

**THE ROLE OF ARMED CONFLICT AND
CLIMATE CHANGE ON CHARCOAL TRADE
IN SOMALIA: A CASE OF JUBBALAND
STATE OF SOMALIA**

IRSHAD MOHAMUD SHEIK DAHIR

**MASTER OF ARTS
IN PUBLIC POLICY**

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**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
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IRSHAD MOHAMUD SHEIK DAHIR

**AN INDEPENDENT STUDY SUBMITTED TO CHIANG MAI UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARTS
IN PUBLIC POLICY**

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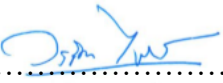
THIS INDEPENDENT STUDY HAS BEEN APPROVED TO BE A PARTIAL
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IN PUBLIC POLICY


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2 June 2023

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To

My mother, my father, my older brother Mohamed Sadik, my younger siblings Abdalla and Yakub, my beautiful twin sisters Aisha and Fatima, my wonderful youngest brother Abdiaziz and finally my lovely wife Asia, who have supported me throughout my academic journey and encouraged me to pursue my passion for Public Policy. Their extraordinary confidence in me and constant encouragement have been valuable, and I am grateful for their guidance and support. This research paper serves as a testament to their unwavering trust in me and their belief in the transformative power of knowledge and education. I will be forever appreciative of their presence in my life and contributions to my personal and intellectual development.

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Irshad Mohamud Sheik Dahir

หัวข้อการค้นคว้าอิสระ	ผลกระทบของความขัดแย้งสู้รบและการเปลี่ยนแปลงสภาพ ภูมิอากาศต่อการค้าถ่านไม้ในประเทศโซมาเลีย กรณีศึกษารัฐจูบาแลนด์
ผู้เขียน	นายอิลาชาด โมฮามุด เซค คาร์เฮร์
ปริญญา	ศิลปศาสตรมหาบัณฑิต (นโยบายสาธารณะ)
อาจารย์ที่ปรึกษา	ผู้ช่วยศาสตราจารย์ ดร.วริศดา ไชยปะ

บทคัดย่อ

การค้าถ่านชาร์โคลในรัฐจูบาแลนด์ของโซมาเลียเป็นกิจกรรมทางเศรษฐกิจที่สำคัญ โดยสร้างรายได้ให้กับครอบครัวในภูมิภาคจำนวนมาก อย่างไรก็ตาม การค้านี้เผชิญกับความท้าทายเนื่องจากความขัดแย้งด้วยกำลังอาวุธและการเปลี่ยนแปลงสภาพภูมิอากาศ ซึ่งทำให้ทรัพยากรลดลงและความเสื่อมโทรมของสิ่งแวดล้อมมากขึ้น เอกสารนโยบายนี้กล่าวถึงปัจจัยที่กระตุ้นการค้าถ่านชาร์โคลที่ผิดกฎหมาย ผู้เล่นหลักที่เกี่ยวข้อง จุดเชื่อมระหว่างความขัดแย้งทางอาวุธกับการค้า และความเชื่อมโยงระหว่างสภาพอากาศสุดขั้ว ความขัดแย้ง และการค้าถ่านชาร์โคล การศึกษาเผยให้เห็นว่ากลุ่มติดอาวุธ โดยเฉพาะกลุ่มอัลชาบับ พยายามควบคุมการค้าผ่านการตัดสินใจบนและความรุนแรง ในขณะเดียวกัน การไม่มีธรรมาภิบาลและกฎระเบียบด้านสิ่งแวดล้อมที่มีประสิทธิภาพทำให้เกิดการแสวงหาผลประโยชน์ที่มากเกินไป ปัจจัยทางเศรษฐกิจและสังคม รวมไปถึงธรรมาภิบาลที่ไม่ดีทำให้การค้าเหล่านี้ยังคงอยู่ การศึกษาเน้นย้ำถึงการส่งออกถ่านชาร์โคลอย่างผิดกฎหมายไปยังประเทศรอบอ่าวเปอร์เซีย ผลกระทบด้านสิ่งแวดล้อม และความเชื่อมโยงกับความขัดแย้งด้วยกำลังอาวุธในจูบาแลนด์ ซึ่งสันนิษฐานว่าเกิดกลุ่มก่อการร้ายอัลชาบับ การศึกษานี้ยังกล่าวถึงนโยบายที่มีอยู่และความเป็นไปได้ของนโยบายถ่านชาร์โคลแห่งชาติในการบรรเทาความขัดแย้งและความท้าทายด้านสิ่งแวดล้อม การศึกษาเน้นย้ำถึงความจำเป็นของแนวทางที่ครอบคลุมเพื่อจัดการกับความท้าทาย

เหล่านี้ รวมถึงการเสริมสร้างธรรมาภิบาลให้เข้มแข็ง การบังคับใช้กฎระเบียบ การเพิ่มโอกาสทางเศรษฐกิจและการจัดการกับอิทธิพลของกลุ่มติดอาวุธ พลวัตที่ซับซ้อนท่ามกลางความขัดแย้งทางอาวุธ การเปลี่ยนแปลงสภาพภูมิอากาศ และการค้าผ่านซาร์โคลเน้นย้ำถึงความสำคัญของการทำความเข้าใจและจัดการกับต้นตอของปัญหาเพื่อส่งเสริมการพัฒนาที่ยั่งยืน ท้ายที่สุดแล้ว การศึกษาเรียกร้องให้มีกฎระเบียบ การใช้พลังงานทดแทน การริเริ่มโดยชุมชนและการสนับสนุนระหว่างประเทศ เพื่อให้บรรลุวัตถุประสงค์ทางเศรษฐกิจและสังคมรวมถึงความยั่งยืนด้านสิ่งแวดล้อมในประเทศ โดยเฉพาะในรัฐจูปบาแลนด์ ประเทศโซมาเลีย

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Independent Study Title The Role of Armed Conflict and Climate Change on
Charcoal Trade in Somalia: A Case of Jubbaland State of
Somalia

Author Mr. Irshad Mohamud Sheik Dahir

Degree Master of Arts (Public Policy)

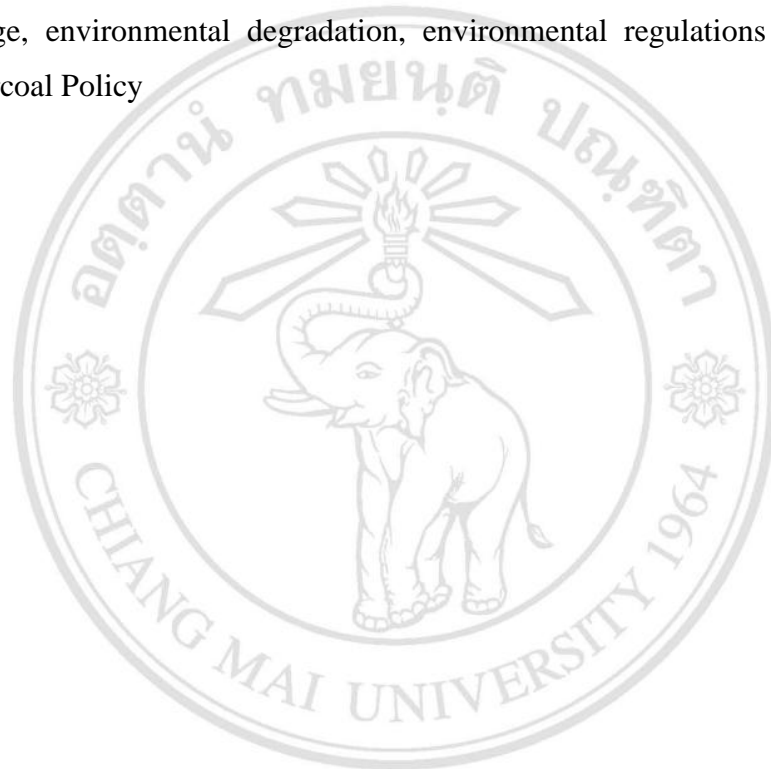
Advisor Assistant Professor Dr. Warathida Chaiyapa

ABSTRACT

The charcoal trade in Somalia's Jubbaland State has been a significant economic activity, providing income to many regional families. However, this trade faces challenges due to armed conflicts and climate change, which exacerbated resource depletion and environmental degradation. This policy paper discusses the factors fueling the illicit charcoal trade, the key actors involved, the nexus between armed conflicts and the trade, and the interconnectedness of climate extremes, conflicts, and the charcoal trade. The study reveals that armed groups, particularly Al-Shabaab, exert control over the trade through bribery and violence. At the same time, the absence of effective governance and environmental regulations enabled overexploitation. Socio-economic factors and poor governance contribute to the trade's persistence. The study also highlighted the illegal export of charcoal to Gulf states, the environmental consequences, and the link to armed conflicts in Jubbaland, presumably by the Al-Shabaab terrorist group. The paper also discussed the existing policies and the viability of the National Charcoal Policy in mitigating conflicts and environmental challenges. The study emphasized the need for comprehensive approaches to address these challenges, including strengthening governance, enforcing regulations, enhancing economic opportunities, and tackling the influence of armed groups. The complex dynamics among armed conflicts, climate change, and the charcoal trade underscores the importance of understanding and addressing the root causes to promote sustainable development.

Ultimately, the study calls for regulations, renewable energy use, community-based initiatives, and international support to achieve socio-economic objectives and environmental sustainability in the country, specifically in Jubbaland State, Somalia.

Keywords: Keywords: Charcoal trade, illicit trade, Somalia, Jubbaland State, armed conflicts, Armed groups, Al-Shabaab, socio-economic factors, resource conflicts, climate change, environmental degradation, environmental regulations and policies, National Charcoal Policy



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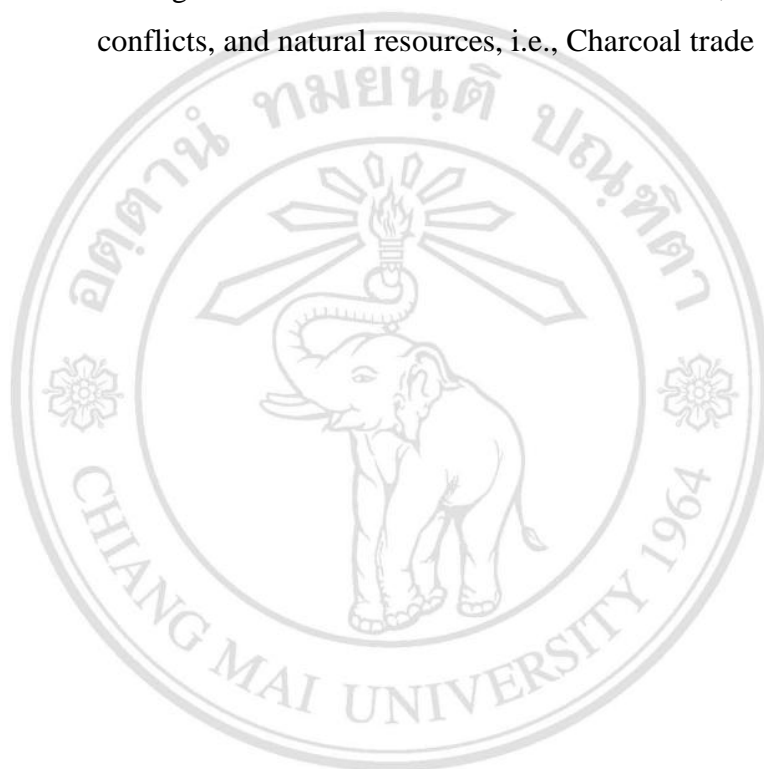
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CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

Introduction:

After decades of conflict, Somalia has made significant progress toward lasting peace. Nonetheless, growth is extremely precarious; official governing structures are challenged, and community competency and resilience in the face of shocks and conflicts are inadequate (Middleton, 2018). Climate-related security issues aggravate Somalia's precariousness while the country defines its future economic and political paradigm (World Bank, 2018; UNEP, 2018). A high carbon development path from the charcoal sector has numerous cascading concerns, ranging from challenges to livelihoods to dangers to national stability (Nelleman, 2014). In contrast, climate-positive development may provide opportunities to further stabilize the nation and improve community and state resilience as well (Anderson & McKnight, 2015). The impact of climate change is a significant threat to the lives and livelihoods of millions of people who rely primarily on pastoralism and agriculture, and it is likely to increase the causes of conflict that are already in place (Bolognesi, Vrieling, Rembold, & Gadain, 2015). The war against Al-Shabaab is the most apparent aspect of Somalia's complex conflict system, but historical grievances and injustices contribute to violent conflicts at the local levels and political instability nationally (Bacon & Muibu, 2019). In Somalia, where decades of inter-clan battles, political, and religiously motivated violences have weakened the capacity to avoid violent conflict, climate change could further degrade institutions for preventing or managing violent conflict (Haji, 2018).

Al-Shabaab emerged as a militia linked and affiliated with the Islamic Courts Union (ICU), a union of locals and clan-based Islamic courts created in 2004 in southern and Central Somalia to battle the anarchy and banditry that had plagued the country since the collapse of Mohamed Siad Barre's central government in 1991 (Felbab, 2018). This terrorist militia served as the military wing of the ICU beginning about 2004 (Mosley, 2015). It included fighters from the former Somali militants Islamist group of al-Itihaad

al-Islamiyah in addition to a few members who previously fought for and been trained by the international terrorists network of al-Qaeda (Haji , 2018). The group was led by Aden Hashi Farah Ayro, a Somali operative purportedly trained by al-Qaeda in Afghanistan and given the name Al-Shabaab, which translates to "the Youth." Ideologically, Al-Shabaab was more radical than the ICU as a whole, preaching a puritanical style of Islam in contrast to the Sufi-influenced variety adopted by the majority of Somalis (Harper, 2019).

In general, Al-Shabaab claims that they want to topple the Federal government, drive out foreign peace-keeping forces, and establish an Islamic State based on its interpretation of sharia law in Somalia. As a means of legitimizing itself among Somalis, the group offers dispute resolution and other services inside its protection racket that the government has historically failed to provide (Keating & Waldman, 2019). Mogadishu's offerings fall short of those made by Al-Shabaab in the regions where the latter has historically held sway. In the territories it rules, Al-Shabaab strictly enforces its own interpretation of sharia, which bans a wide range of activities and beliefs considered un-Islamic, including but not limited to: movies, music, the sale of khat (a narcotic herb commonly chewed); smoking; and the cutting of beards (Maruf & Dan, 2018). Worse yet, the group forbids working with humanitarian agencies, making it extremely difficult to respond to catastrophic droughts (Menkhaus, 2017). Al-Shabaab is currently led by Ahmed Diriye, also known as Ahmed Umar Abu Ubaidah. After his predecessor, Ahmed Abdi Godane, was killed by a U.S. drone strike in 2014, he took office (Grobbelaar, 2022). Despite initial skepticism from certain experts regarding Diriye's capacity to keep control over what was previously a disorganized group, many believe Al-Shabaab to be a substantially coherent organization. The primary decision-making body is an executive council, or shura, comprised of approximately a dozen members (Ido & Yusuf, 2021).

The United Nations Security Council has imposed sanctions on the importation of Somalia's charcoal to the other countries. Given Al-Shabaab's control of the majority of rural districts southern and central of Somalia including south of Puntland and major parties of Galmudug, Southwest ,Hirshabelle and Jubbaland member States, it seems likely that charcoal will remain a significant source of cash for the group (Buontempo,

et al., 2014). As long as charcoal is exported and Al-Shabaab maintains control over the producing regions, they will continue to profit from the trade. Long-term damage is also caused by charcoal to Somalia's ecosystem and conflict system (Connolly-Boutin & Smit, 2016). As grazing supplies diminish due to charcoal production, groups who depend on charcoal-producing regions for livestock rearing may come into conflicts with adjacent tribes, especially those who crop near rivers, where the majority of forestry areas of the country lies (De Waal, 2015). The intensification of a dispute between politically powerful pastoralist clans and politically marginalized riverine clans could end in localized slaughter and a collapse in State authority (Kara, 2019). In response to the climate change and conflict context in Somalia, it is vital to employ a creative and comprehensive approach that takes into account broader societal and security concerns as well as the protection of livelihoods (Gaworecki, 2015). The lengthy battle has claimed innumerable lives and wrecked Somalia's state-building initiative. Domestic and international consensus is expanding that Al-Shabaab cannot be defeated by military methods alone. Yet neither Somali elites nor the country's international allies are eager to explore alternatives, including discussions with militant leaders and addressing climate change, charcoal trafficking, and armed conflicts (Haji , 2018).

Following a catastrophic hotel bombing in Mogadishu in August 2022, Somali President Hassan Sheikh Mohamud issued a televised declaration of complete war against Al-Shabaab. He also declared that the Somalia's military had reclaimed several territories from Al-Shabaab in the center Galmudug and Southwest States (Grobbelaar, 2022). With U.S. assistance, Somali and ATMIS (African Union Transition Mission in Somalia) offensive operations against Al-Shabaab would intensify by September 2022 and reach their greatest level in five years (Petrich, 2022). With the aid of American aircraft, the operation, which is regarded as a combined Somali-ATMIS offensive got underway in August 2022 with the goal of halting Al-Shabaab's activities in Somalia's central Hiraaan region of Hirshabelle State (Grobbelaar, 2022). The Somali military has also targeted other Al Shabaab-controlled regions in southern parties of Somalia. As the military campaign moved forward on September 20, 2022, the Somali Ministry of Information issued a statement that said President Sheikh would only offer Al-Shabaab

fighters the chance to surrender or face severe consequences (Grobbelaar, 2022; Petrich, 2022).

Background of the Study:

There are many detrimental repercussions of deforestation, such as the destruction of wildlife habitats, the deterioration of water and air quality, and many others. Now, a new study adds yet another effect to the list: the financing of terrorist organizations and other criminal networks (Felbab, 2018). Illegal deforestation, along with other illegal activities such as poaching, is one of the primary sources of funding for criminal organizations like Boko Haram and Al-Shabaab (Bolognesi, Vrieling, Rembold, & Gadain, 2015). Environmental crimes such as unlawful logging, fishing, mining, wildlife trafficking, and waste disposal are expected to cost between \$70 billion USD and \$213 billion USD annually, according to the study (World Bank, 2018). Illegal logging was worth between \$30 billion and \$100 billion per year, while wildlife trafficking was worth between \$7 billion and \$24 billion per year. Organized criminals, militias, and terrorist groups, notably in certain African states, have amassed a substantial share of this unlawful money (UNEP, 2018).

In many places of the world, timber smugglers are not penalized as severely as poachers of endangered species. Contrary to trade in illegal drugs, stolen commodities, or wildlife crime, the probability of getting caught and convicted is low, but the earnings are substantial (Nelleman, 2014). Worse, many combat zones are situated in wooded and densely forested regions where governments have limited control. The illegal timber trade is a custom industry for criminal and armed gangs (Middleton, 2018). In many areas of Africa, trees are routinely burned to make charcoal. In Tanzania, Uganda, and the Democratic Republic of the Congo (DRC), armed gangs steal trees from protected areas (Global Forest Watch, 2022). At checkpoints, some collect a fee of up to 30 percent of the retail value of the wood. DRC militias receive between \$14 and \$50 million per year through taxes (Gridneff, 2018). It is believed that trading in charcoal funds the operations of notorious terrorist organizations. Al-Shabaab earns between \$8 and \$18 million each year from a single roadblock in Badhadhe District, Lower Juba Region, of Jubbaland,

Somalia. This road tax on charcoal trucks appears to be the primary source of income for the terrorist group (World Bank, 2018). From 2001 to 2012, Somalia lost around 7.554 hectares of forest, or 0.02 percent of its total land area, according to Global Forest Watch. The annual value of Somalia's whole illegal export of charcoal is estimated at 360 and 384 million dollars (Global Forest Watch, 2022). In Dubai, Oman, Saudi Arabia, and Yemen, charcoal for cooking meat manufactured from perfumed Acacia wood (*Acacia bussei*) is a highly coveted luxury commodity. Kismayo, an important seaport in Al-Shabaab-controlled southern Somalia, is renowned for producing high-quality charcoal (Menkhaus, 2017).

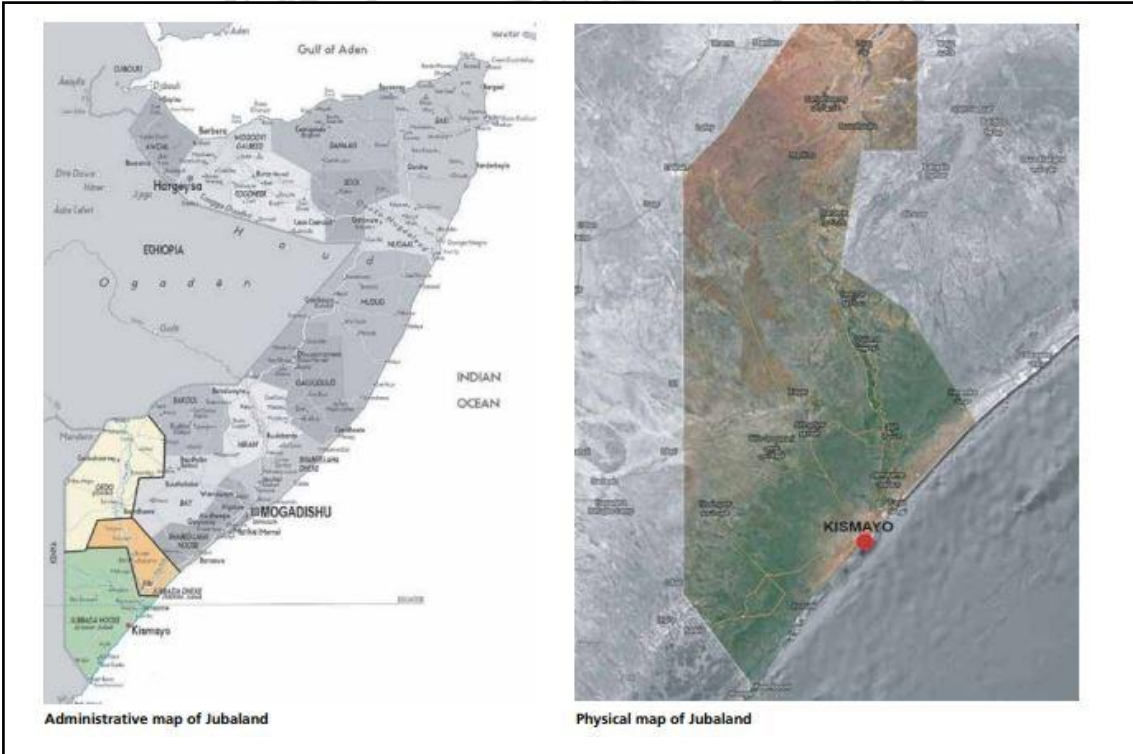


Figure 1.1 Administrative and Physical Map of Jubaland State of Somalia.

Source: (Keating & Waldman, 2019)

Statement of the Problem:

Somalia has relied on the export of charcoal, livestock, skins, and bananas since the 1970s. The Charcoal and firewood are the principal energy sources of the most Somali homes, and the charcoal industry provides many rural Somalis with stable incomes (Connolly-Boutin & Smit, 2016). Despite many attempts to restrict charcoal production in Somalia in the 1990s due to the environmental damage it causes, the business has grown since the country's collapse (Gaworecki, 2015). The effects on the environment are catastrophic. There are signs that deforestation rates have risen in recent years because since 1990, woods covered over 13% of Somalia's total area, but by 2010, they covered approximately 10.7%. (Nelleman, 2014). Terrorist organizations like Al-Shabaab have benefited financially from this sector's expansion, and there have been conflicts between woodcutters and rural inhabitants whose their livelihoods have been endangered by the deforestation and soil erosion (Kara, 2019). Several different types of natural and artificial dangers occasionally threaten Somalia (All Africa, 2014). Droughts, floods, storms, desert locust invasions, desertification, and disease epidemics are among the nation's top natural hazards (UNEP, 2018). The escalating frequency and severity of extreme weather events and natural disasters is one consequence of climate change that has been acknowledged at both the national and regional levels (Global Forest Watch, 2022). Costs associated with climate change disasters are on the rise, highlighting the continued importance of climate catastrophe risk reduction to national prosperity (Mosley, 2015).

According to counterterrorism specialists, Al-Shabaab has benefited from a variety of financial sources throughout the years, including other terrorist organizations, piracy, kidnapping, and extortion of local businesses, the pastoralist farmers, and relief organizations, among others (Harper, 2019). according to the United States Treasury Department, the group makes around \$100 million annually through various routes. It is believed that almost a quarter of this revenue is spent on weapons and explosives (Ido & Yusuf, 2021). Al-Shabaab has established a vast racket consisting of checkpoint fees, levies on imported commodities, and zakat, an annual Islamic levy (Ogallo, Omondi, Ouma, & Wayumba, 2018). Consistently, the gang is one step ahead of regional and local

military operations. In conjunction with their opponents' dysfunction and fragmentation, the militants' adaptability has enabled them to integrate into Somali society. It also makes them difficult to beat, which has allowed the gang to continue profiting substantially from illegally sold charcoal taxes (Grobbelaar, 2022).

Significant barriers continue despite efforts to limit rebel financing sources and promote sustainable livelihoods in Somalia. Equally difficult is the administration of domestic commerce (UNEP, 2018). Multiple accounts link the Kenyan contingent of AMISOM to the illegal charcoal trade and profit-sharing with Al-Shabaab (All Africa, 2014; Middleton, 2018). Jubbaland is one of the six recognized states in Somalia. As a result of the territory's riches, armed factions have struggled for decades over its administration. The terrorist organization Al-Shabaab currently controls a major portion of rural Jubbaland (Menkhaus, 2017). The Gedo region has been and remains extremely susceptible to armed conflicts. The bloodiest armed conflicts in the region occurred during the Somali civil war and following inter-clan battles, as well as between Islamist organizations and pro-government militias supported by neighboring states (such as Ethiopia and Kenya) under the AMISOM banner (Bacon & Muibu, 2019). Currently, the territory is populated by several armed organizations that lack coordination and a single command. In this region, political instability and militia warfare are prevalent. In a location where Al-Shabaab controls the majority of rural regions and the routes connecting all districts of Gedo, commerce and trade are still restricted (Ido & Yusuf, 2021).

The charcoal trade in Somalia generally is at the heart of a vicious cycle of environmental degradation, decreased livelihoods, and increased deforestation, accelerated and exacerbated by climate change. It not only contributes to inter-communal fighting and the military activity of terrorist organizations such as Al-Shabaab, but it also contributes to inter-communal conflict. The Somalia Federal Government has frequently made rulings about deforestation in Somalia, particularly in parts of Jubbaland and Galmudug. As stated previously, Al-Shabaab earns a substantial amount of money from the tax on charcoal trading because it controls the area where the business people are cutting charcoal. This activity also produces societal tensions and allows certain

individuals to deal with the charcoal trade. The federal government of Somalia and the UN have not enforced the ban they issued to end the illegal charcoal trade in Somalia because their legal enforcement institutions need robust access to those areas. Instead, the Al-Shabab terrorist group rules those spaces. In December 2022, the minister of environment and climate change for the federal government of Somalia visited the Jubbaland State of Somalia, where she observed a vast charcoal storage base in Kismayo, the interim capital city of Jubbaland. According to the minister, the charcoal has been placed there, so it cannot be exported outside the country. However, trustworthy sources informed the researcher that the charcoal would be taxed and exported to Gulf states. In the same year, 2022, Somalia's former foreign minister was fired because of a charcoal deal he made with Oman. However, the new government then permitted Oman to get charcoal secretly. Therefore, I have chosen Jubbaland as my area of research because the state is the largest exporter of illegal charcoal in Somalia and gets plenty of money from this business. This study, therefore, examined the impact of armed conflicts and climate change on the charcoal trade in Somalia, focusing on Somalia's State of Jubbaland. This research also focused on the policies and regulations the government and other international partners have already developed. Evaluating the gaps and the pros and cons of those policies will give valuable recommendations to the government and other legal institutions to better address the environmental problem caused by the charcoal trade and illegal interventions by terrorist groups.

Purpose of the Study:

International organizations such as the United Nations, United Nations Environment Programme (UNEP), World Bank, U.S. Treasury Department, and Brookings Institute have done in-depth research on how armed groups have been exploiting natural resources to further their agenda while propelling the adverse effects of climate change. Regarding the purpose of the study, its primary focus was to evaluate the role of armed conflicts and climate change on the charcoal trade in Somalia, in the case of the Jubbaland State of Somalia.

Objectives of the Study:

- i. To explore the charcoal trade and the link between climate and armed conflicts in the Jubbaland
- ii. To evaluate the factors that help armed groups and terrorists to profit from the charcoal trade in Jubbaland
- iii. To analyze existing policies and regulations about climate-related conflicts and environmental problems and how the policies address the UN sustainable development goals
- iv. To assess the feasibility of a national charcoal policy and find out the support needed by the Somali Government and Jubbaland state accordingly for successful implementation

Research Questions:

- i. What is the current state of Jubbaland's charcoal trade? What is its link with climate and armed conflicts?
- ii. What are the factors that help armed groups and terrorists to profit from the charcoal trade in Jubbaland?
- iii. What are the existing policies and regulations about climate-related conflicts and environmental problems and how do these policies address the UN sustainable development goals?
- iv. What is the feasibility of a national charcoal policy, and what support does the Somali government need for successful implementation?

Justification of the Study:

In recent years, there has been an increasing concern regarding the impact of armed conflicts and climate change on the charcoal trade in Somalia, particularly in the State of Jubbaland. One concern is the effect of armed conflicts on the charcoal trade (Felbab, 2018). Conflicts in Somalia have disrupted traditional charcoal-producing regions, resulting in scarcity and price increases. In addition, armed organizations have

been known to tax and regulate the charcoal trade, resulting in further disruption and decreased revenues for local populations (Gridneff, 2018). Another concern is the effect of global warming on charcoal production. Droughts and desertification have made it more difficult to source adequate wood for the production of charcoal. This has resulted in greater strain on existing forests and natural resources, which has led to overexploitation and deforestation (Ogallo, Omondi, Ouma, & Wayumba, 2018). Charcoal production is one of the main sources of income for many people in Somalia, especially in rural areas of Jubbaland, therefore this is not just an environmental concern but also a social and economic one (Maruf & Dan, 2018). Armed organizations are reported to have control of specific areas and use the charcoal trade for financial benefit, which contributes to the escalation of hostilities (Ido & Yusuf, 2021).

Due to a lack of control, charcoal has been illegally traded. Due to this illegal trade, coastal forests are being logged at an alarming rate (Kara, 2019). The complicated relationship between armed conflicts, climate change, and the charcoal trade in Jubbaland State, Somalia has significant effects on the natural environment, the local population, and the national economy (Middleton, 2018). As a result of insecurity challenges in the region, bureaucracy and a lack of sufficient goodwill prevent the implementation of a comprehensive strategy to address these problems, which requires collaboration between the government, local communities, international organizations, and other stakeholders (Keating & Waldman, 2019). Concerning the charcoal trade, its scale, destinations, and routes must be addressed immediately. Charcoal provides as much as \$289 million in "threat finance" to organized criminals, terrorists, and militias every year (Mosley, 2015). Coal trade prolongs conflict, enables the acquisition of arms, and ultimately transforms civil strife and violence into elements of a transnational cyber syndicate that operates globally, rather than a merely local occurrence (Ogallo, Omondi, Ouma, & Wayumba, 2018). Initially, the loss of Mogadishu and other key port cities hampered Al-earnings, Shabaab's but the group now levies taxes on every aspect of the Somali economy (Keatinge, 2014). It generates significant revenue from checkpoints in regions under its control and levies local charcoal production, despite a United Nations embargo on Somali charcoal commerce (Menkhaus, 2017).

Significance of the Study:

The study findings would be significant to several individuals in diverse organizations, as follows:

1. Government: The research study's findings will help the government implement measures to curb charcoal production and trade in Somalia, which contributes not only to inter-communal conflicts and the military efforts of terrorist groups such as Al-Shabaab but also to environmental degradation, diminished livelihoods, and additional deforestation, all of which are exacerbated by climate change.
2. NGOs: Charcoal production is a major contributor to deforestation and forest degradation, and this research study will aid NGOs in developing advocacy efforts to combat this issue. Traditional methods of making charcoal can be brought to people's attention, as they result in many carbon emissions and the waste of valuable timber resources.
3. Academia: The research study will help increase our understanding of public policy in lowering criminal financing through the proceeds of the charcoal trade by stressing the need to reduce the demand for Somalia's fuelwood and charcoal to end environmental deterioration.

CHAPTER 2

CONCEPTUAL FRAMEWORK

21. Background and Context

In Somalia, Charcoal and firewood are the predominant energy sources for most households, with charcoal production serving as a significant source of employment in rural areas. (Mohamed, 2001; Ismail, 2011). According to the Somalia National Development Plan 2017 – 2019 the energy mix in Somalia heavily relies on the locally available charcoal and firewood, which serve as the primary energy sources, catering to almost 80 to 90% of the overall national energy demand. This excessive dependence on these resources has resulted in their overexploitation. As per estimates, about 4 million tons of charcoal are consumed annually, equating to around 400 kg/capita/annum. Unfortunately, this rate is hastening the depletion of Somalia's limited forests. Furthermore, the extensive use of charcoal and wood for cooking purposes is associated with severe health implications in households. However, adopting modern end-user devices that are cleaner and more efficient could reduce these adverse effects while remaining cost-effective. Although petroleum products contribute only a small share (about 10%) of the country's total energy consumption, they are essential for transportation, power generation, lighting, and cooking services. Renewable and alternative energy sources, such as solar and wind power, present substantive opportunities to diversify and expand the energy infrastructure systems of Somalia but so far has not been harnessed, due to both security and funding problems.

The industry has increasingly grown following the collapse of the Somalian state in the 1990s, despite several attempts to ban charcoal production because of its detrimental environmental effects, (Baxter, 2007; Gaworecki, 2015). There are significant environmental consequences of charcoal production. Whereas forests represented about 13 percent of Somalia's land area in 1990, by 2010 they only covered about 10.7 percent which signifies accelerating deforestation rates in recent

years (UN, 2011; Bolognesi et al. 2015). However, the expansion of the charcoal trade sector has also sparked disputes between woodcutters and those communities in rural areas, whose livelihoods are being jeopardized by deforestation and soil erosion, and enhanced the earnings of terrorist groups such as Al-Shabaab (UN, 2011; UNDP, 2013). Al-Shabaab is estimated to earn between \$38 and \$56 million per year from charcoal exports and \$8 to \$18 million per year from taxation of charcoal traders at checkpoints and roadblocks. This makes charcoal one of the group's primary income sources but also a matter of conflict with rival rebel groups (Nellemann et al., 2014; Ward, 2014; UCDP, 2015).

Due to their stringent laws preventing local deforestation, the Gulf States' high demand for Somalia's charcoal serves as a powerful incentive for Somali traders to continue exporting the nation's natural resources. This is exacerbated by the lack of effective government regulations and law enforcement institutions in Somalia that could restrict the activities of woodcutters, charcoal producers, and traders (Baxter, 2007; Mohamed, 2012). However, on this part of conceptual framework the researcher explained the relationships of key elements, and also described and contrasted how armed conflicts, climate change, charcoal trade, and policy are related to each other.

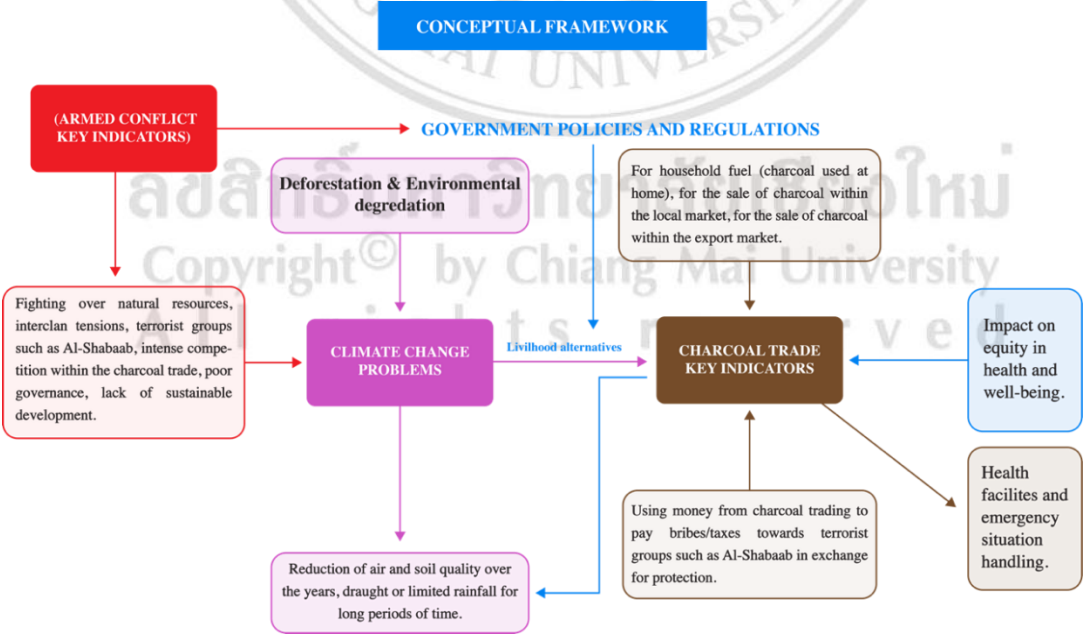


Figure 2.1: Conceptual Framework

2.2 Discussion of Conceptual Framework

In Figure 2.1, it should be noted that numerous descriptions of the nature of armed conflicts occurring in Somalia have been provided. There are two primary perspectives on armed combat. Armed conflicts may be international or non-international (Bolognesi, Vrieling, Rembold, & Gadain, 2015). In accordance with international law, namely the Geneva Conventions of 1949, an international armed conflict (IAC) is a clash between two or more states (Brink, Eva, & Bodart, 2012). In this type of armed conflict, the regular military forces of both countries may be involved. However, under this rule, armed combat between organized armed groups other than conventional military forces is still considered an international armed conflict (Anderegg, Prall, Harold, & Schneider, 2010). Due to the Somali government's need on foreign money to maintain its massive military during the Cold War, factional warfare among her armed personnel resulted, with some of them using force to seize prized real estate in the nation, including fertile river valleys at the expense of clans (Connolly-Boutin & Smit, 2016). The unpaid militias would then start robbing government buildings, consulates, and private homes. Gunmen looting for a living as well as for powerful warlords were the main targets of militia battles today (Gridneff, 2018). In a war economy, these armed gangs were stealing anything they could get their hands on, including aid meant for starving Somalis. The armed groups in Somalia continued to expand thanks to a sizable population of unemployed young and an area overrun with inexpensive weapons (Felbab, 2018). Given that the Somali state had already disintegrated, these armed militias were clan-based and governed by their own laws. Since the continuing civil war first broke out in Somalia thirty years ago, militia organizations have historically been a distinguishing aspect of the country's conflict environment (Connolly-Boutin & Smit, 2016; All Africa, 2014). As a key reaction to situations of instability, vulnerability, and contestation, communities form or join such groups. Armed organizations have become the main tool used by Somali power brokers, sub federal authorities, the national government, and outside interveners to advance their goals (Mosley, 2015). State-aligned militias build ties with local communities, produce more intelligence and better intelligence, serve to balance out the ineffectiveness of Somalia's official security forces, and may even lower crime

and interclan conflict (Nelleman, 2014). However, Somalia's State-aligned militia organizations are also a major cause of the country's persistent outside influence, deadly conflict, and harsh control. Strong militant organizations like the Al-Qaida-supporting, jihadist Harakat al-Shabaab al-Mujahideen, often known as al-Shabaab, are born from them and allowed to flourish. As a result, their growing prominence in the conflict with al-Shabaab has a drawback (Middleton, 2018). In summary some of the armed conflicts' key indicators include: fighting over natural resources, interclan tensions, political rivalries, military offensives by the government and international military forces, terrorist groups such as the Al-Shabaab, intense competition within the charcoal trade, poor governance, lack of stable government leadership, mismanagement of public resources, lack of sustainable development projects and poor economic policies.

2.3 Climate Change

Regarding climate change Somalia is experiencing one of the world's most severe humanitarian crises. As a result of a terrible convergence of conflict and climate change, starvation is once again threatening the continent's population of millions (Bolognesi, Vrieling, Rembold, & Gadain, 2015). The humanitarian crisis in Somalia is rapidly deteriorating. After five unsuccessful rainy seasons in more than two years, the nation is enduring the most severe drought in recorded history, with livestock dying everywhere, crops withering, and many water-resources depleting (Connolly-Boutin & Smit, 2016). More than half of Somalia's seventeen million population suffer from chronic hunger, and current forecasts indicate that the situation will be worse than the 2011 famine, which caused the deaths of 260,000 people. This region once again faces the possibility of famine (Felbab, 2018). In desperate search of food and water, tens of people are fleeing their towns. Climate change has compounded the worst drought that Somalia has experienced in forty years. In addition to the extreme drought, the political unrest has also had an effect (De Waal, 2015). Al-Shabaab has operated in this region for more than fifteen years. The government has declared a state of war against the al-Qaida-affiliated terrorist organization, which is the focus of U.S. counterterrorism operations in the Horn of Africa, in response to a series of nationwide terrorist assaults (Mosley, 2015). The majority of rural areas are under the control of the internationally recognized terrorist

group that restricts access to humanitarian aid and even pollutes water wells. In addition, Al-Shabaab was responsible for the illegal charcoal trade that the United Nations has now declared unlawful (Nelleman, 2014). Despite being an important source of income for the community, deforestation was the primary result of this activity. Al-Shabaab has been chopping down trees for years to use as charcoal to fuel hookah bars in the United Arab Emirates, a multibillion-dollar industry. This deforestation has caused famine and severe crop, animal, and environmental deterioration (Ogallo, Omondi, Ouma, & Wayumba, 2018). Before the prohibition, Al-Shabaab was making tens of millions of dollars from the illegal charcoal trade, according to estimates from the United Nations (Gridneff, 2018). According to officials and various local sources, the trade continues regardless of the prohibition. Al-Shabaab has direct investments and charges taxes on the charcoal industry. The Emirates are the ultimate consumers of the charcoal and they benefit from it. In this way, they acquire ammunition (Middleton, 2018). In summary some of the climate change key indicators affecting Jubbaland state in Somalia include: Reduction of air quality over the years, Limited rainfall for long periods of time, scarce drinking water for people and livestock, increased pollution in the environment, Minimal tree cover and surrounding vegetation, Poor management of waste, increased temperatures and reduced number of animal species. These climate change indicators are as a direct result of the ongoing armed conflicts and charcoal trade in Jubbaland state and the rest of Somalia.

2.4 Charcoal Trade

Regarding the charcoal trade, it is stated that *Acacia bussei*, a slow-growing hardwood, has been the backbone of Somalia's multimillion-dollar charcoal trade for a long time. Decades were spent attempting to execute a 1969 prohibition on exports of charcoal and firewood (Keatinge, 2014). The progressive deterioration of governmental institutions, which culminated to utter lawlessness and the beginning of a full-scale civil war in 1991, significantly weakened the effort (Anderegg, Prall, Harold, & Schneider, 2010). The manufacturing and export of charcoal, an economic activity that stretches back to the pre-colonial era, has long served to supply local and regional energy needs and to provide livelihoods for numerous families (All Africa, 2014). In contrast,

unsustainable charcoal production has increased over the past few decades due to continuous conflict, weak law and order, ambiguous regulations regarding resource ownership, and a lack of other sources of energy and livelihoods. As a result, the trade in charcoal has increased problems such as environmental deterioration and conflict over the management of wealth generated as a result (Connolly-Boutin & Smit, 2016). Despite a 2012 UN Security Council ban on the importation of Somalia's charcoal, the trade has proceeded apace: the market value of the exported commodity was anticipated to exceed \$250 million in the two years after the prohibition (Gaworecki, 2015). Why should environmentalists be concerned about the danger posed by charcoal? The War-Torn Societies Project claimed in 1996 that northeastern Somalia produced roughly 4.8 million sacks of charcoal yearly. This quantity would necessitate the felling of roughly 2,100,000 Acacia trees (De Waal, 2015). Due to deforestation and a lack of replanting, *Acacia bussei* was listed on the Red List of vulnerable species by the International Union for the Conservation of Nature. This drought-tolerant, evergreen, indigenous tree has supplied feedstock to pastoralists for a number of years, allowing them to remain drought-resistant (Bolognesi, Vrieling, Rembold, & Gadain, 2015). The *Acacia bussei*, however, is becoming an impractical source of feed because to the increasing demand for charcoal. This has put the livelihoods of many pastoralists in jeopardy (Mosley, 2015). Due to the prevailing political instability, important traders and paramilitary organizations who are not involved in the charcoal producing process have penetrated the charcoal distribution chain in an attempt to extort money (Brink, Eva, & Bodart, 2012). Although prior African army advances in Somalia may have resulted in the recovery of land from the Al-Shabaab group and appeared to have halted the charcoal trade, there is evidence to suggest that the volume of illicit exports has not altered significantly (Nelleman, 2014). In summary some of the charcoal trade key factors include: For household fuel (charcoal use at home), For the sale of charcoal within the local market, For the sale of charcoal within the export market, using money from charcoal trading to pay taxes towards terrorist groups such as Al-Shabaab in exchange for protection.

2.4.1 Charcoal business as an insecurity factor in Jubbaland

In addition to the environmental consequences, deforestation as a source of income caused internal disputes and conflicts within the neighboring communities. In recent years, the charcoal trade has become the most sought-after commodity to fuel Somalia's war economy, with militia groups profiting from illegal exports.

The traditional chiefs and clan elders in affected rural areas of Somalia attempted to prohibit Charcoal cutting several times in their respective lands. However, their actions sparked conflicts and resulted in the loss of life in the local communities. The expansion of the charcoal industry has also resulted in conflicts between woodcutters and rural communities, as well as increased revenue for armed groups such as Al-Shabaab. Through the illegal Somali charcoal trade, the militant group al-Shabaab received steady revenues from wealthy Gulf States' demand for Charcoal through invisible hands and business cartels. Therefore, Al-Shabaab generates significant financial returns from the charcoal business, export, and taxation, making it one of the group's primary sources of income and a source of contention with rival rebel groups. Nevertheless, the production of Charcoal also causes resource-based conflicts over diminishing forests, and as a result, many charcoal producers have died, inciting clan clashes. The sequence of violence in charcoal production, combined with prolonged droughts, is not only a permanent threat to the environment but also jeopardizes the sustainability of rural communities' livelihoods, leading to abject poverty.

2.4.2 Charcoal ban efforts by the successive Somalia's Administrations and United Nations Security Council Resolutions

In 2012, the United Nations considered the charcoal trade and its connection to financing Al-Shabaab's military operations. Consequently, the UN Security Council announced the resolution of 2036, encouraging UN member states, presumably the Gulf States that are through which the charcoal trade flows, to implement the appropriate measures to avoid importing charcoal from Somalia to their respective countries. However, according to a group of UN monitors, Somalia's illegal charcoal trade and corruption have remained unabated, ensuring a steady income for Al-Shabaab (UN

Security Council, 2014). The United Nations Security Council authorized, in 2014, another Resolution, 2182, which authorized Member States to inspect vessels suspected of carrying charcoal violating the Somalia charcoal ban. This authorization was effective for 12 months and allowed Member States to act nationally or through voluntary multinational naval partnerships like the "Combined Maritime Forces." The resolution extended these inspection powers to Somali waters territorial and the high seas off the coast of Somalia, including the Arabian Sea and the Persian Gulf. In line with this, in 2017, the UN passed another resolution (Resolution 2385) that reiterated a total ban on the exportation of charcoal from Somalia. It called upon both the Federal Government of Somalia (FGS) and Federal Member States (FMS) to take the necessary measures required for its implementation while receiving support from African Mission in Somalia (AMISOM). The AMISOM has been tasked with ensuring that the Somalia and Eritrea Monitoring Group (SEMG) is granted consistent entry to ports where charcoal shipments occur. However, the illegal charcoal trade continues despite the ban on charcoal by Somalia's successive administrations, including the federal government as well as resolutions from the UN Security Council.

2.5 Government Policies and Regulations

Concerning government policy and regulation, it is observed that due to repeated droughts, civil war, and interrupted livelihoods, the pastoralist communities in Somalia are regularly turning to charcoal manufacturing as an alternative source of revenue (All Africa, 2014). Charcoal manufacturing in Somalia is a significant cause of communal conflicts, deforestation, and environmental degradation, but it also offers a regular funding stream for militant groups such as Al-Shabaab (Anderegg, Prall, Harold, & Schneider, 2010). The Charcoal trade in Somalia not only adds to communal strife but also the military exploits of insurgent groups such as Al-Shabaab. However, it is also the crux of a cruel cycle of environmental deterioration, depleted livelihoods, and further deforestation, which is accelerated and exacerbated by climate change (Connolly-Boutin & Smit, 2016). In order to address these challenges, the federal government of Somalia, the UN Security Council (UNSC), and other organizations are not only attempting to restrict Somalia's charcoal exports but also to reduce local charcoal consumption and

promote alternative livelihoods (Felbab, 2018). Programs to lower charcoal usage and promote alternative livelihoods have accompanied efforts to limit charcoal exports (Mosley, 2015). UNEP, UNDP, and FAO assist the Somalian government in a program led by the Ministry of Natural Resources to enhance regional cooperation, establish regulatory instruments and enforcement mechanisms, introduce alternative energy sources, and, most importantly, assist charcoal producers and traders in finding alternative livelihoods (UNEP, 2018). It is estimated that the introduction of more efficient stoves and kilns for charcoal production could result in a 50 percent reduction in charcoal use and an 80 percent reduction in woodcutting (Ogallo, Omondi, Ouma, & Wayumba, 2018).

In summary the forest provides an important resource basis for the livelihoods of vulnerable populations, lowering their vulnerability during times of crisis in particular. Widespread reports indicate that vulnerable populations in Somalia's Jubbaland state rely on charcoal sales as an essential of subsistence, particularly during lengthy droughts. Decades of news articles have also covered the export of charcoal from Somalia's Jubbaland state and the rest of Somalia in particular. Due to lack of access to the ground owing of insecurity, however, the role of armed conflicts and climate change on charcoal trade has not yet been thoroughly researched.

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CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Methods

A qualitative descriptive research design was adopted in this study. The researcher used this methodology to understand the role of armed conflicts and climate change on the charcoal trade in Somalia, in the case of the Jubbaland state of Somalia. The descriptive character of the study enabled the researcher to determine the study's core research questions. For high-quality research, the descriptive design permits the integration of qualitative data-gathering strategies to analyze and interpret findings and reporting.

3.1.1 Research Design

The study employed purposive sampling as its primary sampling technique, focusing on specific characteristics of the population of interest. Key informants from the Ministry of Environment and Climate Change of the Federal Government of Somalia, Jubbaland State of Somalia's Ministry of Environment and Climate Change, international NGOs, local communities, and other independent environmental experts were approached for interviews.

3.1.2 Data Collection Instruments

The study examined both primary and secondary data sources. In-depth interviews and focus group discussions with subject matter experts were conducted accordingly to collect the primary data for this study. This approach allowed for data collection tailored to the study's specific objectives. Secondary data were obtained from reports, online sources, and academic journals, providing a cost-effective means of supporting the primary research purpose. Furthermore, the researcher arranged meetings

with them conveniently to conduct the interviews. Interview guidelines directed the interviewees to understand the research concept, which lasted at most 20 minutes with each significant participant. All major participants were interviewed for three weeks, with each respondent assigned a convenient day. To ensure high-quality data, the researcher verified the accuracy and completeness of the recorded data. Accurate data was critical, as accurate data will result in high-quality study outcomes.

3.1.3 Data Collection Procedures

The data collection process involved administering in-depth interviews for primary data and utilizing document citations for secondary data. The researcher conducted individual interviews, following up promptly to ensure timely responses from the participants. The researcher designated one month, scheduling respondents on various days to facilitate face-to-face group interviews. The participants' anonymity was preserved. However, some respondents permitted the researcher to use their institutions and area of residency. Moreover, when it comes to publicly available documents, the researcher made in-text citations and added their sources to the references list at the end of the research.

3.1.4 Data Analysis

Qualitative techniques were used to analyze the collected data, particularly thematic analysis. The data were categorized into main themes. By capturing participants' voices through quotes, the study enhanced the credibility and authenticity of the findings. The study presented the results through text narrations, providing a comprehensive and engaging presentation of the study outcomes.

CHAPTER 4

FINDINGS AND RESULTS

The Interlinked Influence of Armed Conflicts and Climate Change on Charcoal Trade

Table 4.1: Interviewed Participants

List of interviewees	Gender, Age	Affiliation (Institution)	Job Position
First interviewee	Male, 30s	Norwegian Refugee Council (NRC) in Somalia's Capital city, Mogadishu	Water and Environmental Issues Expert
Second interviewee	Male, 40s	Ministry of the Environment and Climate Change of the Federal Government of Somalia	Environmental Issues Expert
Third interviewee	Male, 30s	Anonymous	Charcoal Inspection Officer
Fourth interviewee	Male, 40s	Anonymous	Armed Conflicts Expert
Fifth interviewee	Female, 30s	Anonymous	Climate Coordinator
Sixth interviewee	Male, 30s	Ministry of the Environment and Climate Change of Jubbaland State, Somalia	Director, Forestry Department

Table 4.1: Interviewed Participants (Continued)

List of interviewees	Gender, Age	Affiliation (Institution)	Job Position
Seventh interviewee	Male, 30s	Ministry of the Environment and Climate Change of Jubbaland State, Somalia	Director, Climate Change Department
Eighth interviewee	Male, 30s	Anonymous	Environmental Issues Expert
Ninth interviewee	Male, 30s	Office of the Prime Minister, Government of Somalia	Climate, Environmental and Immigration expert
Tenth interviewee	Male, 30s	Adam Smith, Somalia	Environmental Issues Expert
Eleventh interviewee	Male, 30s	Ministry of the Environment and Climate Change of Jubbaland State, Somalia	Environmental Officer

This research focused on four primary areas: the current state of Jubbaland's charcoal trade and its link with climate change and armed conflicts; factors that help armed groups and terrorists gain profit from the charcoal trade in Jubbaland; the existing policies and regulations about climate-related conflicts and environmental problems; and the feasibility of the national charcoal policy.

4.1 The current state of Jubbaland's charcoal trade and its link with climate and armed conflicts

This interviewee revealed the existence of a complex charcoal trade involving various players, including business people, government officials, and even the militant group Al-Shabaab. This revelation raises concerns about the region's security and environmental deterioration by illuminating the intricate dynamics underlying the charcoal trade in Jubbaland. An anonymous male who works with the Ministry of Environment and Climate Change of Jubbaland, Somalia, stated that:

"Charcoal trade activities exist in Jubbaland and involve various actors, including business people, government officials, and even Al-Shabaab, who control the forest areas where the charcoal is sourced." Eleventh interviewee, anonymous male, Jubbaland's MoEC Environmental Officer, 2023.

This intimates that the trade of charcoal in Jubbaland, Somalia, encompasses a vast spectrum of stakeholders, comprising business people, governmental officials, and even the extremist organization Al-Shabaab. It suggests that financial motives do not solely fuel the illegal charcoal trade but also intersect with security and governance predicaments in the area. An anonymous respondent said:

"Jubbaland is the primary center for charcoal trade in the country, known as "black gold" for its high demand and profitability." Third interviewee-Charcoal Inspection-Anonymous Male, 2023.

Another respondent supported the above argument and shed light on the thriving charcoal trade in the region. The interviewee emphasized the concerning link between the charcoal trade, the recurrent droughts in Jubbaland, and stressed that:

"The charcoal trade is thriving in Jubbaland. The frequent droughts in this area are due to the excessive felling of trees each year." Tenth interviewee, Adam Smith, an environmental expert, 2023.

The respondents concur on the existence of a thriving charcoal trade in Jubbaland, Somalia, involving various stakeholders. They collectively emphasize the participation of business people, government officials, and the extremist groups such as Al-Shabaab in this trade. Referring to charcoal as "black gold" due to its profitability, they underscore its link to environmental deterioration, specifically the excessive felling of trees and the recurrence of droughts in Somalia's Jubbaland.

4.1.1 What is the link between the charcoal trade, armed conflicts, and Climate Change?

Producing charcoal involves moving on to the next area with sufficient trees available for harvest. However, these areas may coincide with territories owned by neighboring tribes, which can lead to conflicts as they attempt to defend their land from outsiders. This is depicted in an interview with an environmental expert who works with the Norwegian Refugee Council (NRC) and said:

"Frequent clashes emerge as a result of disputes regarding resources such as territory and water among the clans. These conflicts recurrently escalate into violence and warfare between various tribes in Jubbaland, namely, Awramale, Gaaljecel, Marehan, and Ogaden. The battle for resources, such as land and water, frequently leads to bloodshed and war among the clans." Environmental Expert, NRC 2023.

In addition to that, according to an anonymous male serving as a charcoal inspection officer in Jubbaland, conflicts arising from resource disputes in the context of charcoal production adversely affect tribal conflicts in the region. These disputes can escalate into violence, causing significant repercussions for regional environmental stability and local populations. The officer stressed that:

"Conflicts over resources for production without proper regulations in place leads to warfare. These issues can have significant consequences for the local

communities and environmental stability in the region." Third interviewee-Charcoal Inspection-Anonymous Male, 2023.

According to this interviewee, in some cases, this competition for resources has escalated into violence and bloodshed between nearby clans. This competition over natural resources is undeniably one of the most significant factors fueling the longstanding conflict among these tribes. Another respondent, a climate migrations expert with the Office of the Prime Minister of Somalia, also supports and emphasizes this viewpoint:

"The violent extremist groups that largely control the charcoal production areas are increasing tensions and driving communal conflict. Disputes between local clans looking for firewood can result in death in some cases as the trees end in some areas; people try to move to other areas with rich forests and trees to cut them down and burn them for business purposes." Ninth Interviewee: Climate Migration Expert at OPM, 2023.

Due to its vast deforestation activities, Somalia's thriving charcoal trade has been identified as one of the most significant contributors to climate change. Moreover, the ongoing deforestation practices have also resulted in severe weather patterns changes, such as droughts and floods, that cause further damage to the environment and thus contribute to the overall climate change in the country. An interview participant who wishes to remain anonymous said:

"Many rely on this business for income, but it negatively impacts the environment and climate. The burning of trees to produce charcoal leads to deforestation and droughts." Third interviewee-Charcoal Inspection-Anonymous Male, 2023.

The interviewee acknowledges that while many depend on this business for income, it also harms the environment and climate change, emphasizing the negative impacts of deforestation and droughts from burning trees for charcoal production. This

perspective emphasizes the importance of finding sustainable alternatives that balance livelihoods with preserving natural resources and reducing the adverse effects of climate change. The opinion of another respondent, who is an environmental expert from the Ministry of Environment and Climate Change of the Federal Government of Somalia, also corroborated this and stated the following:

"Due to the activities occurring in the charcoal business, alterations in weather patterns have arisen, resulting in droughts that contribute to climate change." Second interviewee- Environmental Expert at MoEC, 2023.

According to an insider at the Office of the Prime Minister of Somalia (OPM), deforestation and droughts lead to conflicts between tribes regarding water and land. Economic shocks also leave communities vulnerable without any way to handle the situation, resulting in the loss of livestock and human lives. The source stated that:

"Somali livelihoods are negatively affected due to resource scarcity, such as water, grazing land, and soil. Deforestation and droughts create hostilities and tensions among tribes over water and land. Economic shocks leave communities with no coping mechanisms, resulting in the loss of herds and people. Charcoal production has become a vital source of income for some populations affected by environmental hardship, displacement, and conflict. Despite bans on exports and UN resolutions, demand for Somalia's charcoal remains high in the Gulf States. However, sourcing firewood for charcoal can come at a high cost to the environment and communities, leading to climate change negative impact." Ninth interviewee- Climate Migration Expert at OPM, 2023.

The specialist further discussed climate change, environmental decline, and disputes over natural resources in Somalia. The negative consequences of these problems, such as reduced water supplies and crop failures caused by droughts, have resulted in food insecurity and the migration of millions of individuals, creating strain on urban areas like Mogadishu. He *said the following:*

"Climate change and environmental degradation are decreasing water resources, also causing conflicts over ecological yields. Droughts in Somalia have caused crop failures, food insecurity, and the displacement of the population. Millions of internally displaced persons have increased pressure on urban centers such as Mogadishu. Climate-conflict mitigation programs are needed in Somalia to increase access to natural resources and reduce violence. Long-term climate and conflict mitigation strategies are urgently needed." Ninth interviewee-Climate Migrations Expert, 2023.

Clearing the forest has a significant adverse effect on rainfall availability. This situation has endangered the livelihoods of rural populations because of rapid soil degradation and declining biodiversity. Excessive forest removal has caused widespread losses in productivity, erosion, siltation, and stream flow, resulting in climate change and other adverse effects that border on desertification in many areas. Due to massive land clearing and rangeland degradation, the resident of those populations are being forced to search for new lands that can support their livelihoods, and the pastoralist communities have been hit the hardest because they depend on cattle for survival. The following is a 2023 quote from the forest director, Ministry of Environment and Climate Change, Jubbaland, regarding the current state of Jubbaland's charcoal trade and its link with climate change and armed conflicts:

"Charcoal production contributes significantly to climate change due to high carbon emissions. This industry's profitability has led to violent conflicts among Jubbaland's armed groups competing for income control. Al-Shabaab, an extremist group, controls charcoal production areas in Jubbaland and makes huge profits from illegal trade that funds their terrorist activities and perpetuates conflict." Director, Forest Department, MoEC, 2023.

The director's information emphasizes the negative impact of charcoal production on climate change, primarily as a result of its high carbon emissions. The statement also highlights how the charcoal trade's profitability has fueled violent conflicts between

various groups contending to control the profits generated. Furthermore, the involvement of Al-Shabaab, an extremist group, in controlling charcoal production areas enables them to make substantial profits, perpetuates conflicts, and finances their terrorist activities, aggravating the overall situation.

The respondents unanimously acknowledged the link between the charcoal trade, armed conflicts, and climate change in Jubbaland, Somalia. They recognize that disputes over resources, such as territory, water, and land, fuel violent clashes and warfare among tribes and armed groups. The first three respondents emphasize the detrimental environmental impact of the charcoal trade, including deforestation, droughts, and climate change. Additionally, the second and third respondents highlight the role of the charcoal trade in funding extremist groups such as Al-Shabaab and perpetuating conflicts in the region. In contrast, the fourth respondent, the forest director of Jubbaland's Ministry of Environment and climate change, provides a unique perspective by explicitly mentioning the significant carbon emissions from charcoal production and the involvement of Al-Shabaab in controlling production areas, which funds their terrorist activities. This perspective adds additional insight into the environmental and security implications of the charcoal trade in the Jubbaland State of Somalia.

4.2 The factors that help armed groups and terrorists to profit from the charcoal trade in Jubbaland, Somalia

When the researcher asked the interviewees about the factors that help armed groups and terrorists utilize profits from the charcoal trade in Jubbaland, Somalia, they mostly agreed that the charcoal trade in Jubbaland has become a significant source of Al-Shabaab terrorist group in Jubbaland and Somalia at large. This group can profit from the trade in various ways, including taxation, extortion, and illegal activities such as smuggling. Taxation is one of the primary sources of revenue, as armed groups and terrorists can impose taxes on traders and charcoal producers. In addition, they can extort money from traders by threatening to disrupt the trade. Smuggling is also common for these groups to make money, as they transport charcoal to outside countries, such as Kenya and the Gulf States, where it is in high demand. Moreover, these groups can take

advantage of weak law enforcement to engage in illegal activities such as illegal logging and the destruction of natural resources. All these factors contribute to the ability of armed groups and terrorists to profit from the charcoal trade in Jubbaland, Somalia. In an interview, a participant stated that:

"Armed groups and terrorists in Jubbaland Somalia benefit from their power to influence commercial activities in charcoal trade zones and dictate the business, involving bribery and violence" Environmental Expert from MoEC, 2023.

Armed groups and terrorists in Jubbaland, Somalia, benefit from their control over the charcoal trade zones and are able to influence commercial activities. They also use coercion and violence to maintain their dominance, forcing businesses to offer bribes. The adverse effects of deforestation, soil erosion, and biodiversity depletion are ignored due to the lack of proper environmental regulations. At this point, one can understand that climate change is causing pastoralists to seek new livestock and agricultural strategies, leading to land and water resource conflicts. This has created a vicious cycle, where militia clans and extremist groups take advantage of the situation to recruit and mobilize youth, contest weak government institutions, and consolidate their power. In addition, there are many factors that help armed groups and terrorists in Jubbaland, Somalia, to utilize profits from the charcoal business in Southern and Central Somalia. The expert continued giving comments and added:

"The lack of government presence in charcoal business areas and the lucrative profits received by business people, some government officials, and terrorist groups contribute to the continuation of charcoal trade in Jubbaland." Fourth interviewee—anonymous conflicts expert, 2023.

Another female environmental activist joined the conversation and added other factors and stated:

"Due to many causes, namely: clan systems, poverty, income generation, and financial benefits, grievances among the Al-Shabaab's control over the charcoal production areas; terrorizing the people; and overall poor governance, the charcoal business is continuing over the ages." Fifth interviewee: anonymous female, Climate Change Coordinator, in Jubbaland, 2023.

Additionally, other significant factors that support the armed groups utilizing this trade are the government's lack of authority to regulate the maritime boundaries where this illicit trade flourishes, facilitating transportation to Kenya and beyond for subsequent sale on the global market. One of the interviewed participants, who wished to remain unidentified, stated that:

"Charcoal trade often utilizes sea borders beyond government control. The government can use diplomatic channels to prevent overseas exports and take over responsibility for ports and customs." Anonymous Female Climate Coordinator -in Jubbaland, 2023.

The government has not effectively controlled overseeing export of charcoal, which passes through the oceans. Options for the government include using diplomatic channels to prohibit illegal charcoal trade and taking over responsibility for seaports, airports, customs, etc. On the other hand, as the Forest Departmental Director of Jubbaland's Ministry of Environment and Climate Change highlighted, the extent of Al-Shabaab's influence and control over the charcoal industry in Jubbaland, Somalia, is a cause for serious concern. *He said as follows:*

"The significant power and control over the industry by Al-Shabaab allows them to benefit from this business." Forest Departmental Director at MoEC, Jubbaland, Somalia, 2023.

This underscores the significant power wielded by the armed groups in the trade, emphasizing the illicit benefits they derive from their involvement. Understanding and addressing this nexus between armed groups and the charcoal trade is crucial for tackling the region's environmental degradation and security challenges. Furthermore, the director believes that the inadequate environmental regulations of this country have also significantly contributed to this group's ability to benefit from this business, and *he said*:

"Lack of effective environmental regulations is a major factor that allows armed groups to profit from the charcoal trade" Forest Departmental Director at MoEC, Jubbaland, Somalia, 2023.

The interviewees generally agree on the factors that help armed groups, and terrorists profit from the charcoal trade in Jubbaland, Somalia. These factors include taxation, extortion, smuggling, weak law enforcement, and the control exerted by armed groups over trade zones and commercial activities. However, there are differences in their perspectives regarding the continuation of the charcoal trade, the role of the government, and the importance of effective environmental regulations. While they also highlighted the lack of government presence and the lucrative profits received by various actors, such as business people, government officials, and terrorist groups. This viewpoint adds another dimension to the discussion by emphasizing the systemic issues and the involvement of different actors beyond armed groups and terrorists. Despite these variations, all respondents emphasize the significant influence and benefit armed groups derive from their involvement in the charcoal trade, indicating the complex dynamics and multiple actors involved in perpetuating the illegal charcoal trade.

4.3 The existing policies and Regulations on climate-related conflicts and environmental problems and the feasibility of the National Charcoal Policy

It is imperative that when a country faces acute problems, be it fragile or stable, there must be prompt interventions from the government and international organizations. The gravity of the situation demands comprehensive measures to be taken to mitigate the

effects of these problems on society as a whole. In such unfortunate circumstances, the government is responsible for taking swift action and implementing policies that address these issues. At times like this, international intervention can also be crucial in providing necessary aid and support to affected areas. Only by coming together and taking decisive actions can it be hoped for a better future for those impacted by these acute problems. This research effort discovered that the government is working with international organizations and other countries to address the challenges posed by climate change, armed conflicts, and illegal charcoal trade in Somalia, and some results have been achieved so far. Many of these, but not limited to are: awareness, advocacy, fighting against Al-Shabaab, initiating draft policies, and many more. In an interview with an Environmental Expert who works with the Ministry of Environment and Climate Change stressed that:

"Generally, the Somali people are aware of the climate problems and are mobilizing and discussing this matter: Twitter spaces, clubhouse debates, and much more. The UN and other international partners such as FAO, IGAD, and AU are playing their part in discussing this. For Example, the government launched a war against Al-Shabaab because it is part of the country's vulnerability to climate-induced factors, such as droughts, environmental degradations, conflicts and many others. "eighth interviewee: Environmental Expert, MoEC, 2023.

Since the charcoal is exported mainly outside the Gulf states, the government can manage this case by using diplomatic channels. This realization emphasizes the significance of international organizations such as the United Nations that have developed policies and frameworks to address these global challenges. Using diplomatic channels to engage with these organizations, Somalia's government can access its expertise and resources to bridge gaps while developing sustainable solutions for its environmental concerns. Another interviewee joined this conversation and said:

"There are many policies on environmental and climate-related issues developed by international organizations such as the UN. But regarding the Somali government's

understanding, this matter has been quite low in terms of priority before now. There were no infrastructures or institutions before; however, the new government established the Ministry of the Environment and Climate Change, which was previously merely a directorate office. There are no effective government policies, regulations, financial capacity, and legal frameworks on these matters." seventh interviewee, A male climate change director, MoEC-Jubbaland, 2023.

As per this interviewee, the Somali government has historically not prioritized environmental and climate-related issues. Due to a lack of strong institutions and infrastructure, the country faced difficulties managing and mitigating environmental impacts. However, the establishment of the Ministry of the Environment and Climate Change reflects a shift in the government's recognition of the pressing need to address environmental challenges. The interviewee's evaluation highlights a significant gap within the Somali government concerning effective policies, regulations, financial capacity, and legal frameworks for dealing with environmental and climate-related problems.

The lack of adequate policies and regulations addressing the crucial issues surrounding environmental protection, climate change mitigation, and charcoal trade is why people are still involved in this dangerous business. The absence of practical implementations to counteract these challenges has resulted in grave concerns regarding the sustainability of our planet. The need for more comprehensive and well-designed policies that address these pressing issues cannot be overstated. Today, businesses engaged in the charcoal trade are not subject to any regulatory measures that ensure their operations do not cause harm to the environment or exacerbate the adverse effects of climate change. With more stringent regulations enforced by governing bodies, one can create a future where people can enjoy sustainable living without jeopardizing the natural environment around them. Here is the statement of an environmental expert from the Norwegian Refugee Council (NRC) concerning the policies matter:

"To mitigate the negative effects of charcoal production and trade on the Somali environment, effective policies must be established and enforced. Technical expertise and financial capabilities should also be available. Alternative energy sources should be promoted through tax reductions or waivers for the providing companies. Forestation, renewable energies, alternative farming programs, and dams in rural areas should be created. Collaboration between federal institutions, member states, partner organizations, and local forces is important for validating policies and regulations. District, village, and regional committees consisting of different community members can contribute to fighting climate-related issues and environmental degradations." First interviewee, Environmental Expert, NRC 2023.

In examining the feasibility of the national charcoal policy in Somalia, the interviewees critically assess its effectiveness. According to the research interviewees, the policy has yet to be passed by the executives and the parliament, indicating a lack of official endorsement and support at the highest levels of government. They highlighted that while non-governmental organizations (NGOs) have supported the government in policy development, their assistance has primarily been limited to project-based activities rather than long-term systemic changes. An anonymous female respondent identified several crucial elements the Somali government needs to address to make the national charcoal policy valuable and practical. Therefore, she stated the following:

"The National Charcoal policy is not effective as far as I know. Both the executives and the parliament did not pass it. NGOs always support the government in establishing policies, but this is only project-based activity. To make it useful and effective the Somali government needs to develop the following matters a) human resources with the required skills; b) financial support from the international partners; c) institutional collaboration both at federal and state level institutions and other international partners d) coordination among the different stakeholders in this sector e) effective enforcement from the government side and Monitoring role by International Partners such as the UN."—anonymous Female Climate Coordinator -in Jubbaland, 2023.

The interviewee's observations shed light on the multi-faceted nature of implementing a national charcoal policy in Somalia. It calls for a comprehensive approach encompassing human resource development, financial support, institutional collaboration, stakeholder coordination, and robust enforcement mechanisms. By addressing these key areas, Somalia can strive to effectively implement the national charcoal policy and work towards sustainable solutions for the charcoal sector, ensuring the conservation of natural resources and mitigating the environmental problems caused by the illegal charcoal trade in the country. Referring to this matter, one of the respondents, who wants to remain anonymous and serves as a Charcoal Inspection Officer from Jubbaland, replies to the question of the feasibility of a national charcoal policy and the support that the Somali government needs for its successful implementation by stating that:

"The charcoal policy in question, but it is in the drafting phase and has not been finalized yet. Formulating charcoal policy requires consultation with stakeholders and mobilizing resources and human capital to mitigate climate change effectively. Access to financial support from international organizations could be helpful." (Third interviewee, Charcoal inspection, Anonymous Male, 2023)

Quoting the statement of an interviewee working at the Ministry of Environment and Climate Change takes the flour and said:

"Indeed, the government has many priorities, but it seems they are ready to stop charcoal production. The establishment of the Ministry of Climate Change and Environment indicates their commitment. However, legal loopholes and lack of enforcement allow people to continue cutting trees for charcoal." Eleventh interviewee, Anonymous male, Jubbaland's MoEC Environmental Officer, 2023.

One of the significant challenges governments face in contemporary times is the need for more effectively managing complex and intricate problems that arise across multiple layers. This could be attributed to various factors, including inadequate

resources, insufficient expertise, and a lack of proper planning and execution strategies. The inability to address these multilayered issues can lead to significant negative consequences for society, ranging from economic instability to social unrest. Therefore, governments at all levels must prioritize building their capacity to effectively manage these complex problems and ensure the well-being of their citizens. In similar with the above respondent's argument, another interviewee agreed that there is no effective charcoal policy in Somalia and stated that:

"To my knowledge, this country has no effective or approved charcoal policy. I have heard about this policy but am unsure if it is enforced. Since Jubbaland is hosting a huge charcoal trade activity in Somalia, the key policies from both the Federal and State levels must be heard here in Jubbaland, and any institution working on this matter must engage with Jubbaland communities and civil society organizations to know the real negative consequences of this business." Tenth interviewee, Adam Smith, Environmental Expert 2023.

On top of that, one must be understood that the national charcoal policy has yet to be finalized. The researcher asked another field expert about the existing policies and regulations regarding climate-related conflicts and environmental problems and how these policies address the UN sustainable development goals. Given the complexity of these interrelated issues, policymakers must collaborate with local communities and other relevant actors to develop effective solutions. The respondent replied as follows:

"Regarding the legal framework for protecting the environment, there is a Federal Forest Law that currently exists and we had an input in its development. However, it has yet to be put into effect and is still awaiting final approval from the upper house of Parliament and the President's Office. However, for now, the lower house of the parliament has passed it. It is worth noting that only one environmental protection law has been completed so far, with no other regulations established. "Eighth interviewee, anonymous male, environmental expert, 2023.

The forest policy is the only one that the lower chamber of parliament has so far ratified. The bill also requires endorsement from the upper house and the President's Office before it can take effect. Only one policy related to environmental preservation had been put in place until now, with no other regulations introduced. This appraisal accentuates the urgency for prompt implementation and comprehensive jurisdiction to effectively protect Somalia's natural resources.



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CHAPTER 5

DISCUSSION AND ANALYSIS

The charcoal trade in Somalia's Jubbaland State has been an important economic activity for many years, providing much-needed income to many families in the region. However, this trade faces severe challenges due to the interplay between armed conflicts and climate change. Both factors are exacerbating the depletion of natural resources and contributing significantly to environmental degradation. The link between armed conflicts and the charcoal trade in Jubbaland, Somalia, is noteworthy. The instability caused by ongoing conflicts creates an environment that allows illegal activities such as deforestation and the unsustainable harvesting of trees for charcoal production to thrive. This trend leads to gradual forest depletion without any plans for reforestation or conservation efforts, which further exacerbates climate change's effects. Climate change also significantly drives environmental degradation through changing weather patterns, such as droughts that make it difficult for vegetation growth, thus reducing tree cover available for charcoal production. As people seek alternative livelihoods during such harsh seasons, they resort more heavily to tree cutting to produce Charcoal, ultimately leading to adverse environmental impacts. The implications of these issues are dire since they have far-reaching consequences beyond just environmental damages; they may also affect human health outcomes and overall regional stability.

5.1 Unmasking the Shadows: Unveiling the Factors Fueling the Illicit Charcoal Trade

This research effort found that the factors contributing to the increase in the illegal charcoal trade in Jubbaland, Somalia, can be analyzed based on the collected interview data. Firstly, the influence and control exerted by armed groups, particularly Al-Shabaab, play a significant role. Their power allows them to manipulate commercial activities in charcoal trade zones, engaging in bribery and violence to maintain their dominance. This control enables them to reap the financial benefits from the trade, further perpetuating their activities and undermining efforts to combat the illicit charcoal business.

Secondly, the absence of effective government presence and governance in charcoal business areas contributes to its continuation. The lack of oversight and regulation allows business people, certain government officials, and even terrorist groups to exploit the lucrative profits generated from the trade. The absence of comprehensive environmental regulations further exacerbates the problem, enabling armed groups to profit from illegal activities and evade accountability.

Additionally, socio-economic factors such as clan systems, poverty, and the need for income generation contribute to the persistence of the charcoal trade. Grievances arising from these factors, coupled with Al-Shabaab's control over charcoal production areas, create an atmosphere of fear and instability, further complicating the situation. Poor governance and overall weak institutional capacity add to the challenges, making it difficult to address the underlying causes effectively.

On the other hand, another research found that there are other several reasons for the export of charcoal, including an increased foreign demand, which drives up the price four times higher than domestic sales, Somalia's strategic location and available transportation from GCC countries, weak civil society organizations, and changes in land ownership and property rights. Approximately 1.65 million tons of charcoal are exported annually to the Gulf States, resulting in the felling of around 11 million trees each year. (Elmi, 2018).

In conclusion, the factors that increase the illegal charcoal trade in Jubbaland, Somalia, are multifaceted. They include the significant power and control wielded by armed groups, particularly Al-Shabaab, the lack of effective government presence and environmental regulations, socio-economic factors driving involvement in the trade, and overall poor governance. Addressing these factors requires a comprehensive approach, including strengthening governance structures, enforcing environmental regulations, enhancing economic opportunities, and tackling the influence of armed groups to combat the illicit charcoal trade and promote sustainable development in the region.

5.2 Revealing the Ensemble: Key Actors in the Charcoal Trade

The charcoal trade is widespread with numerous actors involved. These include government officials, the African Mission in Somalia (AMISOM), Al-Shabaab, and various tribal armed groups. Unfortunately, financial gains rather than moral considerations drive many groups. In contrast, local pastoralists, who have suffered greatly from the effects of drought, receive minimal benefits from this taboo industry. Overall, it is clear that the charcoal trade has multiple dimensions and implications for different stakeholders in Somalia's complex social landscape. Not only the charcoal trade within Somalia is harming the region, but the illegal trade between the Horn of Africa and Gulf states has also had a devastating effect on the environment and climate of Jubbaland, Somalia. The trade has led to large-scale deforestation in Lower Jubba and increased levels of air pollution. This illegal trade has also been linked to armed conflicts in Jubbaland. Other competing militias purporting to represent clan interests have also fought for control of the charcoal trade and its lucrative profits, contributing to the ongoing instability in the region.

Another study found that the illegal charcoal from Somalia is transported to various Gulf states on small dhows and larger merchant ships belonging to Indian business people. The transportation process involves using false paperwork due to the risks associated with piracy in the area. The charcoal is trafficked through a specific route along the Somalia coast toward Puntland and then northeast along Oman's coast before entering the Gulf of Oman and the Persian Gulf. The potential ports for illegal charcoal exports include Bahrain (Khalifa Bin Salman), Iran (Kish), Kuwait (Doha), Oman (Duqm, Shinas), Saudi Arabia (Jizan), and the United Arab Emirates (Al Hamriya, Fujairah). (Cater, 2018).

5.3 Charcoal Trade and the Battlefields of Profit: Unraveling the Intricate Nexus Between Armed Conflicts and Illegal Charcoal Trade

In Jubbaland State, Somalia, ample natural resources, their strategic location near the major ports, and the proximity of the border with Kenya make the charcoal trade particularly important. However, it is essential to recognize that this trade does not exist on its own; instead, it operates within a broader framework of armed conflicts and climate

change, the two influential factors that affect the region's ecology and economy. Armed conflicts have led to the widespread destruction of forests for military purposes and the displacement of local populations engaged in charcoal production for survival. Therefore, in Jubbaland, the ongoing armed conflicts play a crucial role in shaping the charcoal trade dynamics within the state, with various factions vying for control over regions rich in forest cover or logistical routes used during transportation from rural areas to urban centers. This contest has led to clashes among the neighboring clans.

Increased competition over scarce resources may lead people towards violent confrontations with one another fueled by resentment stemming from perceived injustices explicitly related to access rights or ownership claims regarding land use practices related directly to deforestation activities. The Jubbaland State of Somalia has been facing a series of devastating crises, resulting in the gradual depletion of natural resources, the mass displacement of populations, and the proliferation of conflict. One of the critical reasons for the crisis is the charcoal trade, which has been a lucrative source of income for many local communities. However, this has come at a considerable cost to the environment, as large forest areas have been cleared, leading to soil erosion, droughts, and flooding. These environmental changes have exacerbated the conflict as communities fight over access to resources, and the adverse effects of climate change have further destabilized the region. Although in 2012 the UN banned the imports of charcoal from Somalia, the market value of exported charcoal from Somalia to the outside world in 2013 and 2014 was estimated to be over 250 millions US dollars. The degradation of a range of resources, such as forestry land, has led to the irreversible loss of pastoral systems, threatening the economy's medium- to long-term sustainability. Charcoal production in southern Somalia contributes to the felling of trees and resource depletion, leading to severe humanitarian crises during droughts (UNDP, 2012).

The armed conflicts in Jubbaland are caused not solely by political instability, but also by resource-based conflicts, including challenges with accessing resources, disputes over land ownership, and other issues. The clans often engage in battles for control over resources, such as water and land, frequently resulting in violence and bloodshed. To address the root causes of these conflicts, experts suggest implementing successful

measures for resolving disputes, including mediation, negotiation, and reconciliation. By doing so, resource-based disputes can be prevented or at least reduced not only in Jubbaland but throughout Somalia. Armed conflicts in certain areas have instigated many problems, one of which is environmental degradation. As a result of these conflicts, explosions have occurred, contributing to air pollution and causing many people to migrate to other areas for safety. However, this mass migration has further perpetuated the issue as disputes between local clans have arisen over firewood, often leading to violence and even death. Many individuals are resorting to cutting down trees in areas with abundant wood stands and selling them worldwide for profit. The violent extremist groups that control the charcoal industry are particularly culpable for exploiting these desperate situations and inciting communal conflicts. It should be recognized that these issues not only disrupt social structures but also adversely impact the region's ecology due to the destruction of forests and increased carbon emissions.

5.4 Interconnected: Climate Extremes, Conflicts, and the Charcoal Trade

To understand the correlation between climate change, armed conflicts, and the charcoal trade, the figure below summarizes the linkages between climate-related extreme events, their effects on energy-related resources, and conflict over resources.

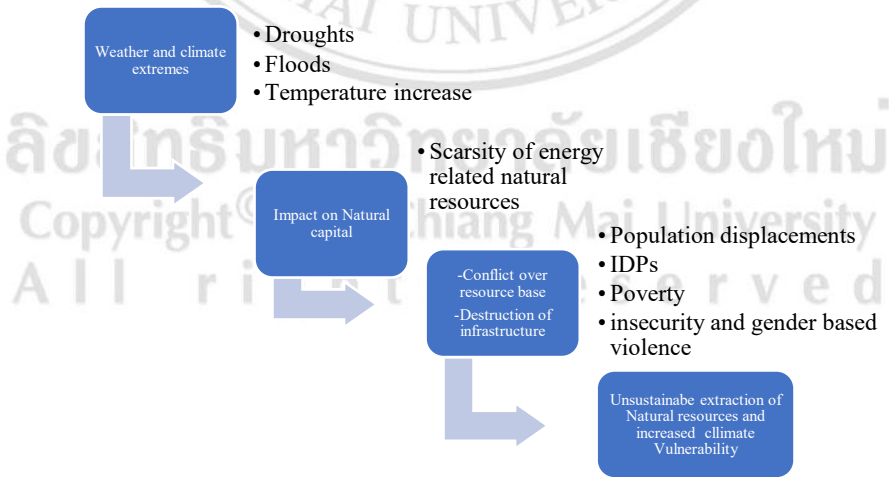


Figure 5.1: Linkages between weather and climate extremes, conflicts, and natural resources, i.e., Charcoal trade.

Source: Author's elaboration

The negative impacts of deforestation, such as soil erosion and biodiversity depletion, can be primarily attributed to the absence of effective environmental regulations and management by the government. Furthermore, the charcoal trade is a notorious business involving numerous stakeholders, such as government officials, terrorist groups, and other armed factions, who exploit it for financial gains. The local pastoralists have suffered significant losses due to recurring droughts that have decimated their livestock, including camels, cows, and goats. Since they derive minimal benefits from the charcoal industry, which explains why they are complicit in allowing their forest territories to be burned, such laxity in regulating these harmful practices has resulted in severe consequences for the environment and the livelihoods of local communities. On the other hand, many people, mainly the local communities, still need to be made aware of the importance of preserving our natural resources and reducing our carbon footprint to mitigate climate change. This lack of education can lead to harmful behaviors such as littering or wasteful consumption, exacerbating the already existing problems.

5.5 Harmony in Policy and Environment: Exploring Existing Regulations and the Viability of the National Charcoal Policy in Addressing Climate-Related Conflicts and Environmental Challenges

Regarding the policies and regulations, there are no clear policies or regulations regarding the charcoal trade, armed conflicts and climate-related issues in Somalia at both Federal and State levels. The existing initiatives are mostly project-based in nature rather than part of an overarching policy framework that emphasizes sustainable development practices. However, there has been some recent progress where the forestry policy was passed by the lower house of parliament. However, it still needs approval from both the upper house and the presidential decree before it can be officially implemented.

In order to address conflicts caused by climate change and charcoal trade, it is crucial to have a thorough understanding of the many dynamics at play in Jubbaland, Somalia. Policies should be in place that reduce adverse effects and aim toward achieving sustainable development goals. International aid programs that support initiatives for

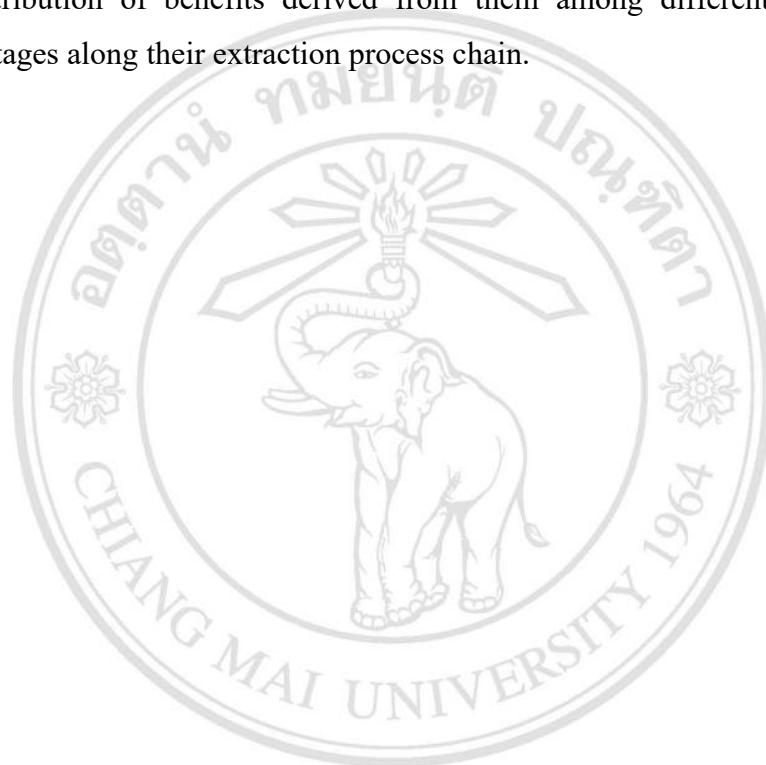
capacity-building can enhance resource management. Community benefit-sharing arrangements should take precedence to protect natural habitats and ensure fairness among all stakeholders involved in extraction processes.

The lack of definite regulations and policies in Somalia creates difficulties, but there are chances for sustainable development if the National Charcoal Policy succeed and enforced successfully by the government with the support of the International Community i.e. the UN. Enforcing extensive regulations, using renewable energy sources, and encouraging community-based initiatives are necessary to tackle climate-related conflicts and environmental issues while progressing toward socio-economic objectives.

The money earned from formalized trading activities could be set aside for specific community-based programs, such as environmental education. Protection measures should be designed to boost security endeavors. Integrated initiatives supported by GCC states could result in formally-regulated charcoal development projects within Somalia capable of addressing climate change issues, deforestation concerns, and poverty reduction strategies. These ideas have already received support from organizations such as the World Bank, which advocates for clear regulations governing this sector under one comprehensive framework, making it easier for subsequent reforms to step towards making the charcoal industry environmentally friendly, while also being economically and socially sustainable. Furthermore, due to the abundance of alternate renewable energy sources such as wind, solar, and other resources, Somalia has the potential to lead the way in climate-related solutions. The country's demographics also work in its favor, with a young population comprising 70% of its people that can be utilized as a workforce for creating sustainable change. Moreover, Somalia has vast water resources, including rivers and oceans, which can further contribute to its energy mix. Despite all these advantages, the country's energy sector still needs to be explored due to a lack of support from the government. Unfortunately, this lack of capacity building for harnessing these resources increases Somalia's vulnerability to climate change issues.

Finally, the complex interplay among these factors must be understood to develop effective strategies to address the root causes of the crisis in Jubbaland, Somalia. Future

research should explore potential policy interventions to mitigate both causes' impacts while effectively addressing sustainable development goals (SDGs) within the region and Somalia. Further exploration could consider evaluating how international aid programs can support local governments' capacity-building initiatives that enable effective resource management strategies tailored towards community benefit-sharing arrangements designed explicitly around preserving natural habitats and ensuring equitable distribution of benefits derived from them among different stakeholders involved all stages along their extraction process chain.



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CHAPTER 6

POLICY RECOMMENDATION AND CONCLUSION

6.1 Policy Recommendations

Based on the research findings, the illegal charcoal trade in Jubbaland, Somalia, is fueled by armed conflicts and climate change, and the combination of these drivers is fueling this trade. Therefore, to address this issue and promote sustainable development in the region, the following recommendations are proposed. These recommendations provide both immediate actions and long-term strategies to address the issue of illegal charcoal trade, ensuring sustainable development in Jubbaland, Somalia:

Short-term recommendations

1. **Implement a Comprehensive National Charcoal Policy:** Expedite the approval and implementation of the National Charcoal Policy to regulate the charcoal trade at the Federal and State levels. Develop a comprehensive framework integrating sustainable development practices, environmental conservation, and community benefit-sharing arrangements. Collaborate with international partners, such as the United Nations and the World Bank, to provide technical assistance and support for policy enforcement.
2. **Strengthen Governance Structures:** Enhance the presence and effectiveness of the government in charcoal business areas. Establish and enforce comprehensive environmental regulations to curb illegal activities and hold perpetrators accountable. Improve institutional capacity and transparency to combat corruption and bribery associated with the charcoal trade.
3. **Enhance Law Enforcement:** Increase efforts to dismantle the influence and control of armed groups, particularly Al-Shabaab, over charcoal production areas. Collaborate with international partners and regional organizations to strengthen

security measures and disrupt the financing and logistical networks of the illegal charcoal trade.

4. **Raise Awareness and Education:** Launch comprehensive awareness campaigns to educate local communities about the environmental impacts of the charcoal trade and the importance of sustainable resource management. Promote environmental education in schools and engage local leaders, civil society organizations, and community-based institutions to advocate for conservation efforts and responsible charcoal production practices.

Long-term recommendations

1. **Promote Sustainable Livelihoods:** Address the socio-economic factors driving involvement in the charcoal trade by creating alternative income-generating opportunities. Support vocational training programs, entrepreneurship initiatives, and agricultural projects that provide viable alternatives for communities dependent on charcoal production. Focus on inclusive and equitable development to reduce poverty and clan-based grievances.
2. **Strengthen International Cooperation:** Engage with Gulf Cooperation Council (GCC) states and other countries involved in importing charcoal from Somalia to enforce stricter regulations and prevent illegal trade. Collaborate on capacity-building initiatives and invest in renewable energy sources to reduce the demand for charcoal as an energy resource.
3. **Foster Peacebuilding and Conflict Resolution:** Prioritize peacebuilding efforts and implement conflict resolution mechanisms to address resource-based conflicts and disputes over land ownership. Promote mediation, negotiation, and reconciliation processes to prevent violence and contribute to long-term stability in the region.

4. Conduct Research and Monitoring: Support further research to deepen understanding of the complex interplay between armed conflicts, climate change, and the charcoal trade. Furthermore, monitor and assess the effectiveness of implemented interventions, identifying areas for improvement and adaptation of strategies.

By implementing these recommendations, stakeholders can work towards curbing the illegal charcoal trade, mitigating the negative environmental impacts, and promoting sustainable development in Jubbaland, Somalia. It requires a multi-dimensional approach involving the government, international partners, local communities, civil society organizations, and the private sector to address the issue's root causes and create a pathway toward a more sustainable and prosperous future for the region.

6.2 Conclusion

In conclusion, the charcoal trade in Jubbaland, Somalia, operates within a complex web of factors, including armed conflicts and climate change, which have severe implications for the environment, human health, and regional stability. This research has shed light on the multifaceted nature of the illicit charcoal trade and its interconnectedness with various actors and dynamics. The factors driving the illegal charcoal trade in Jubbaland are diverse and interlinked. Armed groups, particularly Al-Shabaab, exert significant control and influence over the trade, enabling them to manipulate commercial activities, engage in corrupt practices, and perpetuate their activities. The absence of effective government presence and governance in charcoal business areas further exacerbates the issue, allowing various stakeholders, including government officials and terrorist groups, to exploit the trade for financial gains. Socioeconomic factors such as clan systems, poverty, and the need for income generation also contribute to the persistence of the charcoal trade. These challenges are compounded by poor governance and weak institutional capacity, making it difficult to address the underlying causes effectively.

Additionally, the illegal charcoal trade has detrimental consequences beyond environmental damage. It has far-reaching implications for human health outcomes and regional stability, as it fuels armed conflicts, communal conflicts, and the displacement of populations. The trade's extensive network involves various actors, including government officials, armed groups, and tribal militias, who prioritize financial gains over moral considerations. However, this has led to large-scale deforestation, air pollution, and regional instability. Climate change exacerbates the environmental degradation caused by the charcoal trade. Changing weather patterns, such as droughts, hinder vegetation growth and push communities to engage in unsustainable tree-cutting for charcoal production. These environmental changes further destabilize the region, leading to resource-based conflicts over access to dwindling resources.

Addressing the complex challenges the charcoal trade poses in Jubbaland requires a comprehensive approach. Strengthening governance structures, enforcing environmental regulations, and enhancing economic opportunities are essential. Tackling the influence of armed groups and promoting sustainable development in the region are crucial steps forward.

Policy interventions should develop comprehensive regulations emphasizing sustainable practices and benefit-sharing arrangements. International aid programs and capacity-building initiatives can support resource management strategies and community-based initiatives. Additionally, exploring alternate renewable energy sources, such as wind and solar, and leveraging Somalia's abundant water resources can contribute to sustainable development and reduce the reliance on charcoal. To achieve lasting change, it is crucial to understand the intricate interplay between armed conflicts, climate change, and the charcoal trade. Further research is needed to explore potential policy interventions and evaluate the effectiveness of international aid programs in supporting sustainable development goals in Jubbaland and Somalia. Combating the illegal charcoal trade, lessening the effects of armed conflicts and climate change, and promoting socioeconomic development in the country can be achieved by dealing with the underlying issues and putting efficient approaches into action. The concerted efforts

of the government, international community, and local stakeholders are needed to bring about positive change and create a more sustainable and stable future for the region.



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