. UNHRO.
UNOWAS 2018. *Pastoralism and Security in West Africa and the Sahel Towards Peaceful Coexistence.* United Nations: UNOWAS Study.
Vetlesen, A.J. 2019. *Cosmologies of the Anthropocene Panpsychism, Animism, and the Limits of Posthumanism*. London: Routledge, Taylor & Francis. https://doi.org/10.4324/9780429060564
Woodward, J. 2021. *Eyewitness Climate Change*. London: Penguin Random House.
Ziyadi, M., A. Dahbi, A. Aitlhaj, A. El Ouahrani, A. El Ouahidi & H. Achtak 2019. Terraced Agroforestry Systems in West Anti-Atlas (Morocco): Incidence of Climate Change and Prospects for Sustainable Development. In Castro, P., A.M. Azul, W.L. Filho & U.M. Azeiteiro (eds.): *Climate Change – Resilient Agriculture and Agroforestry Ecosystem Services and Sustainability*. Geneva: Springer. https://doi.org/10.1007/978-3-319-75004-0_1

Dr. Babayo Sule
Lecturer and Head of the Department of International Relations
Federal University of Kashere Gombe State
Nigeria
babayosule@gmail.com

Dr. Usman Sambo
Senior Lecturer
Department of Public Administration
Yobe State University
Damaturu
Ussambo2@gmail.com