FROM DISPLACEMENT TO AWARENESS:

THE CLIMATE–MIGRATION NEXUS BETWEEN THE HORN OF AFRICA AND EUROPEAN SCHOOLS

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Executive Summary

The relationship between climate change, migration, and conflict has been a topic of discussion in academic circles for several decades. Policymakers and media outlets are progressively acknowledging climate as a security concern. Nevertheless, despite the rising apprehension and emphasis on the interplay between climate change and conflict, there remains a degree of uncertainty regarding the mechanisms that connect climate change to migration and subsequently to conflict. While it is challenging to fully comprehend the intricate causes of migration and the resulting economic and political instability, the mounting evidence of connections between climate change, migration, and conflict warrants significant concern. Therefore, it is imperative to begin contemplating innovative and comprehensive solutions to the multifaceted crises exacerbated by global climate change.

The report addresses the intricate issues of climate change, migration, conflict and their complex interconnections, along with the relevant policy frameworks. It is divided into two parts.

Part one explores the relationships among climate change, migration, and conflict specifically in the Horn of Africa, evaluating existing secondary data and literature on this nexus. It begins by investigating the connection between climate change and migration, and subsequently examines the relationship between migration and conflict in the region.

The second part focuses on the European Union's policies regarding migration driven by climate change and the perceptions of youth in the EU concerning climate-induced migration. The analysis of public perception regarding climate change-induced migration is derived from data gathered from schools in Belgium, Greece, Italy, and Spain.

The main findings of the report are summarized below.

The convergence of climate change, human migration, and conflict poses a distinct challenge for the Horn of Africa. These three elements are increasingly interacting in ways that weaken traditional coping strategies, resulting in intricate consequences for the economy, security, and environmental sustainability in the region

Alongside climate change, the Horn of Africa is becoming progressively susceptible to insecurity, violence, and ongoing conflict. In 2022, more than 8,000 conflict incidents were documented in the region, with Ethiopia, Somalia, Sudan, and South Sudan being the primary areas of concern. This region is characterized by both enduring and emerging conflicts, with most violence arising from national-level armed confrontations, inter-communal tensions, competition for scarce resources, attacks by non-state actors, as well as protests and political instability.

Conflict, insecurity, natural disasters, and climate change are significant factors driving regional migration and displacement. From 2013 to 2023, the number of new internal displacements in the

region due to conflict surged nearly sixteen times, rising from under 500,000 to over 7.7 million individuals, averaging 1.7 million displacements annually. This translates to more than 4,600 individuals displaced each day due to violent conflict over the past decade. Likewise, sudden-onset events resulted in an average of over 1.75 million new displacements per year from 2015 to 2023. The majority of these hazards were weather-related, primarily involving droughts, floods, and landslides. The data also highlights the magnitude of these events, with very large occurrences displacing over 1 million people, particularly noted in Somalia during 2022 and 2023. Most disaster events were substantial, causing displacements ranging from 100,000 to 999,999, while smaller events, displacing fewer than 100,000, also played a role in the overall displacement figures.

The region is experiencing a significant rise in food insecurity and acute malnutrition due to violent conflicts, extreme weather events, and increasing food demand. The Horn of Africa is confronted with a combination of recurring and intensifying climate crises, particularly droughts and floods, alongside conflicts, disease outbreaks, and economic shocks. These factors, exacerbated by the effects of El Niño, are forcing millions into displacement and worsening food insecurity and malnutrition. The demand for humanitarian assistance in the region is on the rise, with the number of individuals requiring aid nearly tripling from 2016 to 2023. Currently, approximately 64 million people in the Horn of Africa require humanitarian and protection assistance, representing nearly 22 percent of the global humanitarian caseload projected for 2024. Sudan and Ethiopia are among the five largest humanitarian crises worldwide, with the Sudan crisis alone accounting for nearly 40 percent (25 million people) of the regional total, followed by Ethiopia (21 million), South Sudan (9 million), and Somalia (8.3 million). A variety of factors, including economic barriers to food access such as poverty, political instability, recurrent droughts, rising food prices, and natural disasters like landslides and floods, as well as pandemics, have contributed to the worsening food insecurity in these countries.

International migration is experiencing an upward trend in the IGAD region. The overall number of international migrants has seen a substantial increase, rising from 3.1 million in 2010 to 6.5 million in 2019. This represents a growth of 110.2 percent, corresponding to an annual growth rate of 7.4 percent. This trend is evident among both genders. In 2010, there were 1.7 million male migrants, which increased to 3.5 million by 2019, reflecting a rise of 111.9 percent. Similarly, the female migrant population grew from 1.5 million in 2010 to 3 million in 2019, indicating an increase of 108.3 percent. The annual growth rates for male and female migrants are 7.5 percent and 7.3 percent, respectively. These developments emphasize the increasing migratory movements within the IGAD region, highlighting the necessity for enhanced migration governance to facilitate socio-economic development and effectively address migration challenges.

Climate induced migration is a gendered process: Women are particularly impacted by climate change, as they often have restricted access to information, resources, and employment opportunities in

the communities and nations to which they migrate. As climate change disrupts existing livelihoods, women are at an increased risk of being left behind, enduring perilous conditions while simultaneously managing family and household responsibilities when men migrate in search of improved economic opportunities. The repercussions of climate change can significantly hinder women's mobility. For instance, drought conditions may compel women to seek food, water, and other essential resources in unfamiliar territories, which can pose considerable challenges and risks, particularly for those traveling alone. Furthermore, natural disasters like drought can negatively affect women's access to education and healthcare services, potentially harming their health and overall well-being while also limiting their employment prospects. Additionally, drought can heighten women's vulnerability, making them more prone to violence, exploitation, and abuse. For instance, research indicates that climate change has a significant impact on the migration patterns of Ethiopian women to Saudi Arabia. Young women from rural Ethiopia are increasingly driven to explore alternative means of generating income and sustaining their livelihoods. The act of migrating as domestic workers to the Middle East, specifically Saudi Arabia, has emerged as a compelling choice for these women, offering them career prospects and the ability to assist their relatives residing in their countries of origin financially. This decision is shaped by the lack of economic opportunities and the increased vulnerability brought about by climate change.

Awareness on climate-induced migration is limited: The results from a survey questionnaire on students from Belgium, Greece, Italy and Spain indicate a varied comprehension and awareness of climate change and migration among students, revealing significant knowledge gaps in multiple areas. A considerable number of students exhibited a fundamental understanding of climate change, especially regarding its impacts on the environment and the economy; however, their awareness of migration driven by climate change is markedly lower. Although the majority of students recognize the significance of climate action, a smaller proportion perceives the direct relationship between climate change and migration, underscoring a disconnect in associating these two vital issues. This analysis suggests a pressing need for more targeted education on the specific subject of climate-induced migration, as many students lack familiarity with this dimension of climate change.

PART ONE - CLIMATE CHANGE AND MIGRATION IN THE HORN OF AFRICA

CHAPTER ONE: OVERVIEW OF THE HORN OF AFRICA

1.1 Introduction

The term Horn of Africa in this context refers to the states of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda also called the IGAD region (see figure 1). The IGAD region encompasses an area of 5.2 million square kilometers. It features approximately 6,960 kilometers of coastline along the Indian Ocean, Gulf of Aden, Gulf of Toudjoura, and the Red Sea. Additionally, the region shares a total of 6,910 kilometers of international borders with Egypt, Libya, Chad, the Central African Republic, the Democratic Republic of Congo, Rwanda, and Tanzania.

About 70 percent of the IGAD region consists of Arid and Semi-Arid Lands (ASALs), which receive less than 600 millimeters of rainfall each year. The remaining areas exhibit a wide range of climates and landscapes, including cool highlands, wetlands, tropical rainforests, and other characteristics typical of equatorial regions. Moreover, the region is home to various ecosystems and agro-ecological zones at varying altitudes, ranging from 150 meters below sea level at Dalul to approximately 4,600 meters above sea level at Mount Kenya. Socio-economically, the majority of IGAD Member States are classified as some of the world's Least Developed Countries (LDCs) and exhibit similar economic growth rates and social ethnic groups across their borders.

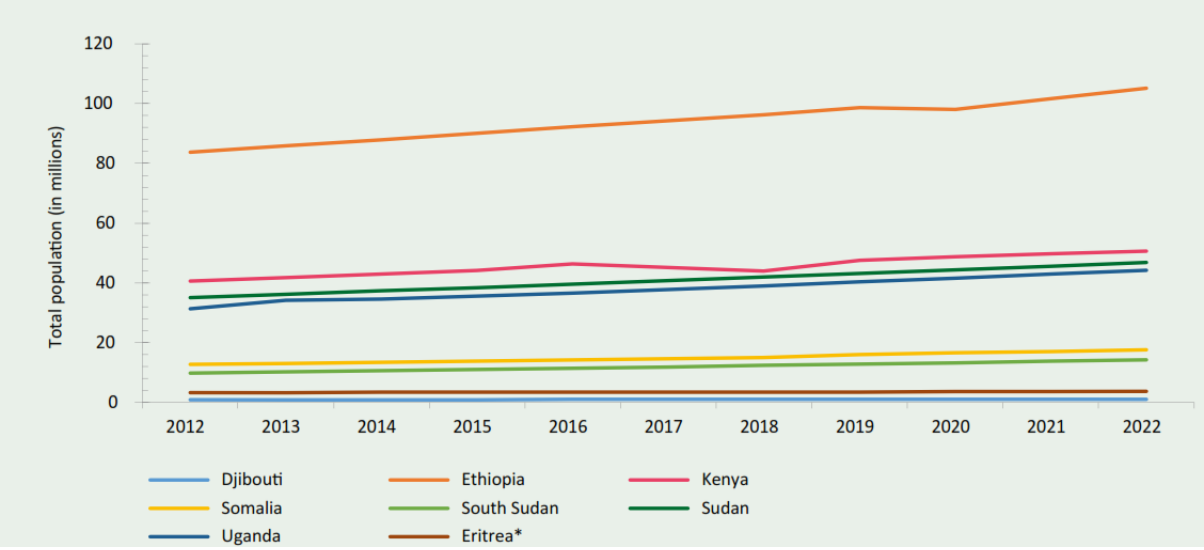
Figure 1. 1: Map of IGAD region

In terms of type of use of land in the IGAD region, agricultural lands represent 7 percent, forests comprise 19 percent, and permanent pastures make up 28 percent of the total land area. The remaining 46 percent consists of relatively unproductive or marginal land. Moreover, this region is rich in extensive mineral resources that remain largely unexplored and underutilized. A significant challenge in optimizing the agricultural potential of this area is the considerable variability in rainfall patterns, both spatially and temporally. Additionally, the IGAD region frequently experiences droughts and dry spells, rendering it one of the most vulnerable areas on the African continent to climate fluctuations. This situation underscores the necessity for policies and programs aimed at enhancing the region's technical and research capabilities. Land and environmental degradations pose the most critical threats to the region, adversely impacting agricultural productivity and economic development. Such degradation not only leads to food insecurity, famine, and poverty but can also exacerbate social, economic, and political tensions, potentially resulting in conflicts and widespread suffering. Thus for a sustainable development, poverty reduction and lasting peace and security in the region, member states need to strategize and relentlessly work sustainable management of natural resources.

1.2 Demography of the Region

The total population for the IGAD region in 2012 was 217 million. This has steadily increased over the last decade, to an estimated 283 million people in 2022, marking a 20% increase with an annual growth rate of 3.0% (IGAD, 2023). The populations vary with Ethiopia being the most populous country in the region, accounting for 37% of IGAD's total population, while Djibouti has the smallest share of the region's population, constituting about 0.4% of the region's population. As of 2022, South Sudan had the highest annual growth rate at 4.5%, followed by Uganda and Somalia with estimated growth rates of 4.1% and 3.8% respectively (IGAD, 2023).

Figure 1. 2: Population trends across the IGAD member states (in millions)



Source: IGAD Statistics, Facts and Figures 2023

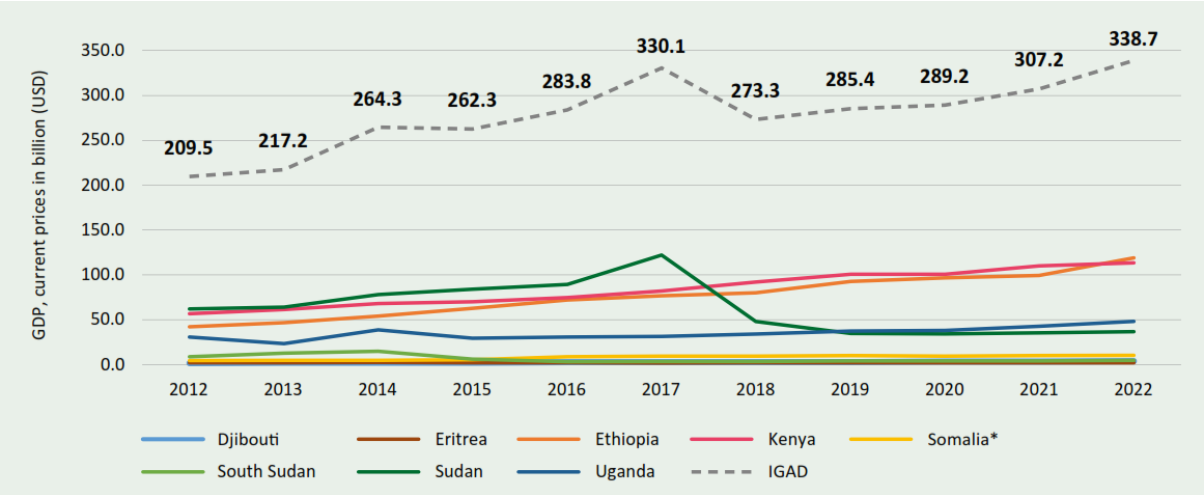
The average population density in the IGAD region is about 30 persons per km2 with significant variation among the member states ranging from 14.5 persons per km2 in Somalia to above 95 persons per km2 in Uganda. The differences in population distribution are particularly evident across various ecological zones. For instance, the IGAD region features vast deserts with minimal human habitation, while certain rural areas boast high population densities, exceeding 600 individuals per square kilometer. Urban areas also exhibit significant density, with Nairobi housing approximately 4,509 individuals per square kilometer, and Addis Ababa reaching even higher at 5,165 individuals per square kilometer. Notably, the demographic profile indicates that around 50 percent of the population consists of youth, which presents a substantial opportunity for sustained economic development, provided that these young individuals receive suitable education and training. Additionally, there is a significant trend of urbanization within the IGAD region, as many individuals from rural locales migrate to major urban centers in pursuit of employment and improved livelihoods. The average urbanization rate in the region is estimated to be 4.1 percent. The capital cities, including Addis Ababa, Nairobi, and Khartoum, each have populations exceeding three million. However, the rapid growth of these urban centers brings forth socio-economic and environmental challenges that pose ongoing threats to peace and stability in several countries within the IGAD region.

1.3 Economy of the Region

Looking at trends in economic performance of the IGAD region, we observe that the region recently is recording a rise in GDP having achieved a growth rate exceeding 5% over the planning period 2021-2025, although it falls short of the AU/SDG target of 7%. The agriculture sector continues to be the leading contributor, representing 31% of the region's GDP in 2018, along with generating 60% of export revenues and providing 80% of employment opportunities (IGAD, UD). Djibouti's economy is predominantly service-oriented, with 60% focused on port services and facilities. In contrast, South Sudan's economy is heavily reliant on oil revenues, accounting for 90%, while Somalia's economy is significantly supported by livestock, contributing 40%. In Kenya, agriculture constituted 34% of the GDP, whereas in Ethiopia and Uganda, it represented 33% and 24%, respectively. In South Sudan, agricultural contribution was below 10% during the planning period. Despite their mixed economic structures, both Kenya and Uganda remain reliant on agriculture (IGAD, UD).

Figure 1.3 below indicates trends in GDP at current price in the IGAD region. GDP at current prices represents the total value at current prices of final goods and series produced within a country during a specified period, such as one year. IGAD's nominal GDP (GDP at current price) growth was reported at 10.4% in 2022, an increase from the previous number 6.3% for 2021. Growth in nominal GDP means growth in economic activities in IGAD and it is attributed to increase in quantity or price. Ethiopia stands out with significant GDP expansion, growing from 42.2 billion USD in 2012 to 119 billion USD in 2022, showcasing a robust and expanding economy. Djibouti and Uganda also demonstrate consistent GDP growth over the years, reflecting stable economic environments and steady progress. However, some countries like Eritrea have maintained relatively stable GDP figures, indicating a need for targeted strategies to stimulate growth. South Sudan and Sudan experienced fluctuations, possibly due to factors such as political instability, economic challenges, or shifts in resource availability

Figure 1. 3: Trends in GDP at Current Prices in the IGAD region

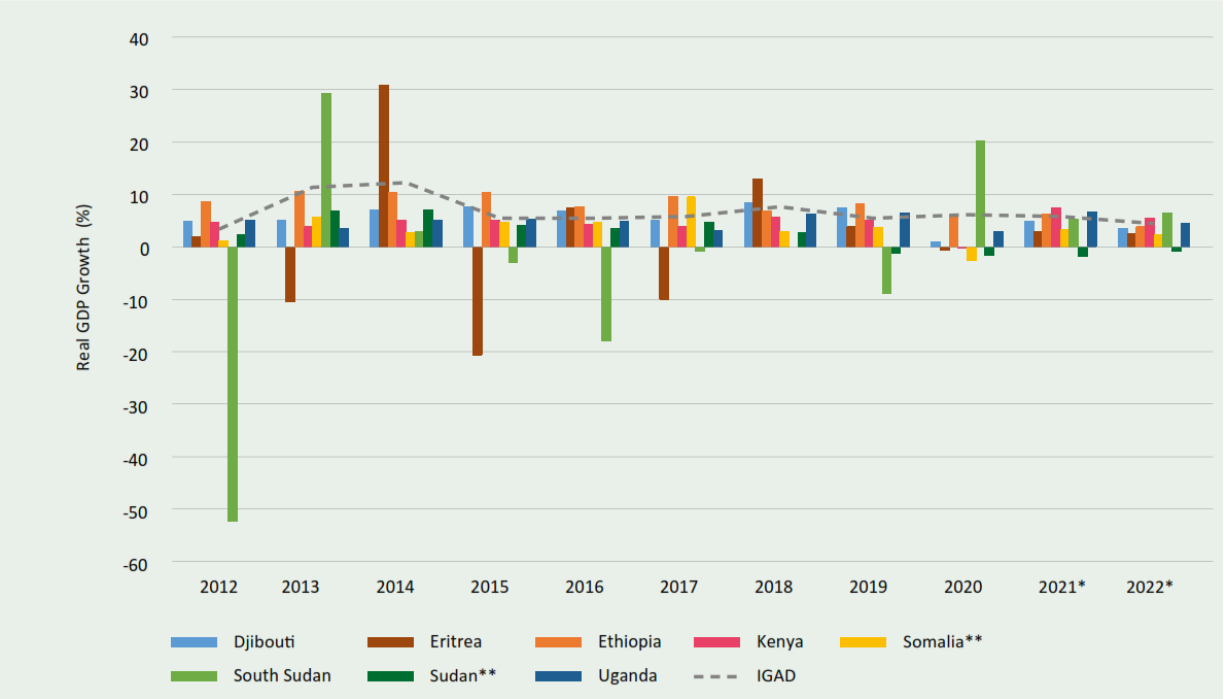


Source: IGAD Statistics, Facts and Figures 2023

Figure 1.4 below indicates trends in real GDP growth in the IGAD region. Real GDP growth also called GDP in volume growth represents the total value at constant prices of final goods and services. The figure indicates that in 2022, the GDP volume growth rate of IGAD reached its lowest point since 2012, primarily due to the global economic disruption triggered by the pandemic. Consequently, Sudan experienced a decline in growth, recording a negative rate of -0.8% among the eight IGAD member

states. In contrast, South Sudan achieved the highest real GDP growth rate at an estimated 6.5%, followed closely by Kenya with a growth rate of 5.4%.

Figure 1. 4: Trends in Real GDP growth rate in the IGAD region (2012 – 2022)



Source: IGAD Statistics, Facts and Figures 2023

Overall, the region is expected to experience a rise in income levels due to its favorable economic prospects, advancements in governance, and the growth of a middle class. Nevertheless, the challenges posed by climate change and environmental degradation, along with a significant dependence on agriculture and livestock, make the region susceptible to recurring droughts and floods. As a result, the area frequently encounters economic disruptions that jeopardize livelihoods and endanger lives (FAO, 2019). The ongoing reliance on imports and food assistance continues, while there is minimal progress in the industrial and manufacturing sectors, which exacerbates high youth unemployment rates. Since 2014, the Human Development Index has largely remained unchanged or has seen declines in certain regions.

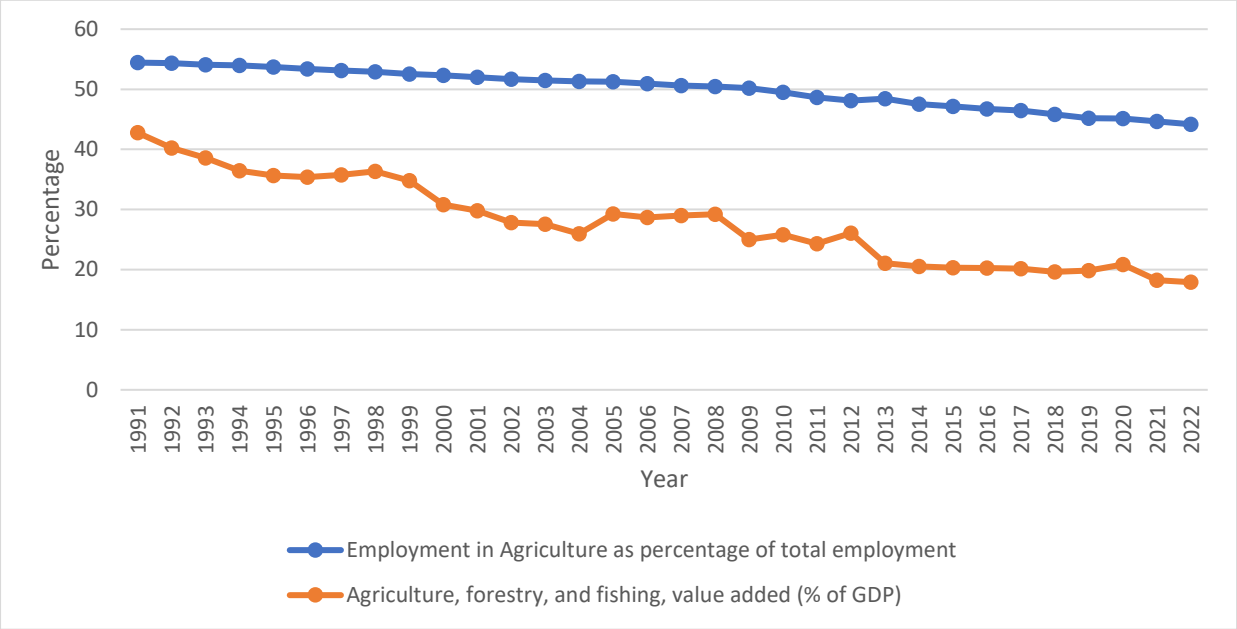
1.4 Agriculture and Food Security in the IGAD region

1.4.1 Agriculture

Agriculture continues to be a pivotal sector in the economies of most IGAD member states. The figure below indicates trends in contribution of agriculture to GDP and total employment in the IGAD region. Although agriculture's value addition as percentage of GDP is declining in the IGAD region, it still remains a major contributor. On average, agriculture's value added as percentage of the GDP in the

region in 2022 was close to 18 percent. The contribution of the sector is even more pronounced in terms of its contributions to employment. Employment in agriculture on average is close to 50 percent of the total employment in the region. However, the figures are different for the different countries. Among the IGAD countries, agriculture plays the least in Djibouti contributing only 1.8 percent of the GDP and 1.2 percent to total employment. The contribution of the sector is significant in countries like Ethiopia, where the sector contributes close to 38 percent of the GDP and Uganda where the sector contributes not less than 66 percent of the total employment.

Figure 1. 5: Trends in contribution of agriculture to GDP and employment in the IGAD region

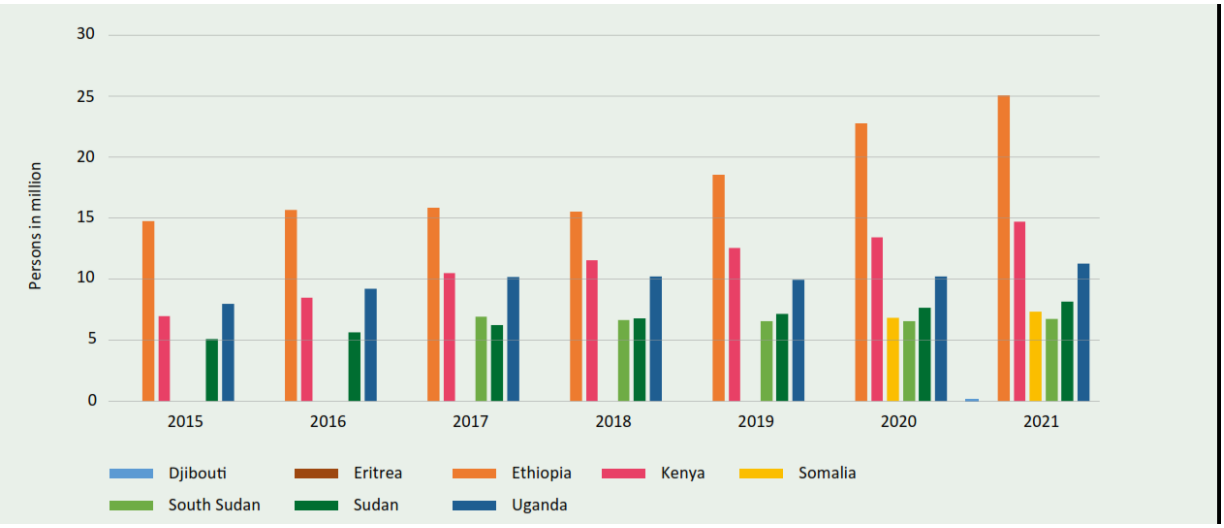


Source: World Bank: World Development Indicators

1.4.2 Food insecurity

Food insecurity represents a significant challenge within the IGAD region, affecting millions of individuals each year. The demand for food in IGAD is rapidly increasing due to swift population growth. A critical contributor to hunger and malnutrition is the availability of food. Many member states of IGAD continue to depend on subsistence farming, which may signal an impending food insecurity crisis. Various factors have contributed to the escalation of food insecurity in these states, including economic barriers to food access (such as poverty), political instability, recurrent droughts, rising food prices, and natural disasters like landslides and floods, as well as pandemics. The accompanying figure illustrates the number of food-insecure individuals by country since 2015. In 2021, Ethiopia had the highest number of food-insecure individuals, estimated at 25.3 million, followed by Kenya with 14.8 million, while South Sudan had the lowest figure at approximately 6.8 million.

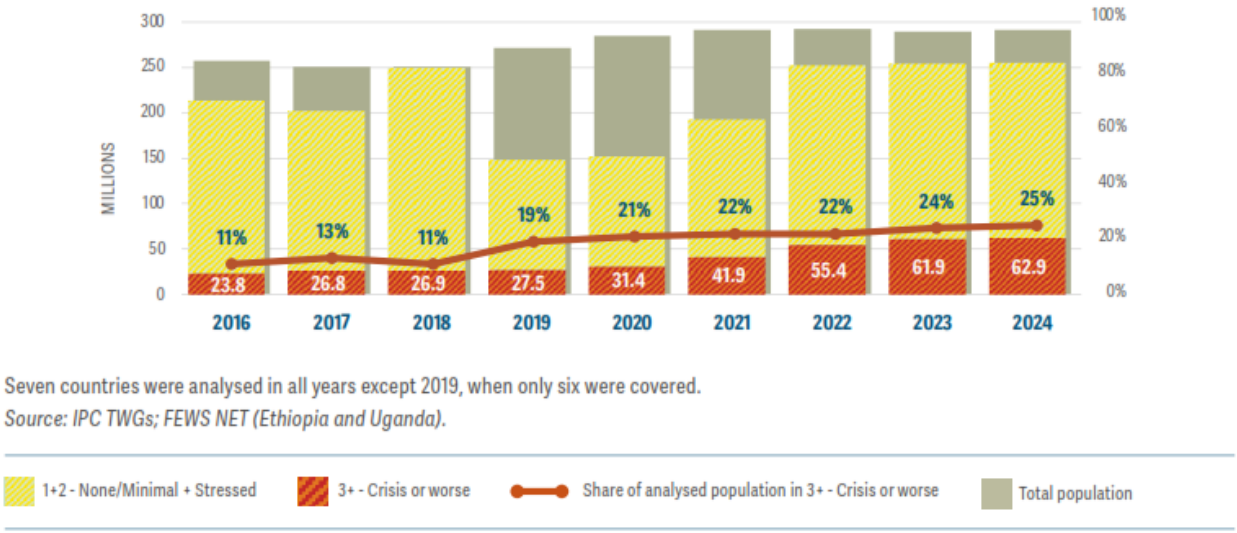
Figure 1. 6: Trends in Sever Food Security in the IGAD region by country



Source: IGAD, 2023: IGAD Statistics, Facts and Figures 2023

Examining food insecurity at the regional level, Figure 1.7 reveals that the rates of high acute food insecurity in the IGAD region remained relatively constant until 2019. However, the combination of various shocks has led to a significant escalation in the magnitude and severity of food crises in the region. Following a period of stability from 2016 to 2019, the number of individuals experiencing high levels of acute food insecurity in the IGAD region surged from 2020, with an increase of over 10 million people each year until 2022, and an additional rise of more than 6 million between 2022 and 2023. Projections for 2024 indicate that there will be an increase of 1 million more individuals in Integrated Food Security Phase Classification (IPC Phase 3 or higher compared to 2023.

Figure 1. 7: Number of people and share of analysed population facing high level of acute food insecurity, 2016 - 2024



1.5 Climate Change

Table 1. 1: IGAD's Average Surface Temperature over the period 2012 – 2024

Member state / Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Djibouti	-	1.23	1.09	1.59	1.35	1.81	1.42	1.47	1.53	1.13	1.55
Eritrea	1.48	1.19	0.99	1.81	0.99	1.31	0.98	0.91	-	1.49	0.53
Ethiopia	1.10	1.23	1.19	1.44	1.53	1.50	0.99	1.32	1.34	1.52	1.46
Kenya	1.03	0.93	1.02	1.16	1.24	1.50	0.68	1.62	1.34	1.42	1.28
Somalia	0.98	1.09	1.12	1.47	1.29	1.62	0.71	1.53	1.72	1.53	1.45
South Sudan	1.25	1.33	0.97	1.14	1.29	1.30	1.19	1.00	0.69	1.17	0.98
Sudan	1.03	1.15	0.95	1.50	1.17	1.21	1.23	0.88	0.46	1.24	0.77
Uganda	1.12	1.06	1.14	1.16	1.26	1.74	1.10	1.62	1.24	1.50	1.42
IGAD	0.94	1.21	1.10	1.52	1.33	1.60	1.16	1.44	1.08	1.45	1.35

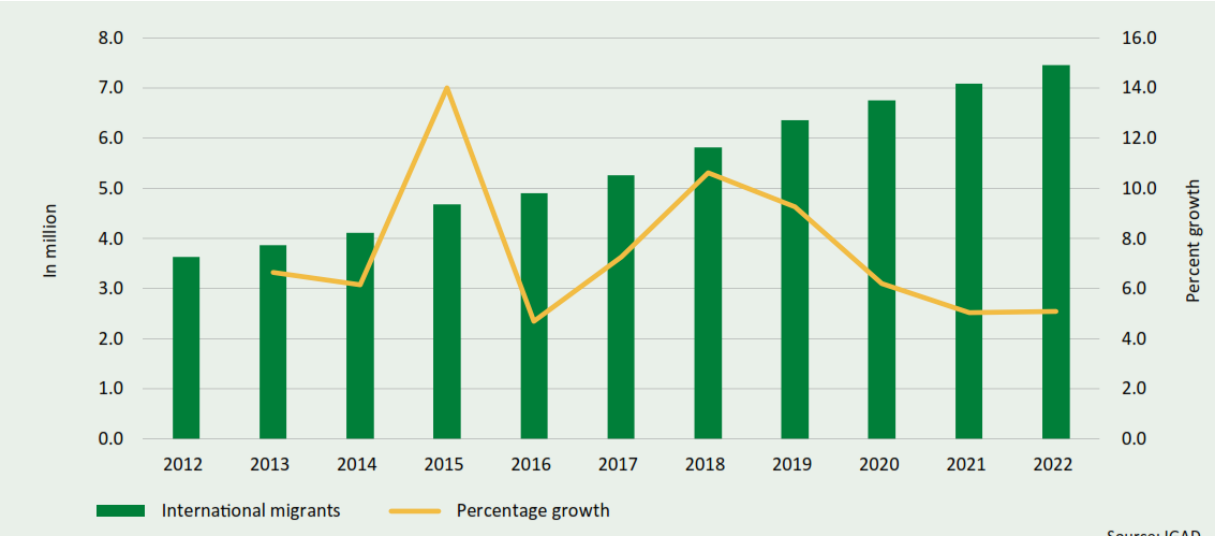
Source: IGAD Statistics, Facts and Figures 2023

The table presented below depicts the trends in surface temperature across the IGAD region. Since 2012, the average surface temperature in IGAD has risen by 0.41°C. Human activities have been the primary contributors to global warming during this period, with greenhouse gas emissions being a clear factor in this phenomenon. There have been notable changes in temperature and weather patterns among the IGAD member states since 2012. In Djibouti, the indicator has shown variable values over the years. Eritrea has experienced significant fluctuations, particularly with a marked decline in 2020. Ethiopia typically exhibits a moderate level of the indicator, reaching its highest points in 2016 and 2021. Kenya's values also fluctuate but indicate a general upward trend. Somalia has shown variability, with peaks occurring in 2012 and 2020. South Sudan's values have varied greatly, including a significant drop in 2020. Sudan's values have similarly fluctuated, with a notable decrease in 2020. Uganda's values show variability but reflect an overall increasing trend. The IGAD region as a whole displays fluctuations, with notable peaks in 2017 and 2021.

1.6 Migration

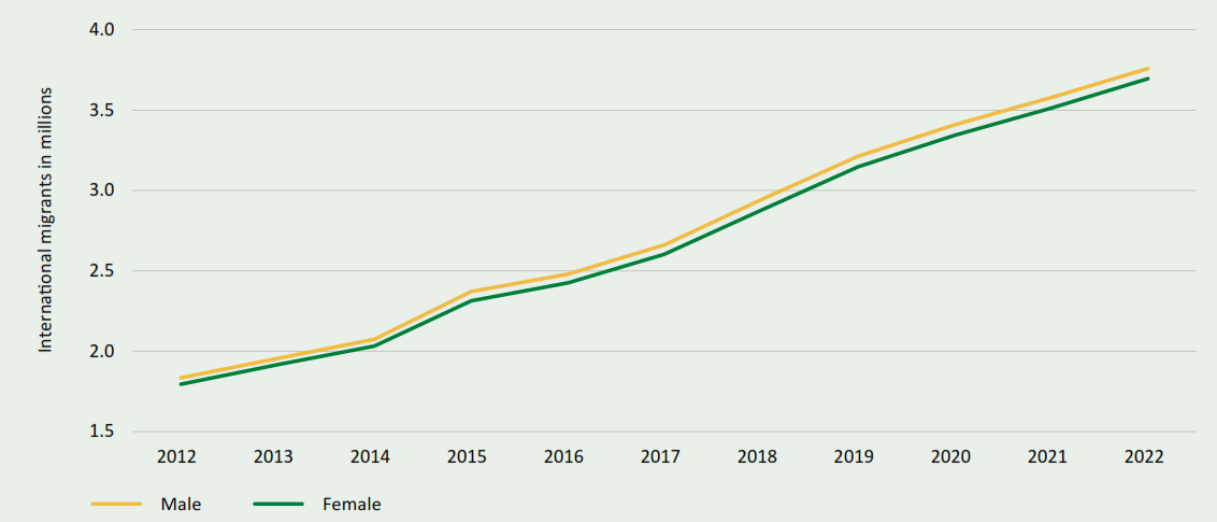
The number of international migrants in the IGAD region has been increasing over the years, from 3.6 million migrants recorded in 2012 to 7.5 million in 2022 (see figure 1.8). This represents an increase of 108.3 percent, translating to an annual growth rate of 7.4 percent. Over the years, the IGAD region has recorded a consistent increase in both male and female international migrants. The number of male and female international migrants was roughly equal in the IGAD region, though male migrants held a slight lead at 3.8 million (50.7%) compared to female migrants at 3.7 million (49.3%) in 2022 (see figure 1.9). These trends signify increased migratory movements within the IGAD region, thus necessitating better migration governance for socio-economic development and management of migration issues.

Figure 1. 8: Trends in International Migration from the IGAD region



Source: IGAD Statistics, Facts and Figures 2023

Figure 1. 9: Comparison of Male and Female International Migrants from the IGAD region



Source: IGAD Statistics, Facts and Figures 2023

CHAPTER TWO: CLIMATE CHANGE, MIGRATION AND CONFLICT NEXUS

2.1 Introduction

There is considerable scholarly discussion regarding the intricate relationships between climate change, conflict, and migration (CCM), highlighting the necessity for innovative strategies to enhance collective comprehension and bridge differing viewpoints (Solow, 2013). These interconnections can be described as a nexus, where each element is interconnected both individually and collectively. An increasing number of policymakers and media outlets are acknowledging climate as a matter of security. Nevertheless, despite the rising concern and emphasis on the relationship between climate change and conflict, there remains ambiguity about the pathways that connect climate change to migration and subsequently to conflict.

This ambiguity is partly due to the inherent complexity of climate change forecasts. Additionally, it is compounded by the difficulties in accurately predicting population growth and movements, recognizing the onset of conflict, and assessing the role of climate and migration as factors influencing conflict in comparison to other stabilizing or destabilizing elements. Despite these challenges and the associated uncertainties, the potential ramifications are so significant that it is crucial to cultivate a more comprehensive understanding of the interactions among CCM.

2.2 Climate Change and Migration

One of the motivations for research in the CCM is the aspiration to better understand how climate, particularly climatic change, will affect human populations. The relationship between climate change and migration—whether or not conflict serves as a mediating factor—is not deterministic. Instead, it is influenced by a variety of elements, including the vulnerability of both the individuals and the specific region involved (Perch-Nielson et al., 2008). It is also crucial to emphasize that the arrival of migrants in a host country is not necessarily detrimental; in fact, in many instances, migrant communities contribute positively to the economy and overall well-being of the host nation (d'Albis et al., 2018; Gaskell, 2019). Consequently, it is essential to create a more comprehensive and integrated understanding of how these three elements interact, with the goal of exploring how quantitative methods can facilitate a more proactive and forward-thinking approach to climate migration, rather than a merely reactive one.

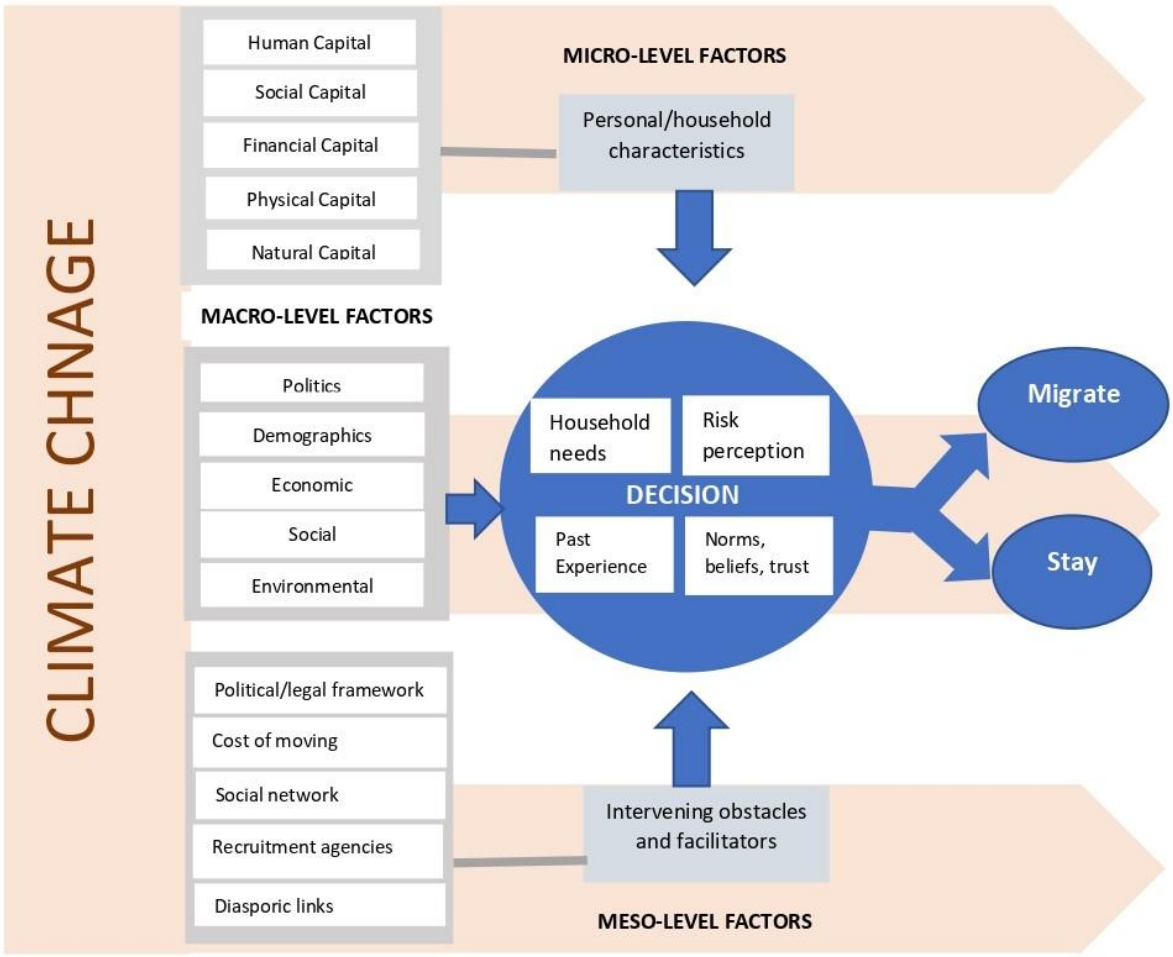
The choice to migrate is a multifaceted issue. The factors that influence this decision evolve over time and differ among individuals and their extended families. Climate change further complicates the already challenging choice of whether to remain in or leave one's residence. Variability in climate and its changes pose significant risks to both environmental and human systems, manifesting in extreme occurrences such as droughts, heat waves, floods, storms, and wildfires, as well as gradual impacts like altered rainfall patterns, rising sea levels, increased salinity, and reduced soil fertility, among others. Such events may result in population displacement as individuals move due to damage or loss of their land and property. Nevertheless, there is ongoing debate regarding the precise ways in which climate

change will influence migration and the extent to which it serves as a critical factor in the decision to migrate.

Individuals may choose to migrate as a strategy for sustaining their livelihoods when climate change impacts critical factors such as the economy, environment, and political landscape of their regions. The influence of climate change is most pronounced on macro-level elements, particularly through economic pathways, yet it also affects variables across all three levels. It can serve as either a push or pull factor by changing the relative desirability of different locations. Additionally, it can modify the barriers or enablers of migration, as well as the accessibility of various areas, or it may impact the livelihood resources available to individuals and families.

The accompanying figure, adapted from Rigaud et al. (2018), illustrates how climate change affects households' decisions to migrate or remain in their current locations. Livelihoods are contingent upon access to various types of capital, which differ in quantity and quality depending on geographic region and livelihood systems. Scoones (1998), as referenced in Rigaud et al. (2018), categorizes livelihood capital into four forms: natural (ecological goods and services), economic or financial, human (skills, knowledge, physical health, and abilities), and social (benefits and opportunities derived from social relationships).

Figure 2. 1: Foresight model adapted to illustrate climate change, livelihoods, and household migration behaviour



Source: Rigaud, et.al., (2018)

Climate change can impact livelihoods both directly and indirectly, often simultaneously. While the immediate physical consequences of climate change may be the most apparent, the less visible indirect effects can be equally harmful. Climate change will drive migration patterns through increased temperatures and droughts, which will adversely affect agricultural output and water availability; rising sea levels that render coastal regions and island nations uninhabitable; the growing frequency and severity of natural disasters; and competition for natural resources, which may exacerbate conflict drivers.

One significant effect of climate change on internal migration in areas like the Horn of Africa is linked to water availability, agricultural productivity, sea level rise, and storm surges. Research indicates that water scarcity and diminishing crop yields, coupled with rising sea levels, pose substantial challenges for low-income nations, serving as key factors driving migration (Henry, Schoumaker, and Beauchemin 2004; Feng, Krueger, and Oppenheimer 2010; Nawrotzki, Riosmena, and Hunter 2013; cited in Rigaud et al. 2018). Water shortages can also have broader economic repercussions, leading households to reduce expenditures and prompting agricultural processing sectors and other businesses to scale back operations. There is limited evidence regarding the effects on regions that may experience increased rainfall over time. In such cases, households might relocate one or more members to urban areas or other rural locations in search of alternative livelihoods, or they may completely abandon farming and other rural occupations, similar to trends observed in rapidly urbanizing nations like China. The existing literature suggests that extreme weather events are more likely to cause temporary displacement rather than long-term migration (Kälin 2010; Black et al. 2011; Brzoska and Fröhlich 2015, cited in Rigaud et al. 2018).

Soil degradation, associated with drought and unsustainable farming practices, has been connected to varying rates of migration. Gray (2011) observed that in Kenya, an increase in soil degradation led to a rise in short-term labor migration, indicating that individuals often resort to migration as a strategy to diversify their income. Conversely, Gray found that in Uganda, a decline in soil quality slightly decreased overall migration rates. This decline hindered households' ability to afford sending permanent, non-labor migrants (Gray, 2011). In Uganda, these individuals may represent a "trapped population," as their limited financial resources restrict their ability to migrate (Foresight, 2011). Such groups are particularly at risk, as their lack of wealth not only makes migration less feasible but also hampers their chances for successful adaptation (Foresight, 2011). The contrasting findings of this research highlight that the relationship between environmental change and migration is not straightforward; rather, it is influenced by various factors, including income. Therefore, understanding the impact of environmental changes on migration necessitates a careful examination of the specific local context surrounding migration decisions.

Flooding, frequently triggered by severe storm events, can lead to increased migration. Research by Mallick and Vogt (2012) indicated that migration rates surged among the lower socioeconomic groups in Bangladesh following Cyclone Aila. This increase was primarily driven by the necessity to diversify income sources and the challenges faced in reconstructing lost or damaged properties (Mallick and Vogt, 2012). These findings align with existing literature on drought, which suggests that income levels significantly influence migration decisions during or after environmental crises. Conversely, an analysis of migration patterns in response to natural disasters in the United States during the 1920s and 1930s revealed that flooding did not correlate with heightened out-migration (Boustan et al., 2012). This lack of migration may be attributed to public disaster mitigation efforts, such as rebuilding initiatives and enhanced protections in flood-prone regions (Boustan et al., 2012). This implies that government

assistance may effectively counterbalance other migration-influencing factors. Similarly, migration remained relatively low following the 2004 Indian Ocean tsunami (Tacoli, 2009), likely due to prompt humanitarian responses. In the same year, Hurricane Ivan caused extensive damage to 89% of housing in Grenada, yet nearly 60% of these homes were restored to their pre-hurricane condition within a year (World Bank, 2005). This indicates minimal long-term migration, partly owing to government and donor support for reconstruction efforts (World Bank, 2005). The subsequent sections will further explore the impacts of political stability and economic conditions.

The existing body of literature on climate and migration has primarily concentrated on the effects of droughts and flooding. In contrast, there has been significantly less investigation into how temperature extremes and wildfires serve as catalysts for migration. In rural Pakistan, research indicates that heat stress correlates with a more substantial rise in long-term migration compared to flooding (Muller, 2014). This phenomenon may stem from the relatively limited emergency assistance provided following heat events, in contrast to the more robust responses to flooding (Muller, 2014). Additionally, forest fires have been associated with an increased likelihood of migration intentions (Nawrotzki et al., 2014). While most migration following fires tends to be temporary, similar to the patterns observed after other natural disasters, researchers have noted that, unlike the situations following floods and droughts, there is no significant variation in migration intentions among different socioeconomic groups after wildfires (Nawrotzki et al., 2014; Foresight, 2011). Despite these compelling findings, there remains a notable lack of research exploring the specific mechanisms through which these extreme events may influence migration in the context of climate change.

As climate change continues to exert its influence alongside other stressors such as deforestation, land degradation, and biodiversity loss, migration patterns are expected to evolve across various ecosystems. In arid regions, an increase in labor migration and rural-to-urban movement is anticipated, with extreme events likely prompting further migration under distress. In tropical and temperate forest areas, dynamic migration patterns are expected to emerge in forest frontier regions, along with rising rates of young adult labor migration from more established agricultural zones. In coastal areas, by the middle of the century, there may be a rise in both temporary and permanent rural-to-urban migration, as well as displacement from smaller atolls and the coastal edges of deltas due to erosion and salinization.

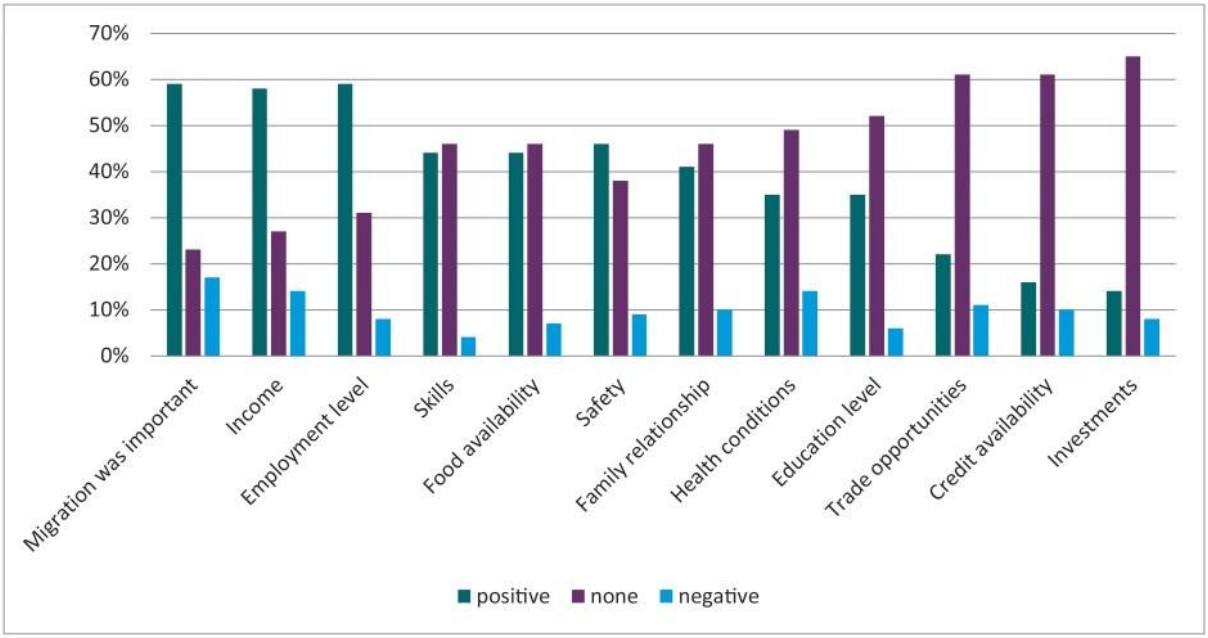
2.3 Impacts of Migration on People and Areas

The results of migration are influenced by the circumstances surrounding individuals' movements (UNDP 2009). Extreme climate conditions undermine household livelihoods and assets (Zomers et al. 2016; Warner and Van der Geest 2013), reducing the necessary resources for successful integration into new locations. Hugo (2009) posits that individuals who are displaced often face challenges in adapting to their new environments due to various factors, including the abruptness of their relocation, their emotional well-being, and the unfamiliarity of their new settings. Those with enhanced capabilities—thus possessing greater flexibility in choosing when and where to migrate—tend to experience improved economic conditions post-migration. Harttgen and Klasen (2009) discovered that in 14 out of 16 developing nations examined, the Human Development Index was higher among internal migrants compared to non-migrants. A World Bank study (2017) reveals that cross-border migrants transitioning from low- to high-income countries experience, on average, a 15-fold increase in income, a doubling of school enrollment rates, and a 16-fold decrease in child mortality. Access to superior health services, improved water quality, and better sanitation at the destination, along with an extended duration of stay, can significantly enhance the health outcomes of migrants (UNDP 2009; Yabiku et al., 2009). Migrants

relocating to urban areas with enhanced health service access have better survival prospects compared to rural inhabitants, although their health outcomes still lag behind those of urban non-migrants (UNDP 2009).

Overall, migration tends to yield positive effects for households in the areas of origin, although these advantages are not evenly shared. Participants in surveys conducted as part of the Migration, Environment and Climate Change: Evidence for Policy (MECLEP) initiative, led by the International Organization for Migration (IOM) in collaboration with six universities, generally report that migration has positive or neutral effects on household economies. Only a minimal percentage of respondents indicate that migration has negative consequences for their households.

Figure 2. 2: Perceived impact of migration on households



Source: Rigaud, et al. (2018)

2.4 Is climate change and/or variability a driver of human mobility?

Mobility is a multicausal phenomenon, the catalysts of which are frequently referred to as 'drivers.' Burrows and Kinney (2016) cited in Savelli et al. (2022) summarize the five main types of drivers as: 'push' factors that drive migrants away from a place; 'pull' factors that draw migrants into a place; network factors that incentivize or disincentivize migration between two places; policy frameworks that make migration easier or harder in general; and the personal psychology of individual migrants. These drivers are often subdivided into economic, political, social, environmental, and demographic dimensions, which may be interwoven and are again filtered through larger institutional structures (social, political, and economic) (Black et al., 2011; Brzoska and Fröhlich, 2016).

Because mobility is multicausal, designating any single driver as the principal influence of a specific instance is problematic (Borderon, et al., 2019). However, the IPCC's Sixth Assessment Report (IPCC AR6) states with high confidence that there is high agreement and robust evidence that "climatic conditions, events and variability are important drivers of migration and displacement … with migration responses to specific climate hazards being strongly influenced by economic, social, political and demographic processes" (Cissé, et al., 2022). Nonetheless, it is important to acknowledge that, when asked their reasons for migrating, individuals most often cite social or economic factors, with climate or environmental factors rarely presented as a primary driver (Risi and Null, 2016; Black et al., 2011). Decisions that are proximately based on socio-economic grounds often have climatic drivers underlying them that are difficult to identify and articulate. Given the inherent complexity and opacity of an individual's decision-making process, researchers have increasingly turned to systems methodologies that account for a wide variety of push and pull factors to empirically answer the question of *why* and *when* individuals choose to migrate. Black et al. proposed a framework to characterize "the range of drivers that might affect the volume, direction and frequency of migratory movements, as well as the different levels of analysis at which migration might be considered" (Black, et al., 2011). In addition to the demographic, economic, political, and social drivers of migration, the natural environment appears both as a primary and an indirect driver, which, in its latter capacity, can amplify the influence of more fundamental factors in the decision-making process. In addition to these structural drivers, individual agency is recognized through the impact that personal and household characteristics as well as structural facilitators and obstacles may exert on individuals at the micro- and meso-levels, respectively.

Climate hazards can be categorized as either rapidly occurring natural disasters or slower onset threats (Naik, 2009). Natural disasters are commonly defined as large-scale catastrophes that impact vast numbers of people very quickly, with tropical storms, hurricanes, cyclones, floods, earthquakes, and volcanic eruptions being the most common (Naik, 2009). Given the speed, scale, and devastation, the disaster itself is the primary "push" factor in disaster-related displacement (Curtis, et al., 2015). While the form of disaster-related migration flows vary, the resulting displacement tends to be temporary, with those affected often returning home once the danger has receded, and span relatively short distances within national borders. Between 2010 and 2020, it is estimated that weather-related events triggered an average of 21.5 million new displacements each year; more than twice as many as displacements as those caused by conflict and violence (UNHCR, 2021). With increasing climate change and variability rendering natural disasters both more severe and frequent, disaster-related migration and displacement is projected to increase over coming decades (Clement, et al., 2021).

Migration driven by slow-onset climate hazards tends to be a more complex phenomenon than disaster-related displacement. Slow-onset hazards occur over longer periods and are typified by decaying ecosystem services, increasing temperatures, shifting precipitation patterns, erratic rainfall, prolonged drought, pest and disease outbreaks, rising sea-levels, salination of freshwater sources, and desertification. Slow-onset climate hazards are likely to interact with other, more primary social, economic, and political drivers to push individuals from their homes – for example, when crops fail due to drought, reducing incomes and driving migration for new livelihood opportunities (Black, et al., 2011; Naik, 2009). Given the slower speed of the impending hazard, individuals may be more agentic in their choice of destination, which is often selected according to social networks or economic opportunities, but limited by financial barriers, geographic boundaries, and border regimes Czaika and De Haas, 2013). These climate-related migration flows assume a wide variety of forms, including circular or seasonal migration, short- and long-term movements, and large-scale movements that build slowly to gain momentum as adverse climatic conditions coincide with other adverse socio-economic conditions (Naik, 2009).

While there is a lack of research related to the specific role that environmental pull factors play in attracting migrants to areas with favorable climatic conditions (Selby and Daoust, 2021), in rural areas where agricultural productivity is declining, migration to other rural or urban areas where livelihood opportunities are more readily available is a common adaptation strategy for climate-vulnerable households (Clement, et al., 2021). The presence of social networks in areas of destination or established migration 'corridors' along which migration is a regular occurrence may acclimate one to the idea of migration, further increasing its likelihood (Nawrotzki, et al., 2015). Labor recruitment agreements that encourage movement from one country to another can further facilitate international labor migration, although the most vulnerable are often not able to afford such opportunities. Though migration related to slow-onset climate hazards can take a number of forms (usually rural-urban, intra-rural, or international), most is internal, relatively local, and folds into existing processes of migration and development such as ongoing urbanization or industrialization. Temporary climate migration is also possible, and can be either short-term (seasonal, circular) or longer-term, lasting, for example, several years before returning (life cycle) (Joarder and Miller, 2013).

The initial reaction of communities faced with slow-onset climate hazards is often to adapt in place (McLeman, 2018). However, as environmental conditions deteriorate, the effectiveness of adaptation strategies will decrease, necessitating significant changes in how natural resources are used and livelihoods are obtained (McLeman, 2018). Once *in situ* adaptation is no longer effective, outward migration will likely increase as conditions worsen (McLeman, et al., 2021). However, the relationship between local environmental degradation and outward migration is non-linear and dependent on place dependent thresholds that influence household mobility decisions. Declining environmental conditions may initially drive outward migration but, past a certain point, will cause migration flows to grow sporadic before severely limiting mobility by trapping people in place (Jacobson, et al., 2019). If conditions continue to decline to the point that climatic conditions finally render the local environment inhospitable, outward migration is likely to resume *en masse* (McLeman, 2018). This cycle begins anew in destination areas, as risk is an ever-present factor that vulnerable households balance against different adaptation strategies, including mobility.

Faced with climate-related environmental threats, the degree of adaptive capacity a household possesses will play a crucial role in decisions to remain in place or migrate. Whereas migration itself can be an adaptation strategy, others (such as crop diversification or the adoption of climate-smart agricultural practices) may enable vulnerable households to adapt *in situ*, precluding the necessity to migrate. In other circumstances, an economic boon elsewhere may encourage outward economic migration. The potential for vulnerable households to become 'trapped' also exists, wherein those who would like to migrate in search of greater security or prosperity are instead forced to remain due to a lack of opportunities to migrate. Alternatively, these opportunities are constituted by social and household factors such as financial resources, demographic factors, and social networks, as well as structural factors concerning political regimes, the architecture of formal migration systems, and international legal frameworks.

Gender, along with other social factors, plays a significant role in determining how resources necessary for mobility are allocated among different demographic groups. Due to existing gender norms and inequalities, women and girls—particularly those in rural areas—typically have less financial and social capital compared to men, resulting in a diminished ability to migrate (Chindarkar, 2012). Even when resources are sufficient, women often encounter societal pressures to stay in their current locations to fulfill traditional roles related to reproduction, caregiving, and household responsibilities (Lama et al., 2020). This lack of mobility opportunities limits women's adaptive capacity, potentially trapping them

in situations of environmental degradation and subjecting them to a greater share of the adverse effects of climate change on human security.

2.5 Is Climate Change and/or variability a Driver of Violent Conflict?

The impacts of climate change and variability are believed to more often have an indirect influence on the outbreak of conflict than a direct one, and are typically mediated through local social, political, and economic variables (Thaljeimer, et al., 2021; van Baalen and Mobjörk, 2018). The climate drivers of conflict are likely to be place-dependent and temporally bound, and, thus, highly varied from one context and time period to the next (Bowlsby, et al., 2020; Mach, et al., 2019). However, several meta-analyses have found that climate variability alone – regardless of whether it tends toward improved or degraded environmental conditions – is linked with a higher likelihood of conflict, with the prospect of interpersonal violence increasing by 14 percent and group violence by 4 percent per standard deviation of climate variable change (temperature and precipitation) (Abel, et al., 2019; von Uexkull and Buhaug, 2021)

The predominant discussion between climate change/variability and conflict pertains to the influence of climate on resource availability. In situations where resources are scarce, the essential natural or economic resources required for security are diminished, at least partially due to climate-related hazards—such as extreme weather events or gradual environmental degradation. This depletion results in heightened competition for the remaining resources, thereby increasing the potential for conflict. For instance, a meta-analysis conducted in Kenya has indicated that violence is most prevalent in regions where natural resources have been adversely affected by climate change (van Baalen and Mobjörk, 2018). Additionally, the risk of conflict arising from scarcity can be exacerbated by factors that limit households' ability to adapt, such as movement restrictions that may confine households in a cycle of insecurity (Freeman, 2017).

Though less frequent than scarcity-related violence, conflict can also be triggered by abundance stemming from periods of favorable environmental conditions, high agricultural productivity, or newly available resources. For example, while livestock raiding often occurs under drought conditions due to economic desperation, the frequency of raiding may increase in other contexts during periods of "increased ecosystem productivity" (van Baalen and Mobjörk, 2018). During these periods of abundance, high grass provides cover for raiding healthy, valuable cattle. Buhaug, et al. (2014) identify a variety of thresholds where local vulnerabilities and adaptive capacities combine with socioeconomic variables, cultural factors, and climate impacts to either drive or limit cattle raiding. While sufficient rain may provide cover for raiding, the absence of rain may give rise to raiding that is instead meant to compensate for drought-related economic losses, and extreme scarcity may dissuade violence altogether as significant investments of capital, time, and energy are required to simply keep livestock alive (Buhaug, et al., 2014). A number of factors can thus interact to form thresholds that determine the likelihood of violence under conditions of both scarcity and abundance.

Furthermore, external demand can elevate the market prices of existing natural resources, such as fishing grounds, timber supplies, or freshwater sources, thereby intensifying competition for these assets. This situation may foster rent-seeking behavior and lead to violent conflicts over non-divisible resources (McLeman, 2011). McLeman illustrates this with the case of local gangs in Mumbai's impoverished neighborhoods who take control of public water resources and impose charges on

residents for access. This scenario is likely to occur in other regions, exacerbated by rising temperatures and declining rainfall (McLeman, 2011). Such circumstances could trigger increased migration and displacement, as violence associated with valuable resources undermines human security in the affected areas.

2.6 Is Human Mobility a Driver of Conflict?

The influence of human mobility on conflict remains a topic of debate; however, the connection between migration, displacement, and conflict is typically indirect and largely influenced by local political, economic, and social factors rather than by any intrinsic or universal association between these phenomena. While literature frequently suggests that inward migration can strain existing resources, services, and infrastructure, potentially heightening socioeconomic and ethnic tensions, some scholars argue that empirical evidence supporting this assertion is limited (Abel et al., 2019). In general, the majority of migration occurs in peaceful contexts, yielding numerous advantages for both the areas of origin and destination, as well as enhancing the well-being of migrants and their families.

One route through which mobility may lead to conflict involves the socioeconomic frictions that arise between migrants and the host communities in receiving regions. The process of 'othering' that migrants experience from local populations can create tensions related to ethnic or national identity, particularly when there is a real or perceived increase in competition for employment, economic resources, and public services (Burrows and Kinney, 2017). This dynamic has been observed in instances such as the conflicts between the Chittagong Hill Tribes in Bangladesh and ethnic Bengalis migrating from the plains, as well as clashes between Bengalis and local residents in Assam, India (Gleditsch et al., 2007). Such perceived or actual threats can be exploited and intensified by political, economic, or militant groups to further their own agendas. Nevertheless, with the rise in global migration and the prolonged nature of displacement, the distinction between migrant and host communities is becoming increasingly blurred. In many situations, migrant populations have resided in their destination areas long enough to achieve significant integration with local communities.

While rapid and extensive displacement has the potential to disrupt social and political structures in receiving areas, the associated risks are frequently overstated and can be alleviated through political measures (Abel et al., 2019; Burrows and Kinney, 2017). Although significant emigration triggered by environmental catastrophes has not resulted in widespread, prolonged conflict, and such disasters can sometimes enhance social cohesion, climate-related migrants may engage in criminal activities if their fundamental needs remain unmet, potentially leading to broader violence (Burrows and Kinney, 2017; Gleditsch et al., 2007). A comparable phenomenon has been noted among economic migrants, who typically lack political motivations for conflict but may turn to crime out of necessity (Gleditsch et al., 2007). These risks can be reduced when local, regional, and national governments, with or without international support, are equipped and willing to assist vulnerable communities and households, including both migrants and host populations. Interventions should be tailored to the specific needs of the context and may involve providing secure housing, ensuring fair access to public resources and social safety nets, and protecting food security. The effectiveness of stabilizing measures relies on the governance capabilities of public administrations, which play a crucial role in sustaining peace.

2.7 Is Conflict a Driver of Human Mobility?

While the potential for conflict to spur migration is obvious, with the risk of physical harm activating a psychological "flight" response in which an individual moves to another place deemed safer, the presence of violence alone is sometimes not enough to spur migration or displacement (Davenport, et al., 2003; Moore and Shellman, 2004). Indeed, many of the largest refugee flows of the 21st century – out of Afghanistan, Iraq, Myanmar, and Syria – were driven by conflict at home (IOM, 2020). However, the initial response of most vulnerable individuals is to adapt *in situ*, and it is instead through interplay with other drivers that conflict becomes operational as a push factor (McLeman, et al., 2021). In Nepal and Syria, an indirect relationship between conflict and movement has been identified, with low and moderate levels of violence reducing the likelihood of outward migration (Schon, 2021). Experiences of violence can certainly motivate one to flee, but can also influence a "prosocial" psychological reaction that increases one's adaptive capacity and enables vulnerable individuals to better adapt *in situ* (Schon, 2021).

Economic and geographic variables also interact with the level of violence to incentivize or disincentivize migration. When combined with poverty and stagnant or diminishing economic activity, the presence of violence can be a powerful 'push' factor for migration. Rates of unaccompanied children from Guatemala, Honduras, and El Salvador apprehended at the United States border have been shown to spike along with sharp increases in homicides rates in countries of origin (Clemens, 2017). In this case, the combination of short-term increases in violence combined with long-term economic depression seems to be a more potent driver of displacement than the long-term presence of violence combined with short-term economic shocks (Clemens, 2017).

To effectively address this complexity, a 'push and pull' model can be employed to examine the interplay between the motivations and opportunities for individuals to flee conflict situations. While conflicts may drive individuals to seek refuge, the ability to do so safely and strategically is influenced by distinct factors. Financial constraints, insufficient social networks, and the risk of violence along migration routes can all hinder the opportunity to escape (Schon, 2021). This helps to clarify why the initial waves of migration resulting from the Syrian civil war predominantly involved households that were better educated, socially connected, and financially stable (Jacobson et al., 2019). Furthermore, in both Syria and Iraq, an individual's understanding of the migration landscape—such as external political cues and legal frameworks that either encourage or deter migration in host countries—has been found to interact with factors like violence and poverty, thereby affecting their mobility choices (Holland and Peters, 2020).

In summary, to comprehend the relationship between climate change, migration, and violent conflict, it is essential to move beyond a simplistic, linear causation among these three factors. A more nuanced approach is necessary to dissect the intricate origins of migration and its implications, both for the migrants and the communities they move to. While the impacts of climate change represent a significant and additional environmental stressor influencing migration decisions, they are not the only factor at play. The likelihood of migrants encountering violent conflict is influenced by various factors, including the number of individuals migrating, the duration of their migration, the receptiveness of the host populations, the availability of resources for prolonged stays, the actions of political entities in the host countries, and the characteristics of the migrating populations. In short, the situation is highly complex. However, it warrants ongoing investigation, especially as climate and other environmental security challenges continue to intensify.

CHAPTER THREE: CLIMATE CHANGE AND MIGRATION IN THE HORN OF AFRICA

3.1 Introduction

The Horn of Africa stands out as one of the most precarious and susceptible regions in Africa, and arguably in the entire world. Each country in this area has faced various forms of civil conflict, political instability, cross-border violence, weak governance, and economic downturns. The region is characterized by a combination of permanent, temporary, and cyclical human mobility, including displacement, migration, and planned relocation. Consequently, it is not surprising that the European Union and other relevant stakeholders view this region as a significant migration hotspot. However, both internal developments and international pressures have led to the emergence of new migration trends within the Horn of Africa.

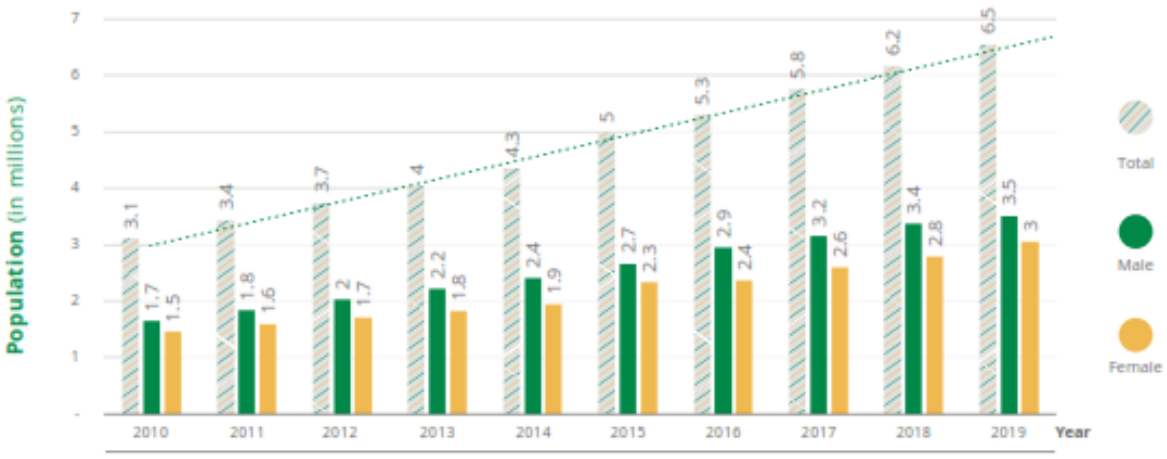
The implications of mobility can be understood in two main aspects. Firstly, mobility is driven by a variety of factors, including environmental conditions, job opportunities, political circumstances, the pursuit of educational prospects, and family reunification. Secondly, the movement of people significantly transforms society and influences cross-border relations among states and administrative regions. This relationship is complex, as the actions of states and institutions also impact societal dynamics, thereby affecting mobility through economic policies and oppressive measures. Some governments attempt to restrict migration by providing alternative solutions, particularly economic opportunities, or by employing authoritarian measures to prevent displacement.

Migration within Africa predominantly occurs on the continent itself, especially in sub-Saharan Africa. In 2022, the migratory dynamics in the East and Horn of Africa (EHoA) region were characterized by significant fluidity and complexity. Although forced migration remained a primary factor influencing movement trends both within and between countries, the overall causes of mobility have become increasingly diverse and interconnected. By the close of 2022, the region was home to a substantial number of internally displaced persons (IDPs) totaling 9.6 million, along with 3.8 million refugees and asylum-seekers. This situation arose from widespread conflict and violence, political persecution, human rights abuses, climatic events, and severe environmental challenges (IOM, 2023)

3.2 International Migration

Figure 3.1 illustrates the trends in international migration within the IGAD region. The total number of international migrants has risen significantly, increasing from 3.1 million in 2010 to 6.5 million in 2019. This marks a growth of 110.2 percent, equating to an annual growth rate of 7.4 percent. This pattern is consistent across both genders. In 2010, there were 1.7 million male migrants, which grew to 3.5 million by 2019, reflecting an increase of 111.9 percent. Likewise, the female migrant population rose from 1.5 million in 2010 to 3 million in 2019, indicating an increase of 108.3 percent. The corresponding annual growth rates for male and female migrants are 7.5 percent and 7.3 percent, respectively. These trends highlight a rise in migratory movements within the IGAD region, underscoring the need for improved migration governance to support socio-economic development and effectively manage migration challenges.

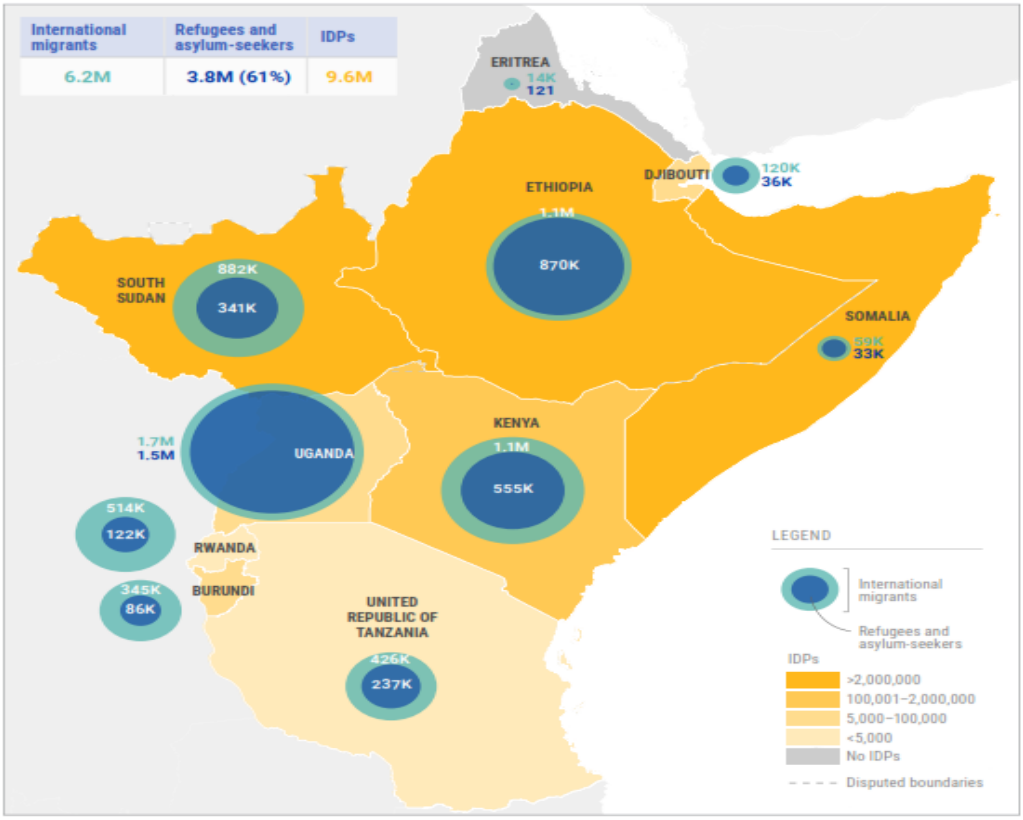
Figure 3. 1: International Migration Population in the IGAD region by sex (2010 – 2019)



Source: IGAD Migration Statistics Report (2021)

Figure 3.2 depicts the migratory situation in the Eastern and Horn of Africa (EHoA) region, which is predominantly characterized by humanitarian factors. Refugees and asylum-seekers account for nearly two-thirds (61%) of the international migrant population, while the region continues to accommodate a substantial internally displaced population.

Figure 3. 2: Estimates on international migrants, refugees and asylum-seekers, and internally displaced persons in the East and Horn of Africa



Source: IOM, 2023.

The primary drivers of migration, whether internal, to neighboring countries, or internationally, include conflict, climate change, and economic hardships. Migrants seeking employment or education often rely on private agencies that assist with documentation and travel arrangements, as seen with many Ethiopians traveling to Saudi Arabia for work. However, those lacking sufficient resources and social networks tend to travel alone or in small groups, making them particularly susceptible to human trafficking networks. This vulnerability is evident among many Somalis in Sudan and Ethiopians in Djibouti. The selection of migration routes is influenced by personal goals, recommendations, and rumors, as well as the guidance of 'brokers'—individuals involved in human trafficking who frequently prioritize their own financial gain over the welfare of those they assist. Additionally, the pursuit of improved access to services, particularly healthcare, serves as another motivation for migration. The Horn of Africa is notably marked by mixed migration patterns, where individuals may flee from the same country that others enter for refuge, while some merely transit through. These movements encompass refugees, asylum seekers, displaced individuals, nomadic populations, and migrants seeking family reunification, education, or employment opportunities.

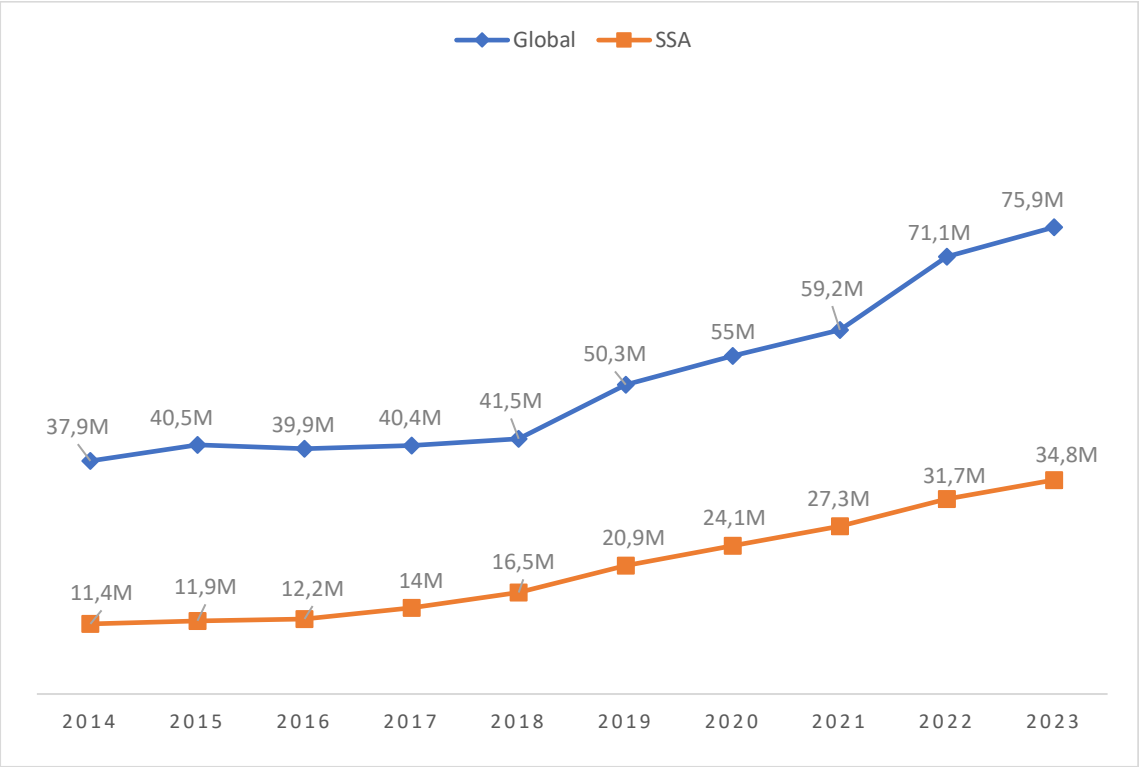
3.3 Internal Displacement

Internal displacement has become one of the most significant humanitarian crises in the contemporary world. It deprives innocent individuals of essential resources such as food, shelter, and medical care, while also subjecting them to various forms of violence. The United Nations Guiding Principles on Internal Displacement (2004) and the African Union (AU) (2009) characterize internally displaced persons (IDPs) as individuals or groups who have been compelled to flee their homes or habitual residences, primarily due to armed conflict, widespread violence, human rights violations, or natural and man-made disasters, without crossing an internationally recognized border. This definition highlights both the involuntary nature of their displacement and the fact that it occurs within national boundaries. Consequently, it can be concluded that internal displacement involves the forced movement, evacuation, or relocation of individuals or groups within the recognized borders of a state (AU, 2009).

3.3.1 Global overview of internal displacement

The global population of internally displaced persons (IDPs) is on the rise. The accompanying figure, derived from the Global Report on Internal Displacement, illustrates the number of IDPs over the past five years, indicating a consistent upward trend. The overall count of individuals experiencing internal displacement has surged by 51% during this period, culminating in a record total of 75.9 million people across 116 nations by the end of 2023. Sub-Saharan Africa is the region most severely impacted by internal displacement, with the number of displaced individuals in this area increasing by 67% over the last five years. In 2023, Sub-Saharan Africa accounted for 46% of the world's IDPs. In many countries, the intersection of conflict and disasters has compelled individuals to flee once more or has extended their periods of displacement.

Figure 3. 3: Trends in Internal Displacement



Source: IDMC, 2024

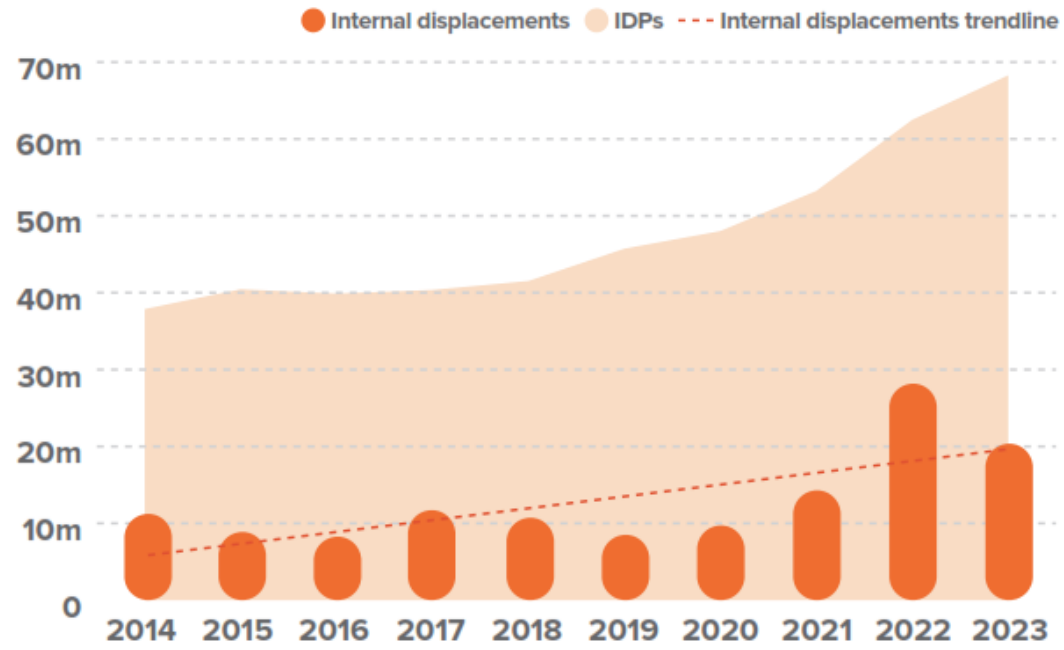
Lwabukuna (2011) identifies several factors that can lead to internal displacement, including natural disasters such as famine, floods, and droughts, as well as conflicts like wars and ethnic violence, human rights violations, and development induced displacements. Terminiski (2013) categorizes causes of internal displacement into four primary types: conflict-induced, environmentally induced, disaster-induced, and development-induced displacement. Additionally, various studies highlight the role of government policies and systematic violations of human rights as contributing factors to internal displacement. Conflict-induced displacement specifically pertains to individuals who are compelled to abandon their usual residences due to the intensification of internal violence or armed conflict (Lwabukuna, 2011; Van der Ploeg & Vanclay, 2017).

3.3.1.1 Displacement due to conflict and violence

According to the Global Report on Internal Displacement (GRID) 2024 report, conflict and violence, and disaster are the two major forces driving internal displacement. As of December 31, 2023, the same report indicated that there were 68.3 million internally displaced people as a result of conflict and violence in 66 countries and territories (IDMC, 2024). The number of people displaced by conflict and violence continues to rise.

Figure 3.4 below indicates the trends in number of displaced people by conflict and violence. The number of displacements triggered by conflict and violence fluctuates from one year to the next (see bars in the diagram) but the number of people living in displacement at the end of each year has risen inexorably over the past decade (see area chart). This illustrates how difficult it has proven for people to bring their displacement to a sustainable end.

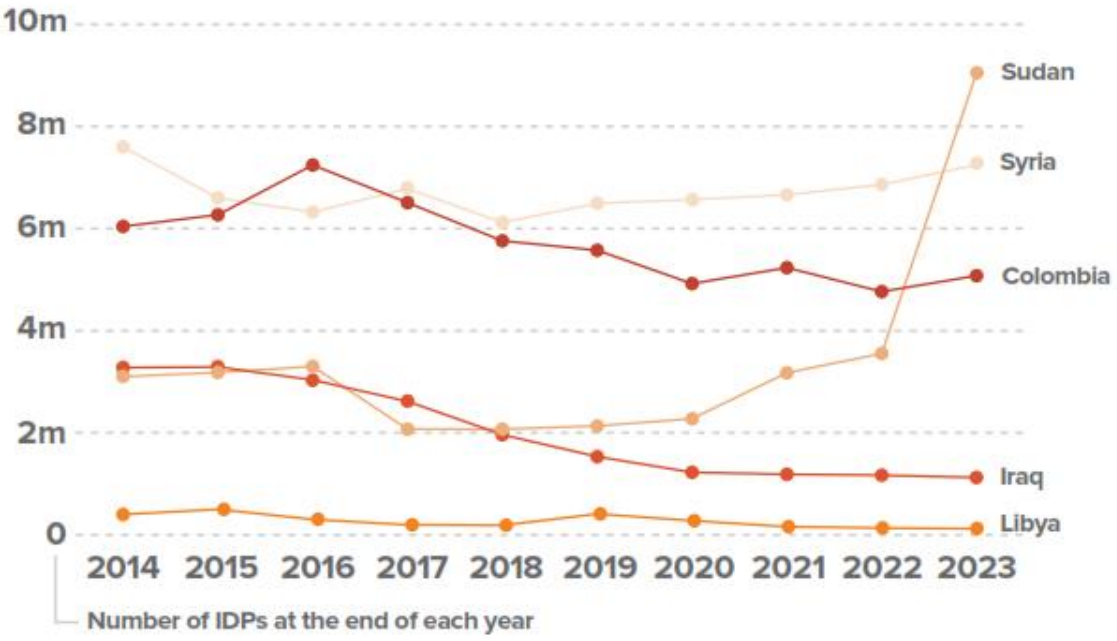
Figure 3. 4: Trends in International Displacement due to conflict and violenc



Source: IDMC, 2024

Achieving durable solutions can take many years: Despite restoration of peace in some conflict and violence areas, achieving durable solution takes many years. As the figure below indicates, there had been some success in the return of displaced persons into their areas in countries such as Iraq, Libya and Colombia, and hence a reduction in number of IDPS, but the persistently high numbers of internally displaced people are testament to the scale of this challenge.

Figure 3. 5: Trends on IDPs in selected countries

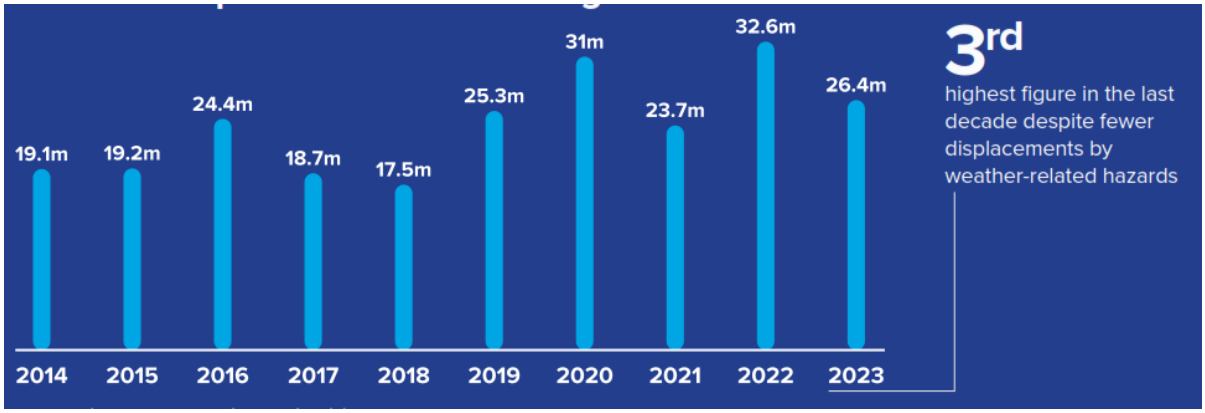


Source: GRID 2024

3.3.1.2 Displacement by disaster

Disaster displacement can affect anyone, anywhere. The figure below indicates global displacement by disaster. It indicates that there were 26.4 million internal displacements due to disaster in 2023, constituting 56% of the global IDPS. Five countries reporting the highest figures of IDPs due to disaster were China, Türkiye, Phillipines, Somalia and Bangladesh (IDMC, 2024).

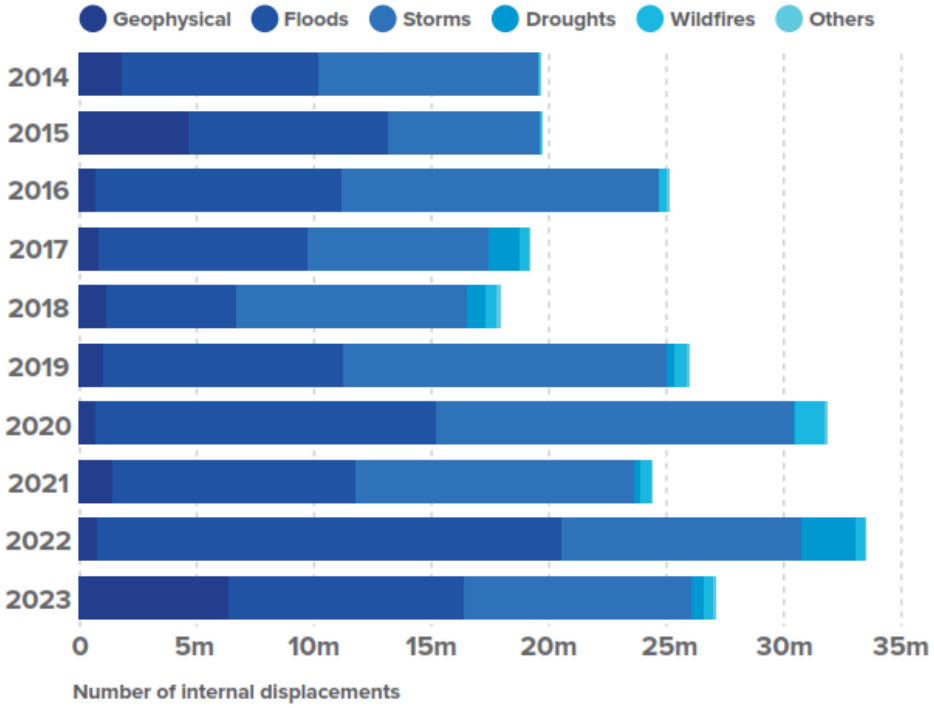
Figure 3. 6: Global displacement by disaster



Source: IDMC, 2024

Disaster can take many forms. Breaking down displacement by disaster types, the figure below indicates that floods and storms trigger most, but by no means all, disaster displacements in the world. Major geophysical and drought events also trigger high numbers but their occurrence varies widely from year to year. Investments in meteorological and seismological technology can help predict many of these events (IDMC, 2024).

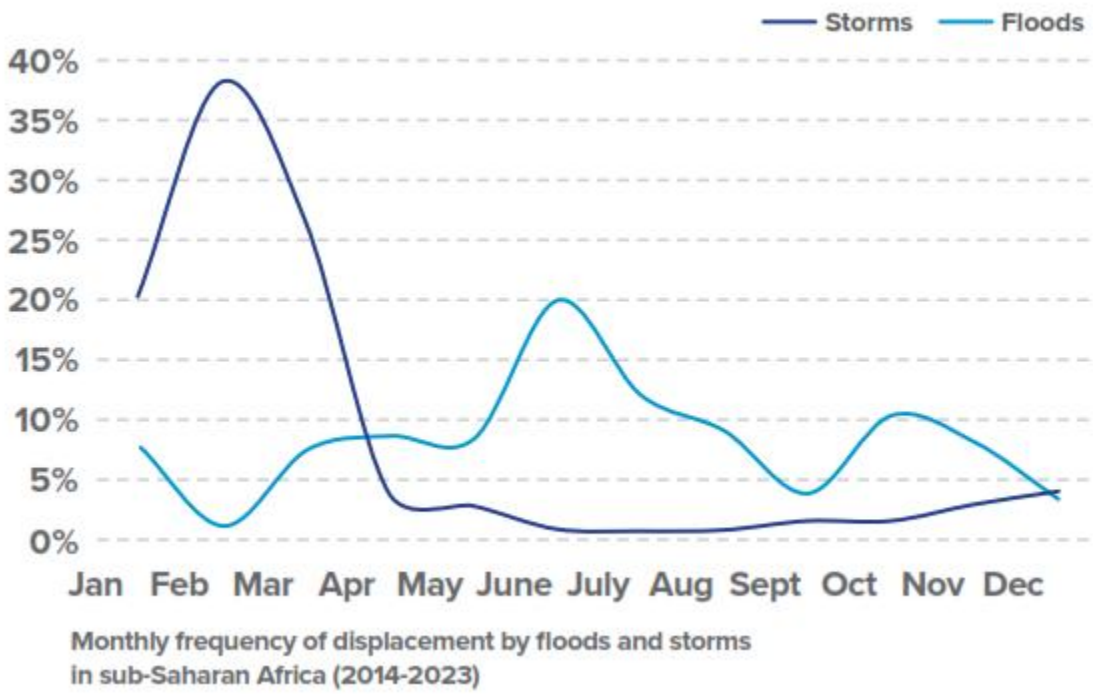
Figure 3. 7: Displacement by disaster type



Source: IDMC, 2024

Weather-related displacement often occurs in predictable patterns: when we look at the average monthly displacement triggered by storms and floods in sub-Saharan Africa over the past decade recognizable patterns emerge. Understanding such patters can help improve preparedness, response and long-term development planning to minimize the risk and impact of displacement.

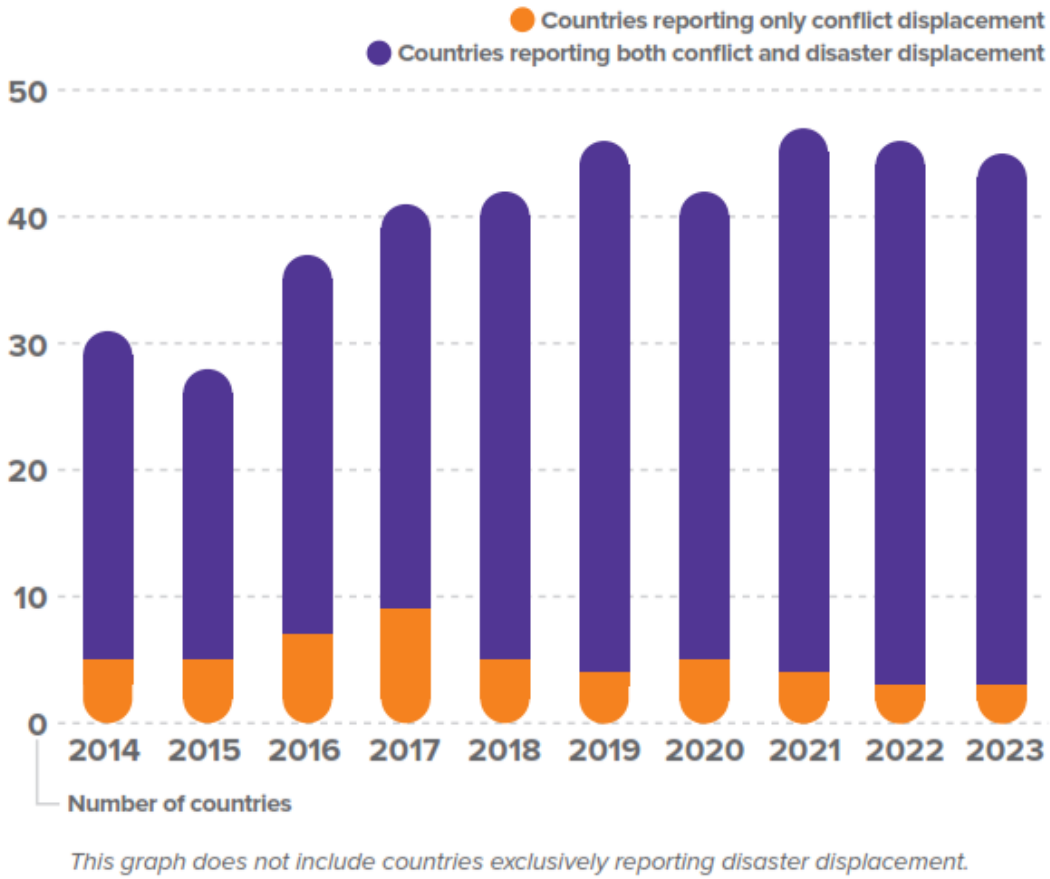
Figure 3. 8: Monthly frequency of displacement by floods and storms in sub Saharan Africa (2014 – 2023)



Source: IDMC, 2024

Conflict and disasters often overlap, multiplying vulnerabilities: over the past decade, countries that recorded conflict displacement often also recorded disaster displacement. It is not unusual for cycles of conflict and disaster to emerge. The GRID 2024 report indicates that all but three of the 45 countries and territories that reported conflict displacement in 2022 also reported disaster displacement (IDMC, 2024). This combination complicates efforts to address the immediate needs of those affected and help them achieve durable solutions.

Figure 3. 9: Overlapping of conflict and disaster

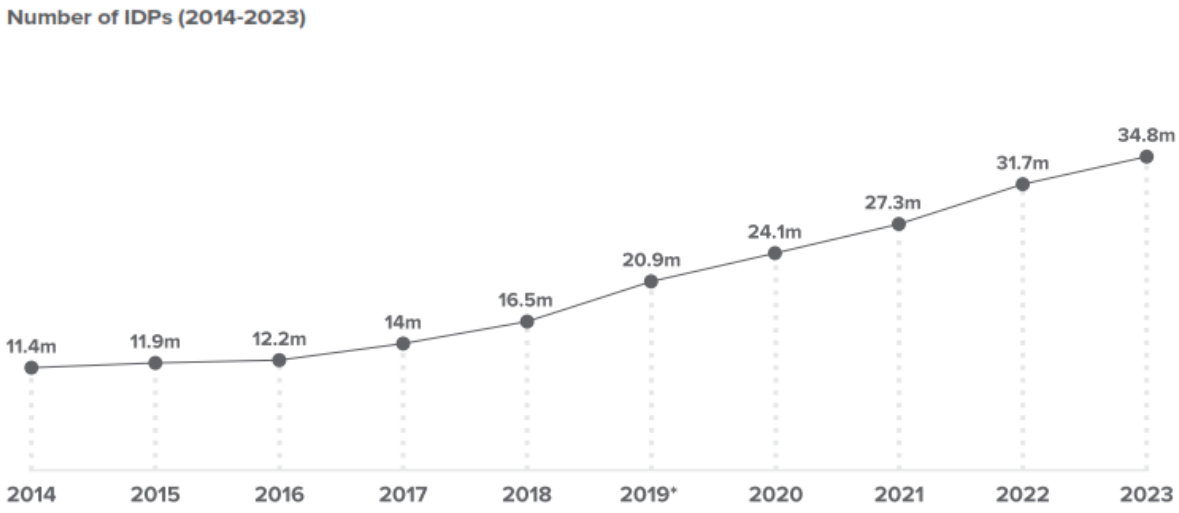


Source: IDMC, 2024

3.3.2 Displacement in Sub-Saharan Africa

Sub-Saharan Africa hosts a large proportion of internally displaced persons. As can be observed from figure 3.10, internal displacement in SSA is not only high but also increasing over time. The number of internal displacements in sub-Saharan Africa reached 34.8 million at the end of 2023 constituting 42 per cent of the global total.

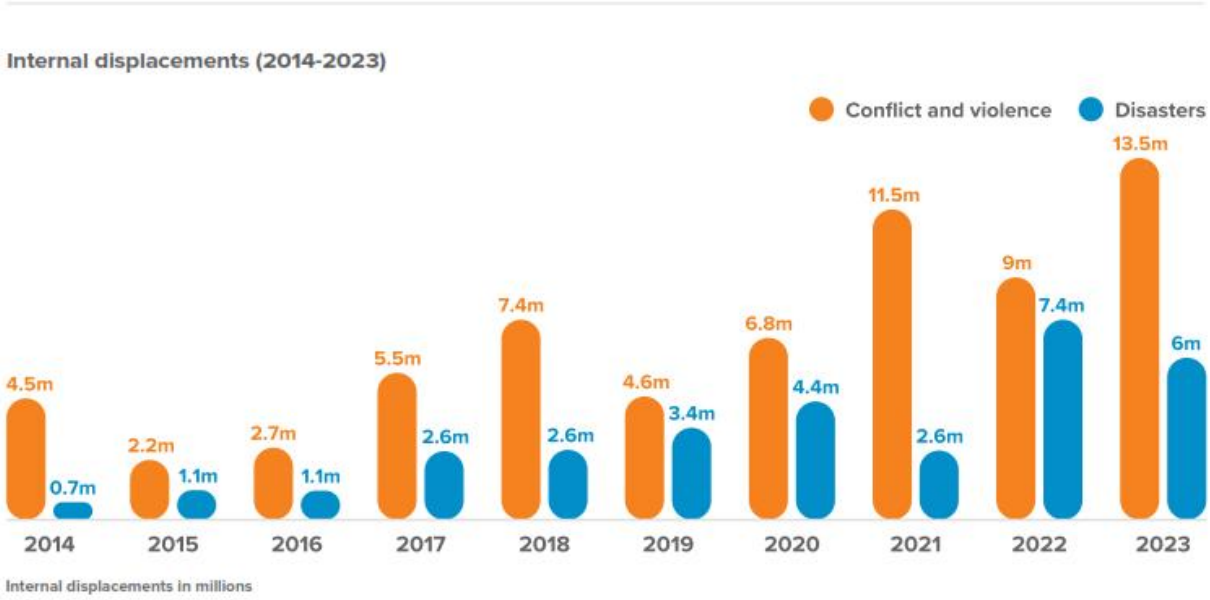
Figure 3. 10: Trends in Internal Displacement in SSA



Source: IDMC, 2024

Displacement in sub-Saharan Africa is primarily attributed to conflict and violence, as well as disasters largely resulting from climate change. Figure 3.10 illustrates the trends in displacement influenced by these two factors. While some variations are noted, the overall trend indicates an increase in displacement due to both conflict and violence over time.

Figure 3. 11: Trends of displacement by cause in SSA



Source: IDMC, 2024

Conflict and violence triggered 13.5 million movements, the highest figure for the past 15 years. According to the GRID report, Sudan made up 45 per cent of this total and the Democratic Republic of the Congo (DRC) recorded the second-highest figure. Between them, they accounted for almost half of

all conflict displacements worldwide. Significant displacement also continued in other countries grappling with protracted conflicts across the Greater Horn, Central and West Africa. Disasters triggered six million displacements across the region, the second-highest figure since records began in 2008 and nearly double the average of the past decade. They were mainly the result of heavy flooding in the Horn of Africa after years of drought. Cyclone Freddy was the largest storm to hit the region, with most displacements reported in Malawi and Mozambique (IDMC, 2024).

Disasters and conflict are presented as different triggers, but their impacts can overlap, often leading to repeated and/ or protracted displacement. Looking at the longer-term trend, the total number of IDPs in sub-Saharan Africa has nearly tripled since 2013. Countries across the Greater Horn of Africa continued to record significant displacement in 2023 as a result of both conflict and disasters.

3.3.3 Displacement in the Horn of Africa

Population displacement and conflict represent some of the most pressing challenges currently confronting the Horn of Africa. The region is characterized by political instability, economic hardship, shifting population trends, and resource scarcity. A diverse array of migrants can be found in this area. According to the International Organization for Migration (IOM), 51% of the migrations recorded in the region involve individuals moving within the Horn of Africa. The majority of these migrants are adult males, comprising 48% of the total, while adult females account for 27%, and children make up 25%, with an equal distribution between genders among the latter group (IOM, 2023). It is estimated that approximately 1 million migrant movements occur annually in Djibouti, Ethiopia, and Somalia. The region experiences various forms of human mobility, including permanent, temporary, and cyclical movements, such as displacement, migration, and planned relocation. Seasonal migration is prevalent throughout the Horn of Africa, driven by individuals seeking opportunities, drawn by the prospect of adventure and improved living conditions, or compelled by adverse weather conditions, natural disasters, or economic challenges. Often, these migrants maintain strong connections with their families, frequently traveling back and forth within a close-knit network of acquaintances. Significant and prolonged migratory patterns can lead to regional transformations, influenced by factors such as climate change, urban attraction, or political and economic motivations, such as large corporations acquiring agricultural land, which displaces farmers, or the diversion of water resources.

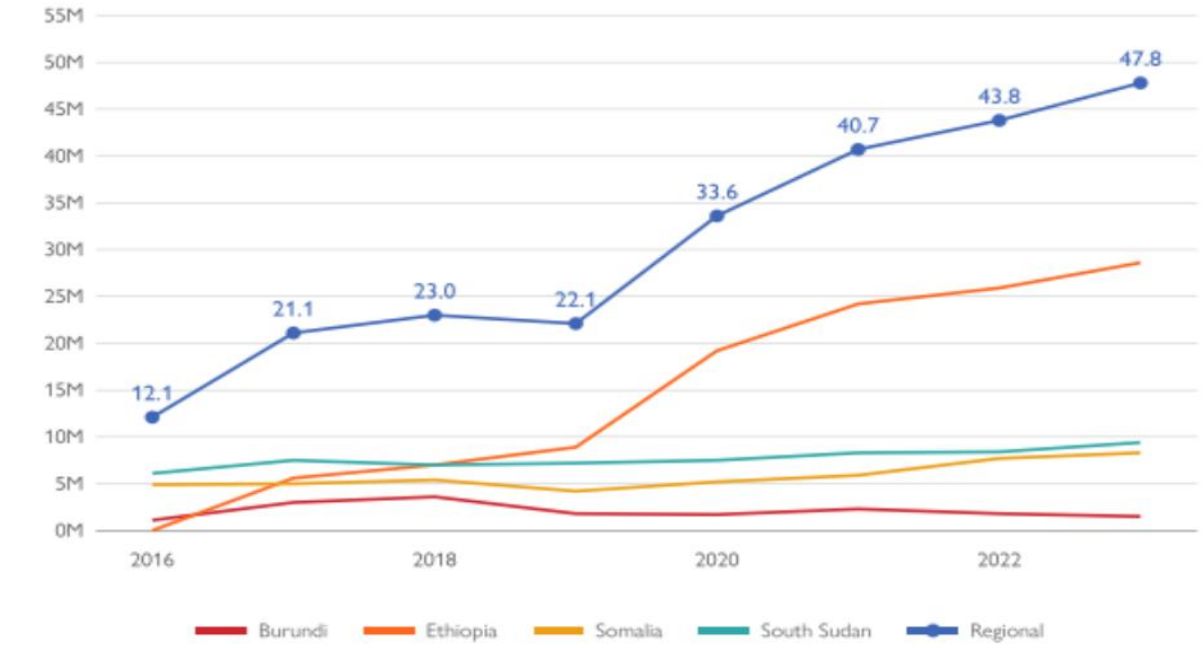
3.3.3.1 Regional Humanitarian Overview

The Horn of Africa faces a convergence of increasingly recurring and intensifying climate crises, mainly drought and flooding, conflicts, disease outbreaks, and economic shocks. These, including impact of El Nino conditions, are driving millions of people into displacement, food insecurity and acute malnutrition. Figure 3.12 below shows trends in humanitarian assistance in some of selected countries in the greater horn of Africa.

The number of people in need of humanitarian assistance in the region continues to rise. From 2016 to 2023, the number of people in need of Humanitarian assistance has increased almost in three fold. With nearly 64 million people in need of humanitarian and protection assistance across the horn of Africa, the region accounts for close to 22 per cent of the global humanitarian caseload in 2024 (OCHA, 2024). Sudan and Ethiopia alone, are two of the world's five largest humanitarian crises. The Sudan crisis

accounts for almost 40 percent (25 million people) of the regional total, followed by Ethiopia (21 million), South Sudan (9 million) and Somalia (8.3 million) (OCHA, 2024).

Figure 3. 12: People in need of humanitarian assistance in the East and Horn of Africa, 2016 – 2013 (millions)

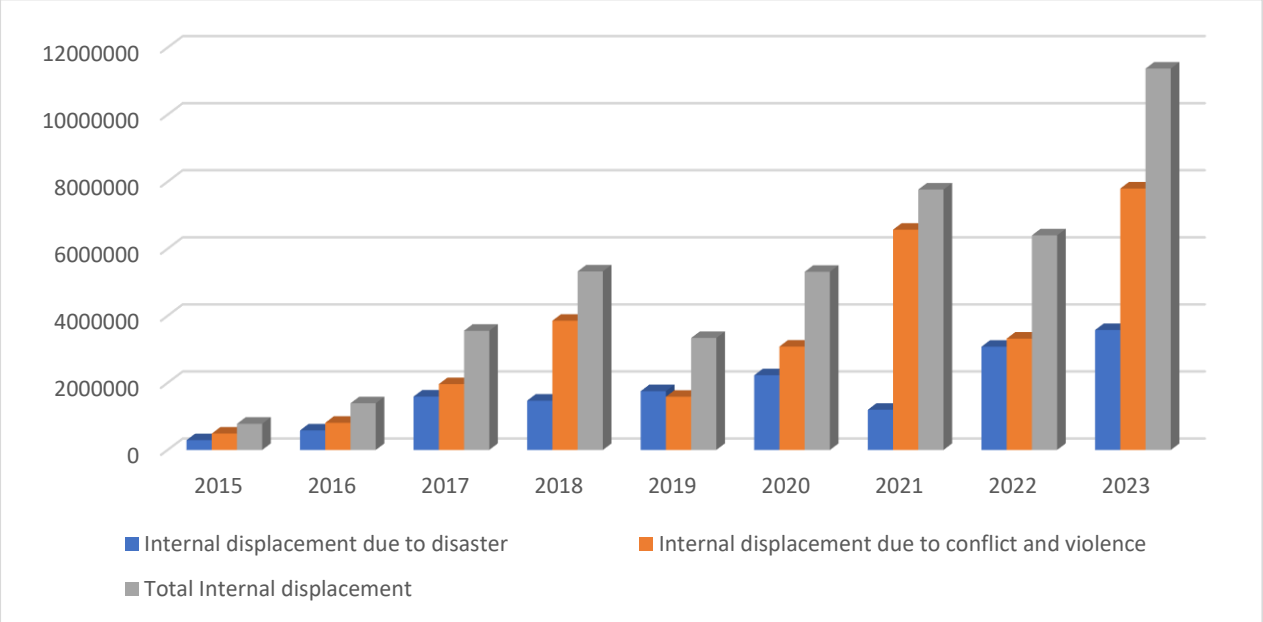


Source: IOM, 2023

3.3.3.2 Internal displacement in the Horn of Africa

The Horn of Africa hosts one of the world's largest displacement crises. The figure below indicates trends of internal displacement in the region due to conflict and violence, and natural disaster. It indicates that internal displacement in the region is not only high but it also increases through time. Moreover, displacement due to conflict and violence and displacement due to natural disaster seem to go hand in hand, i.e. in the years were displacement due to natural disaster is high, displacement due to conflict is also high and vice versa. This indicates that most countries in the horn face both conflict and natural disaster, i.e., although it is difficult to form a cause and effect relationship between the two, but it is clear that one crises triggers the other crises.

Figure 3. 13: Trends in displacement due to conflict and violence, and disaster in the Horn of Africa



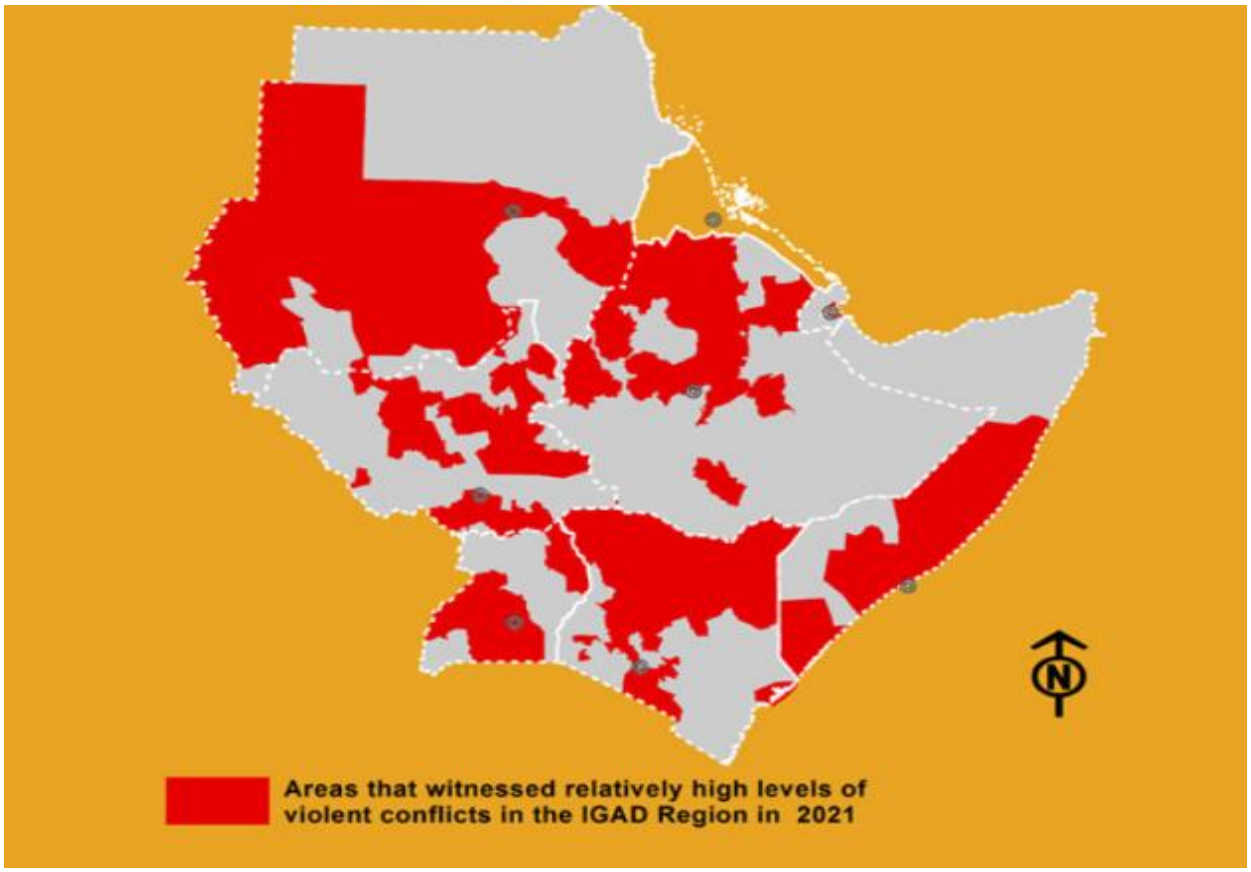
Source: Processed from EM-DAT

The average number of people displaced each year by conflict and violence as well as disaster has risen over the last 12 years (see figure 3.13).The figure indicates close to 3.3 million and 1.8 million displacements a year by conflict, and disaster respectively, with a total of more than 5 million people displaced every year since 2015. This equates to close to 14000 people forced to flee their homes every day due to conflict and disaster. Calculated over the last five years, the average rises to more than 6.8 million a year, or close to 19000 people a day. This indicates that displacement due to both conflict and disaster is increasing year after year in the horn of Africa.

3.3.3.3 Conflict and Violence, and Displacement in the Horn of Africa

The Horn of Africa is in turmoil. From the war in Sudan to Ethiopia's rocky path out of conflict, from Somalia's fight to defeat Al-Shabaab to the troubles of East African democracies, the pace of change in the region is difficult to keep up with. Figure 3.14 below shows distribution of high levels of conflict in the region. Except in Eritrea and Djibouti, high levels of violent conflicts have been witnessed in all countries in the region in 2021.

Figure 3. 14: IGAD region 2021 conflict map

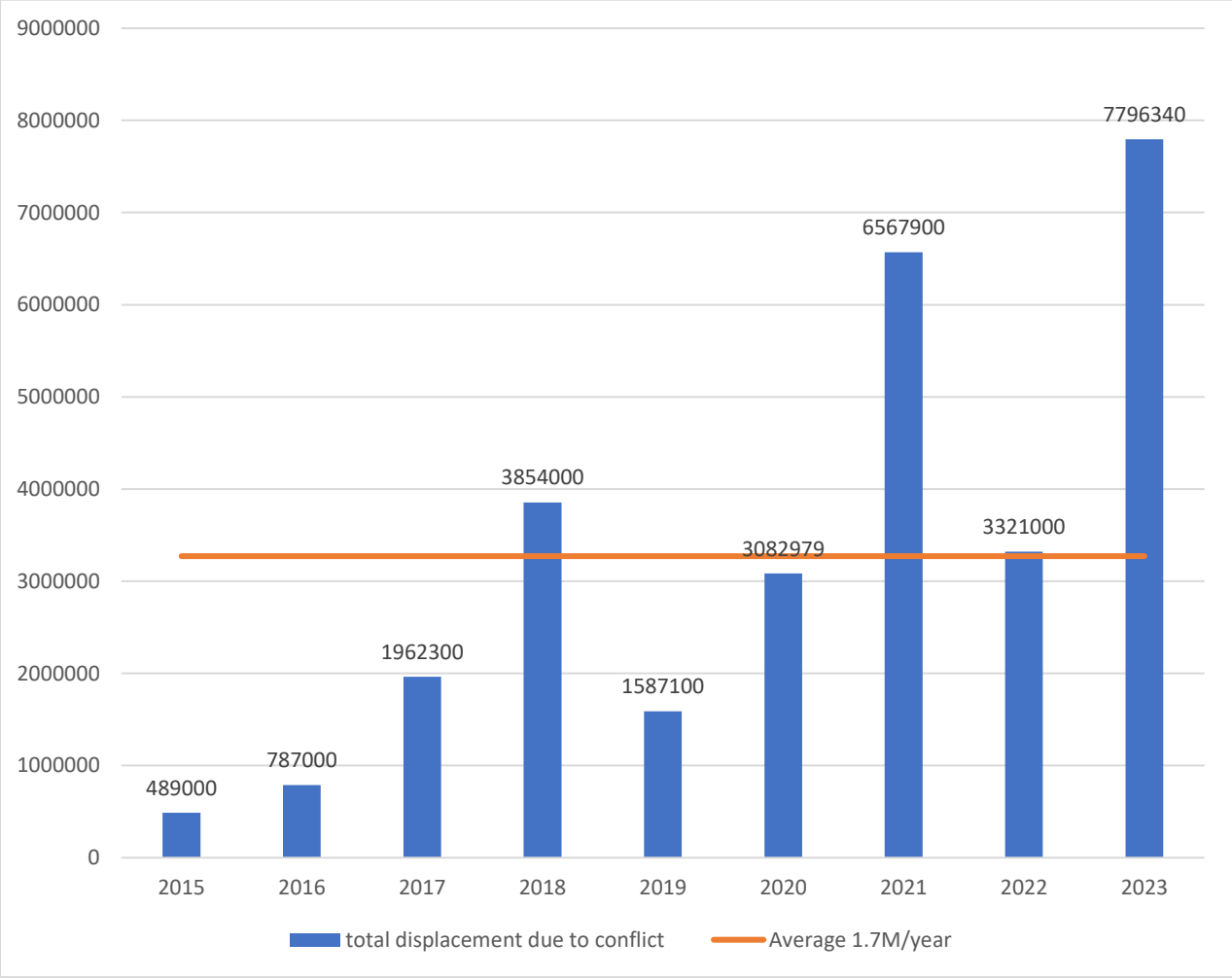


Source: ICPAC (IGAD Climate Prediction and Application Center) 2022

Conflict events in the HoA region continued to occur in 2022, with over 8,000 instances of conflict recorded throughout the year. The primary areas of concern were Ethiopia, Somalia, Sudan, and South Sudan. This region is marked by both prolonged and emerging conflicts, with the majority of violence stemming from national-level armed confrontations, inter-communal strife, competition for limited resources, assaults by non-State actors, as well as protests and political unrest.

Figure 3.15 below indicates the trends in displacement due to conflict from 2015 to 2023. Displacement due to conflict continues to rise with an average displacement of 1.7 million per year. This amounts to more than 4600 persons displaced every day due to violent conflict over the last ten years.

Figure 3. 15: New internal displacement due to conflict in the Horn of Africa

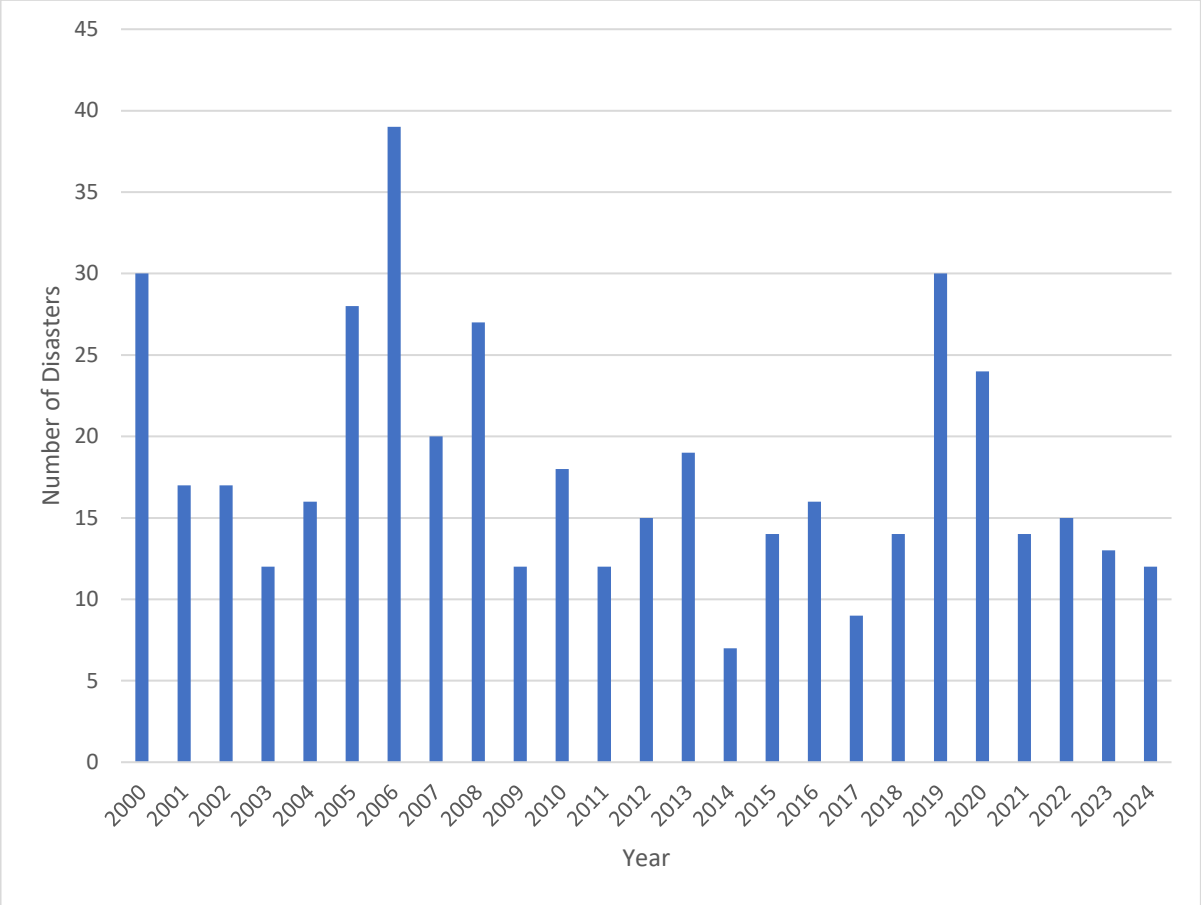


Source: Processed from EM-DAT

3.3.3.4 Natural Disaster and Displacement in the Horn of Africa

Africa at large and the Horn of Africa in particular is experiencing an increasing number of natural hazard events. Figure 3.16 below shows the natural events in the Horn of Africa. The significant exposure of both infrastructure and populations, together with burgeoning urbanization across the Horn of Africa lead to significant displacement and agricultural and other losses.

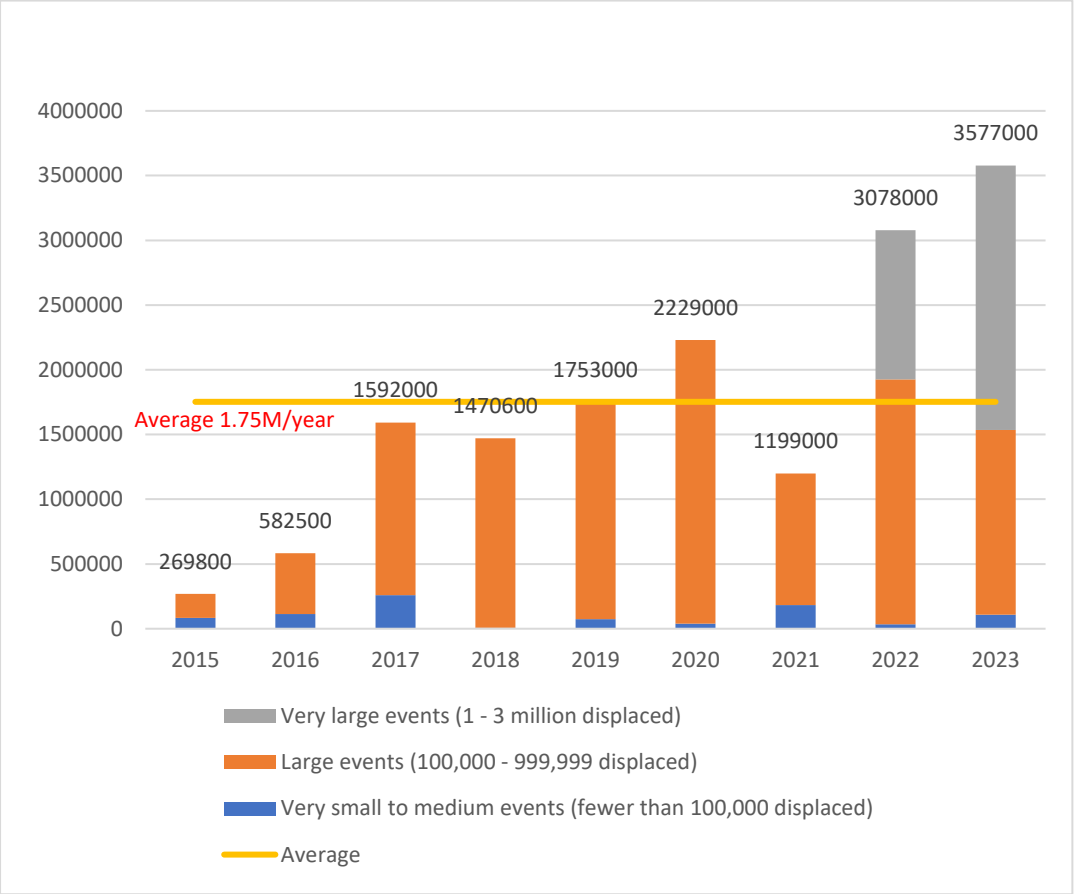
Figure 3. 16: Number of intensive natural hazard events reported each year in the Horn of Africa, 2000-2024



Source: Processed from EM-DAT

Figure 3.17 below indicates that sudden-onset events triggered an average of more than 1.75 million new displacements a year between 2015 and 2023. Most of the hazards were weather related mainly drought, floods and land slide. The figure also indicates the scale of events. Very large events that displaced more than 1 million people were registered in the region mainly in 2022 and 2023 in Somalia. Most of the disaster events were large events with a displacement of 100,000 to 999,999. Very small events with a displacement of fewer than 100,000 also contributed to the displacement.

Figure 3. 17: New displacement associated with disaster by scale of events in the Horn of Africa



Source: Processed from EM-DAT

3.3.3.5 Climate Risk and Displacement in the Horn of Africa

The Horn of Africa Region is one of the most disaster-prone regions of the world (IPCC 2007; 2012) with drought as the most prevalent natural hazard affecting the region. Large parts of the region are arid or semi-arid characterized by low, unreliable, highly variable and unpredictable rainfall which hamper crop and livestock production, thus a continuous cycles of drought and flooding, an evidence suggesting that the climate is becoming more unstable and the weather events more severe. Some of the severe weather and extreme climate related shocks that cause vulnerability in most parts of the region include:

- Flash floods /extreme rainfall events
- Drought
- Cyclones
- Cold Events
- Lightning
- Wind/dust storms
- Hail/thunderstorms

Droughts and flood years occur sequentially, exacerbating the impacts of extreme events on the regional economy. Other non-climatic shocks and stresses, indirectly linked to climate that aggravate vulnerability include:

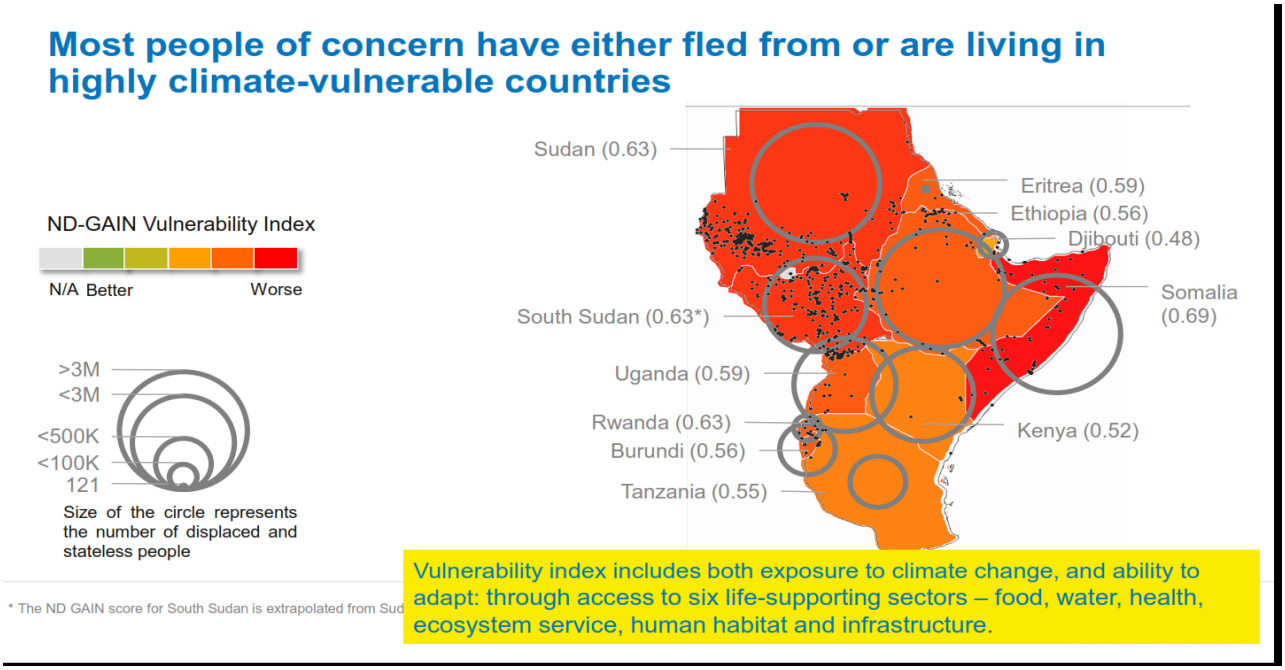
• Rapid expansion of human population
• Hikes in commodity prices (seasonal or due to hindered access) and macro-economic factors
• Livestock and crop diseases and pests
• Inadequate resources for livestock production such as water and pasture
• Land degradation
• Conflicts
• Loss of transfers
• Social unrests
• Deaths

Climate Change is expected to

- Increase frequency and intensity of sudden-onset disasters
- Increase slow onset hazards
- Serve as a "threat multiplier" that exacerbates potential for tensions/conflicts
- Increasingly hinder enjoyment of human rights if not adequately addressed
- Hinder the potential for displaced persons to return

Climate vulnerability, thus, affects displacement significantly in the horn of Africa. The figure below indicates the association between vulnerability index and displacement, where the vulnerability index includes exposure to climat change, and ability to adapt. The figure indicates that highest displacement have occurred in the countries with high level of vulnerability index.

Figure 3. 18: Climate vulnerability and displacement in the Horn of Africa



Source: UNHCR, 2023 (available at: https://data.unhcr.org/ar/documents/details/101918)

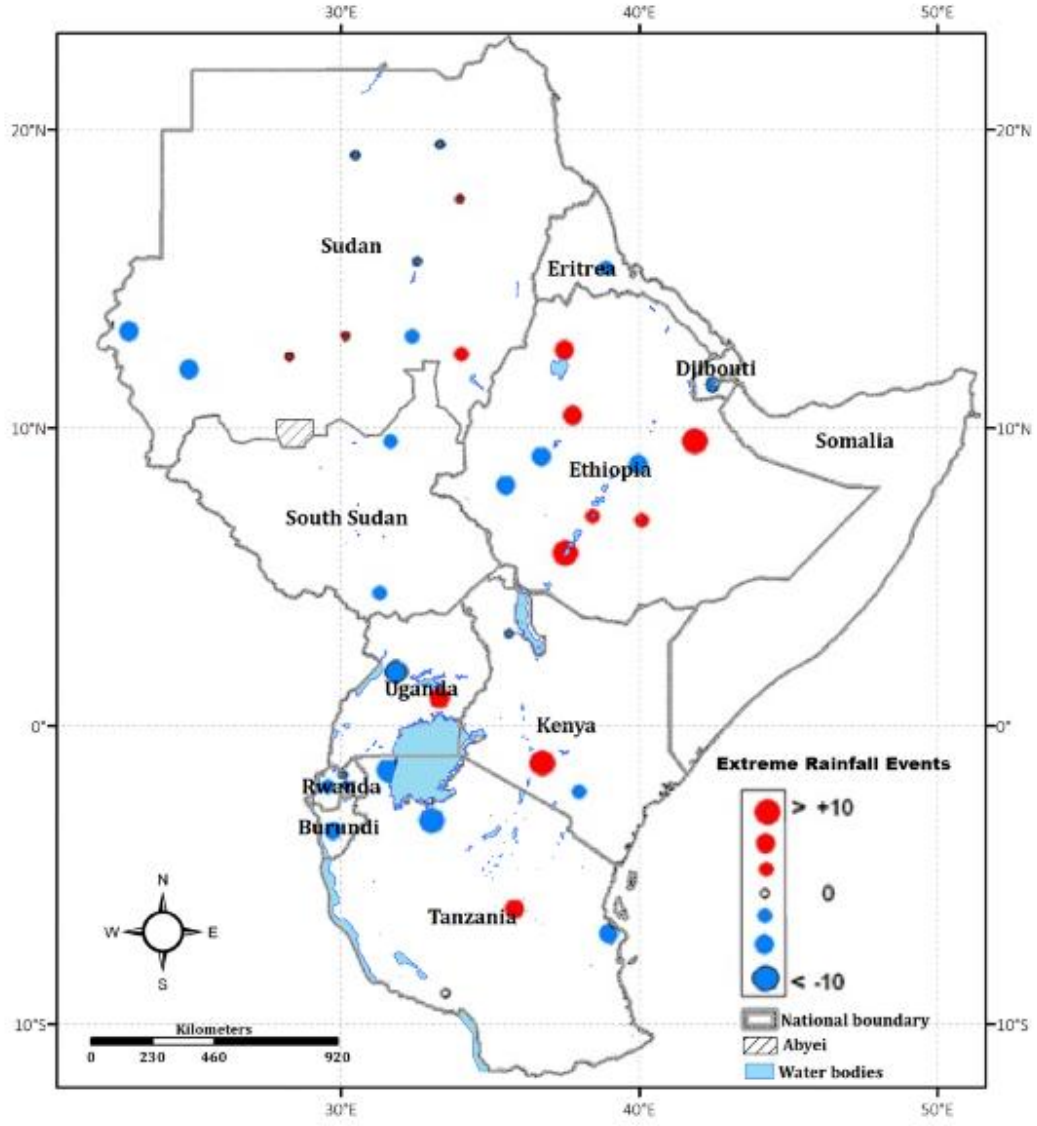
Extreme Rainfall Events

More often than not, extreme weather and climate events interact with exposed and vulnerable human and natural systems, leading to disasters in the region. The extreme weather and climate events have increased in frequency, magnitude and consequently an increased population at risk to disasters.

Extreme events not only cause property damage, injury, hunger, loss of life and threaten the existence of some species but also drive changes in natural and human systems in the region. Impacts of climate change and variability lead to human suffering, particularly the poor as witnessed during droughts and floods of 2010/2011 and 1997/1998 respectively in the region. The year 2010/2011 was exceptional and was the worst drought in 60 years besetting Djibouti, Ethiopia, Kenya, Somalia and Uganda and causing the GHA Region to experience the most severe food crisis in the world.

Figure 3. 19: Trends in averaged regional station on extreme rainfall events.

Positive (negative) trends are shown in red (blue) circles. Large (small) circles indicate significant (non-significant) trends



Source: ICPAC, 2018

Drought hazards

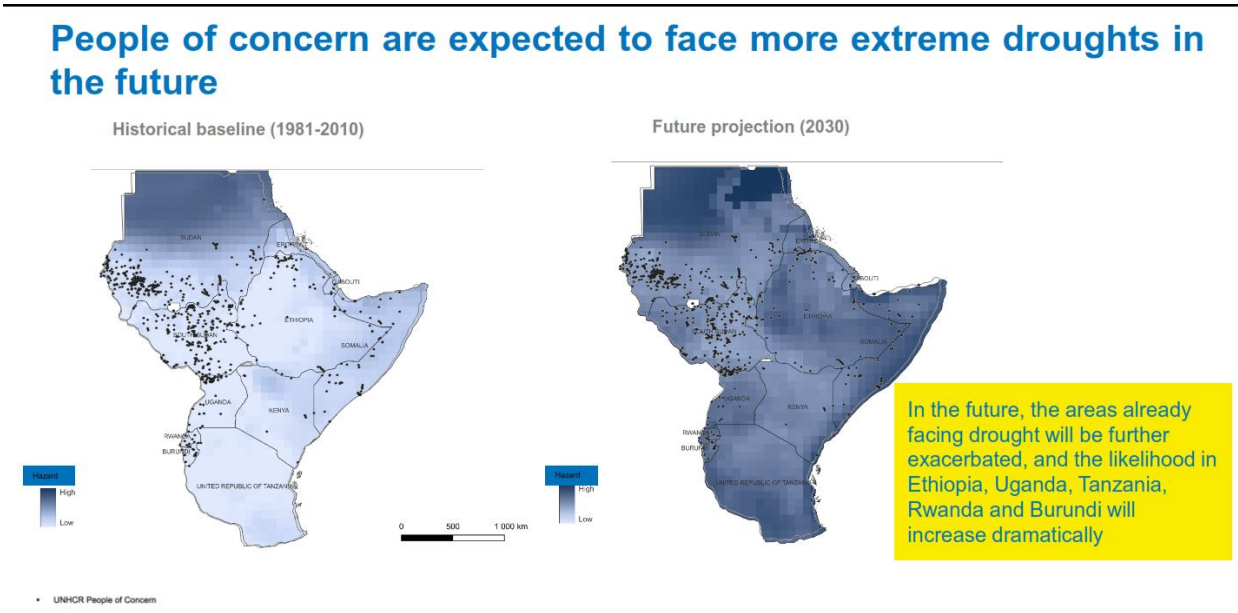
Drought is an insidious natural hazard that results from lower levels of precipitation than what is considered normal. When drought extends over a season or a longer period of time, precipitation is often insufficient to meet the demands of human activities and the environment.

The Horn of Africa is prone to recurrent droughts that severely impact the lives and livelihoods of millions in the area. The drought cycle in this region is repetitive, and when it occurs, it typically lasts for over one season, resulting in significant destruction to both life and property.

In general, the level of hazards – precipitation, temperature and flooding in the greater horn of Africa is expected to be a concern for future displacement. The following figures show the predictions of precipitation, heat and flooding in the greater horn of Africa in 2030. All figures indicate that the areas already facing drought, heat and flooding will be further exacerbated.

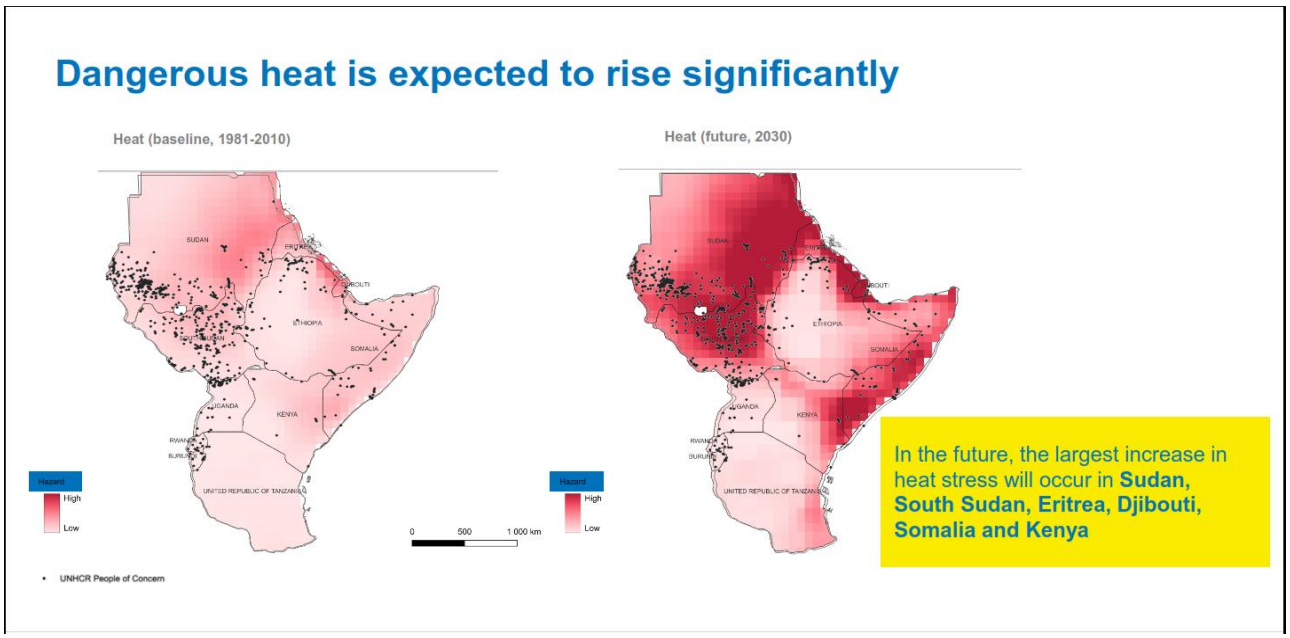
Figure 3. 20: Historical baseline and future projection of level of hazards in the Horn of Africa

a) Precipitation



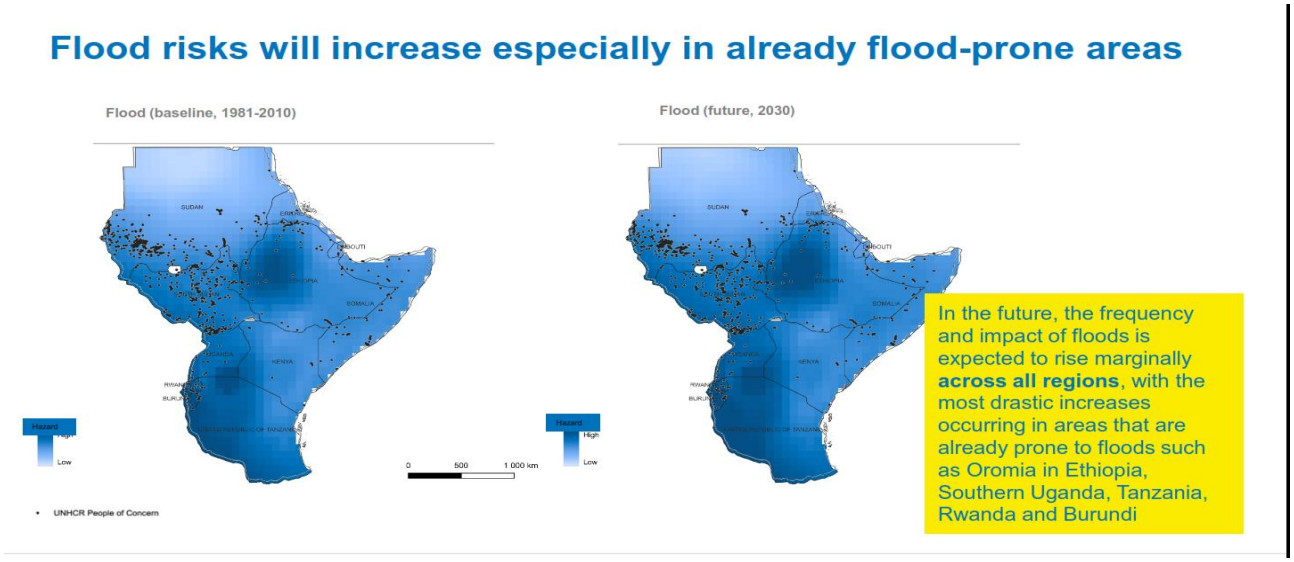
Source: UNHCER, 2023

b) Temperature



Source: UNHCER, 2023

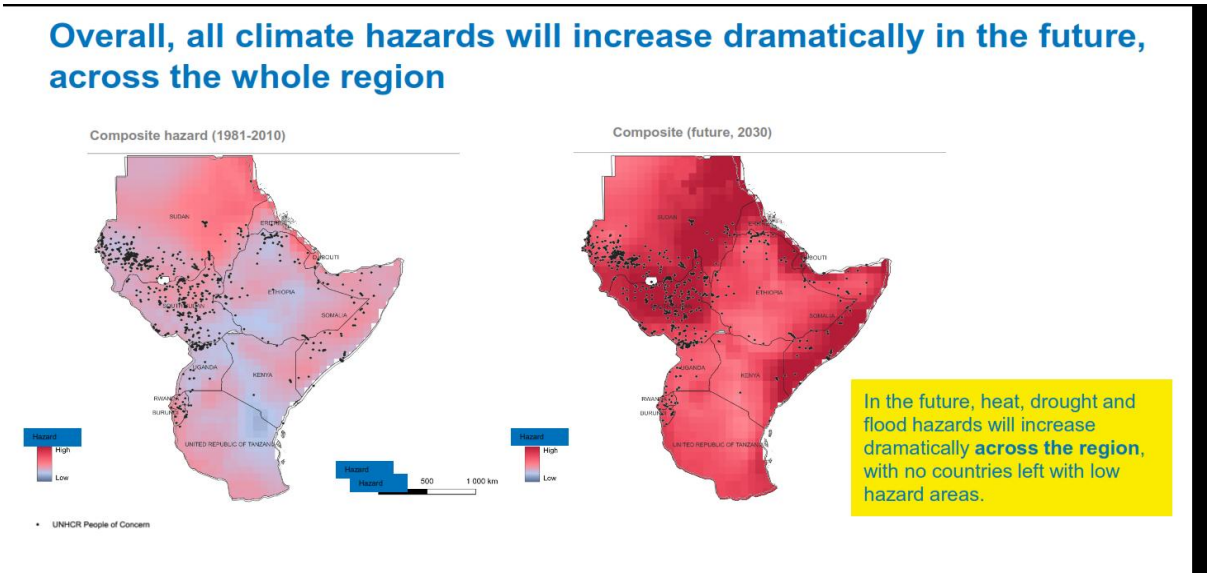
c) Flooding



Source: UNHCER, 2023

Overall, climate hazard will increase dramatically in the future across the greater Horn of Africa. Figure 3.21 indicates the historical composite climate hazard and future hazard levels. Future displacement due to climate hazard is thus a concern in the region. The vulnerable people are living in areas that are expected to see the most drastic increases in climate hazards.

Figure 3. 21: Climate hazard in the Horn of Africa



Source: UNHCER, 2023

3.4 Climate Adaptation

The Adaptation Policy Framework established by UNDP in 2005 characterizes adaptation as a process through which individuals, communities, and nations strive to mitigate and manage the impacts of climate change, including its variability. Central to this process is the necessity to enhance the decision-making capabilities of communities and governments, enabling them to foresee weather fluctuations and, based on prior experiences, modify their plans and investment strategies accordingly. As noted by UNDP (2018), adaptation can be approached at four levels, which should be regarded as integral elements of an adaptation strategy:

Improving baseline resilience to current climate variability

This concept is similar to broader development efforts and signifies investments in established livelihood systems that respond to anticipated or recognized patterns of climate variability including some level of human-induced climate change. Disaster risk reduction and preparedness is one integral component of building resilience. Resilient systems are defined by their capacity to self-organize, the ability to diversify livelihoods to withstand economic and social shocks, and their anticipation and responses to variability and unexpected climate events. Key drivers of resilience include agency, empowerment, and the necessary skills, knowledge, and networks for effective action, all of which require investments in human, social, physical, natural, and financial assets, as well as political capabilities like voice and participation. Coping capacity refers to the measures taken to respond resiliently to climate variability; however, these measures can also adversely impact livelihood prospects, especially in contexts where climate shocks occur more frequently, leading to cumulative effects on coping capacity, such as the loss or sale of assets like livestock during successive droughts. Investments aimed at enhancing the coping capacity of vulnerable communities are crucial for effective adaptation.

Adaptation to climate change hazards

Adaptation to climate change hazards necessitates modifications within systems to effectively prepare for its impacts. This preparation demands investments across various assets, including human, social, physical, natural, and financial resources, as well as the enhancement of capabilities and adaptive capacities. Adaptation should not be viewed as a process of transitioning to a fixed and foreseeable future. Instead, it involves navigating uncertainty, making the development of adaptive capacity essential.

The adjustment of policies and budgets

Policy and institutional mainstreaming is essential for the expansion and replication of effective adaptation strategies, as well as for fostering innovation. It is important to differentiate between baseline capacity development, which focuses on enhancing the effectiveness and efficiency of governmental institutions, and adaptive capacity, which involves strategic planning for climate change. Capacity can be built through the application of technical analysis in policy formulation, engagement in consultation processes, and the implementation of organizational development strategies. Climate finance is projected to reach US$100 billion annually for developing nations, and there are growing initiatives aimed at equipping government planning systems to effectively manage and monitor climate finance within their core budgetary frameworks, thereby ensuring the delivery of adaptation benefits.

Addressing the residual risk

Losses are likely to be inevitable, as it is impossible to eliminate risk entirely due to the ever-changing nature of climate variability. Assisting communities in managing the expenses associated with residual losses enhances resilience; however, for effective adaptation, it is essential to also foster self-organization, learning, and agency. As climate change intensifies, we will encounter 'tipping points' where existing economic systems will no longer function effectively, leading to residual risk costs becoming a more significant component of the overall adaptation strategy.

3.4.1 Adaptation measures in Africa

The Fourth Assessment Report (AR4) from the IPCC highlighted that Africa is particularly vulnerable to the effects of climate change. A global average temperature increase of 2°C presents a significant challenge for adaptation, while a rise of 3.5-4°C entails an even greater adaptation hurdle for the continent (IPCC, 2007). The anticipated temperature increases in Africa are notably severe when compared to the historical climate conditions and variability that have shaped both human and natural systems in the region. Research published in peer-reviewed journals since the AR4 (2007) indicates that the adaptation challenges are extensive and multifaceted, accompanied by considerable residual damages. Although many of the impacts associated with a 4°C warming scenario could be mitigated by limiting global warming to below 2°C, the consequences would still be substantial, necessitating significant adaptation efforts.

The ability of African communities to manage the repercussions of climate change across various economic sectors and human activities is anticipated to face considerable challenges, potentially exceeding their capacity due to the scale and swift onset of impacts, as previously demonstrated. To mitigate the severity of these effects and their consequences for the livelihoods of Africans, adaptation strategies are being developed and executed at multiple levels, ranging from individual households to national and regional frameworks, which require additional support and enhancement. These strategies include:

- The development of early-warning systems for floods, droughts or fires to help populations anticipate and prepare for the occurrence of extreme events

- Irrigation, improvement in water storage capacity, reforestation to protect surface water systems, sustainable use of groundwater resources, desalinization of seawater, and rainwater catchment and storage to maintain sufficient and reliable access to freshwater for human and agricultural needs.

- City infrastructure protection measures such as seawalls, dykes, wave breakers and other elements of coastal zone management, as well as city-level food storage capacity and urban agriculture to enhance food security, and improving design and drainage technology of sanitation facilities to reduce the risk of water-borne diseases in the aftermath of extreme weather events.

Adaptation measures are considered either "soft" adaptation measures, where they involve natural capital or community control; or "hard" adaptation measures, where adapting a sector or a community requires the construction of new and capital-intensive infrastructure. The majority of the adaptation measures require an anticipatory and planned approach and large investments. The need for planned capital-intensive adaptation is greater at high than low warming levels.

3.4.2 The Cost of Adaptation for Africa

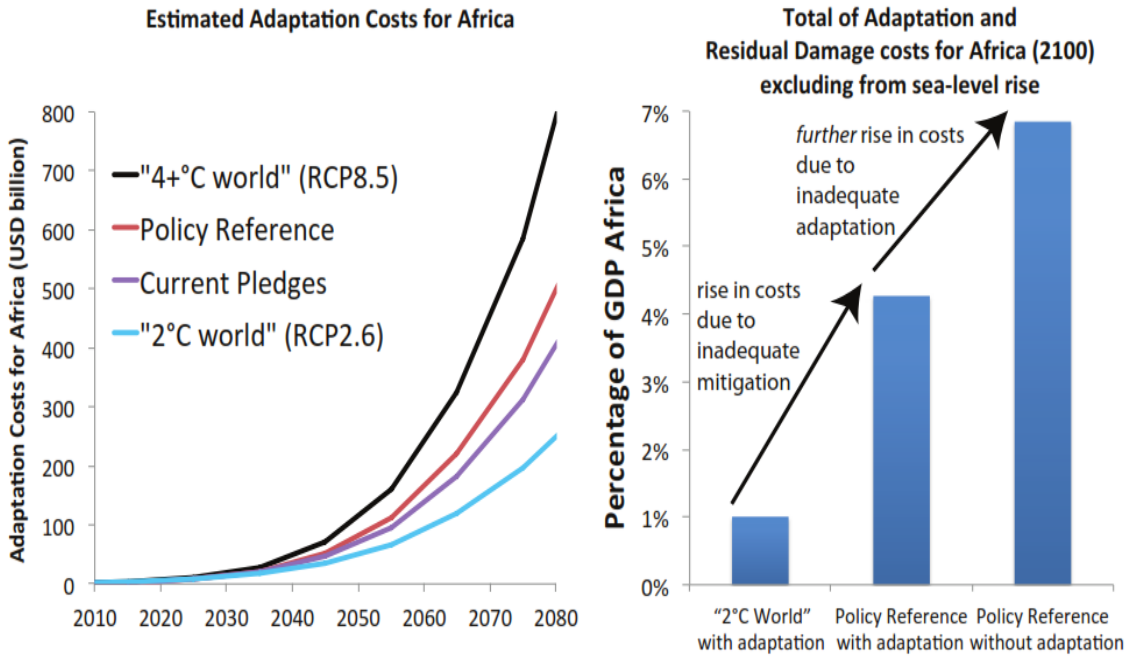
Estimating the costs of adaptation in response to various climate scenarios is a complex endeavor fraught with uncertainties. Nonetheless, numerous studies have provided projections for the expenses associated with adaptation measures. In the short term, the World Bank's estimates from 2010 present a valuable sectoral breakdown at the regional level. Specifically, for Sub-Saharan Africa, the annual adaptation costs are projected to reach approximately USD 13 billion by 2020, assuming a global temperature increase of about 1°C above pre-industrial levels. This figure is expected to rise significantly to around USD 24 billion by 2040, with global warming nearing 2°C. The sectors anticipated to incur the highest adaptation costs include water supply, coastal zone protection, infrastructure, and agriculture.

In a scenario where global warming is limited to below 2°C, Africa continues to face significant challenges, as previously outlined. The long-term costs of adaptation for the continent are projected to reach approximately USD 35 billion annually by 2050 and USD 200 billion annually by the 2070s (refer to Figure 3.22, left panel). After the 2070s, nearly all adaptation expenditures in a 2°C scenario will focus on mitigating the impacts of rising sea levels, which persist even as temperatures stabilize below 2°C or begin to decrease. In contrast, under a warming trajectory of 3.5-4°C, the estimated adaptation costs for Africa rise substantially, reaching around USD 45-50 billion per year by 2050 and USD 350 billion per year by the 2070s. Throughout all timeframes, about half of these costs are associated with adapting to sea-level rise, with less than 10% allocated to autonomous adaptation strategies, and the remainder directed towards other proactive measures.

In a world with a temperature increase of 2°C, the annual costs associated with adaptation, along with residual damages (those that adaptation efforts do not prevent), are projected to be approximately 1% of Africa's GDP in 2100, assuming comprehensive adaptation measures are undertaken (see Figure 3.22 – right panel). However, under the current mitigation strategies that are planned and being executed,

these costs are expected to rise to around 4% of Africa's GDP, again assuming full adaptation efforts. In the absence of any adaptation, total damages could escalate to 7% of Africa's GDP in this scenario, clearly demonstrating how adaptation strategies can substantially mitigate damage and lower overall costs.

Figure 3. 22: Adaptation costs in Africa



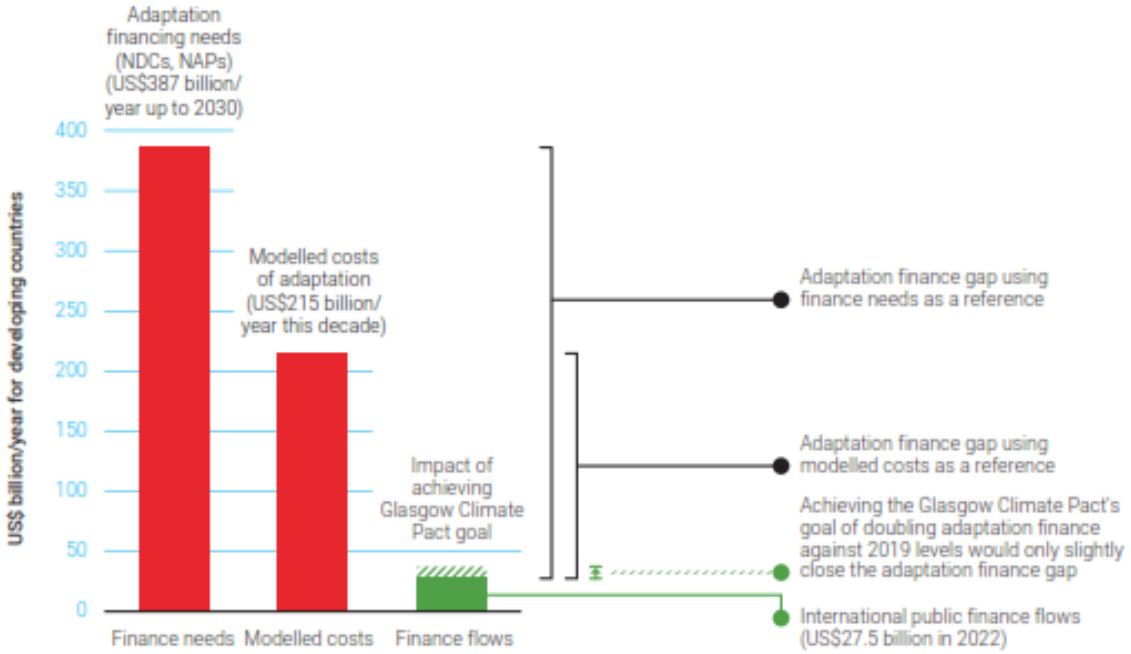
Source: AGRA 2024

3.4.3 Adaptation financing gap

The Adaptation Gap Report 2023 projected that the estimated central range for adaptation costs and financing requirements for developing nations this decade is between US$215 billion and US$387 billion annually. This represents approximately 0.6 percent to 1.0 percent of the GDP for all developing countries (UNEP, 2023). These financial needs are comparable to the total Official Development Assistance (ODA), which amounted to US$224 billion in 2023 (OECD 2024). According to the most recent data available (United Nations Conference on Trade and Development 2024), the debt interest payments for developing countries (excluding China) accounted for 2.4 percent of GDP, exceeding the estimated requirements for adaptation financing.

The financial requirements for adaptation can be assessed alongside the revised international public adaptation finance flows directed towards developing nations, which amounted to US$27.5 billion annually in 2022. Consequently, despite the rise in international public finance flows, a significant gap in adaptation financing persists, as illustrated in figure 3.23. This substantial adaptation finance gap is likely to result in increased losses and damages for developing countries, while also affecting developed nations through international and transboundary risk cascades (Anisimov and Magnan, 2023).

Figure 3. 23: Comparison of adaptation financing needs, modelled costs and international public adaptation finance flows in developing countries



Note: Values for needs and flows are for this decade (2021 prices), while international public finance flows are for 2022 (2022 prices). Domestic and private finance flows are excluded.

Source: AGRA, 2024

3.5: Gender and Climate Change Induced Migration

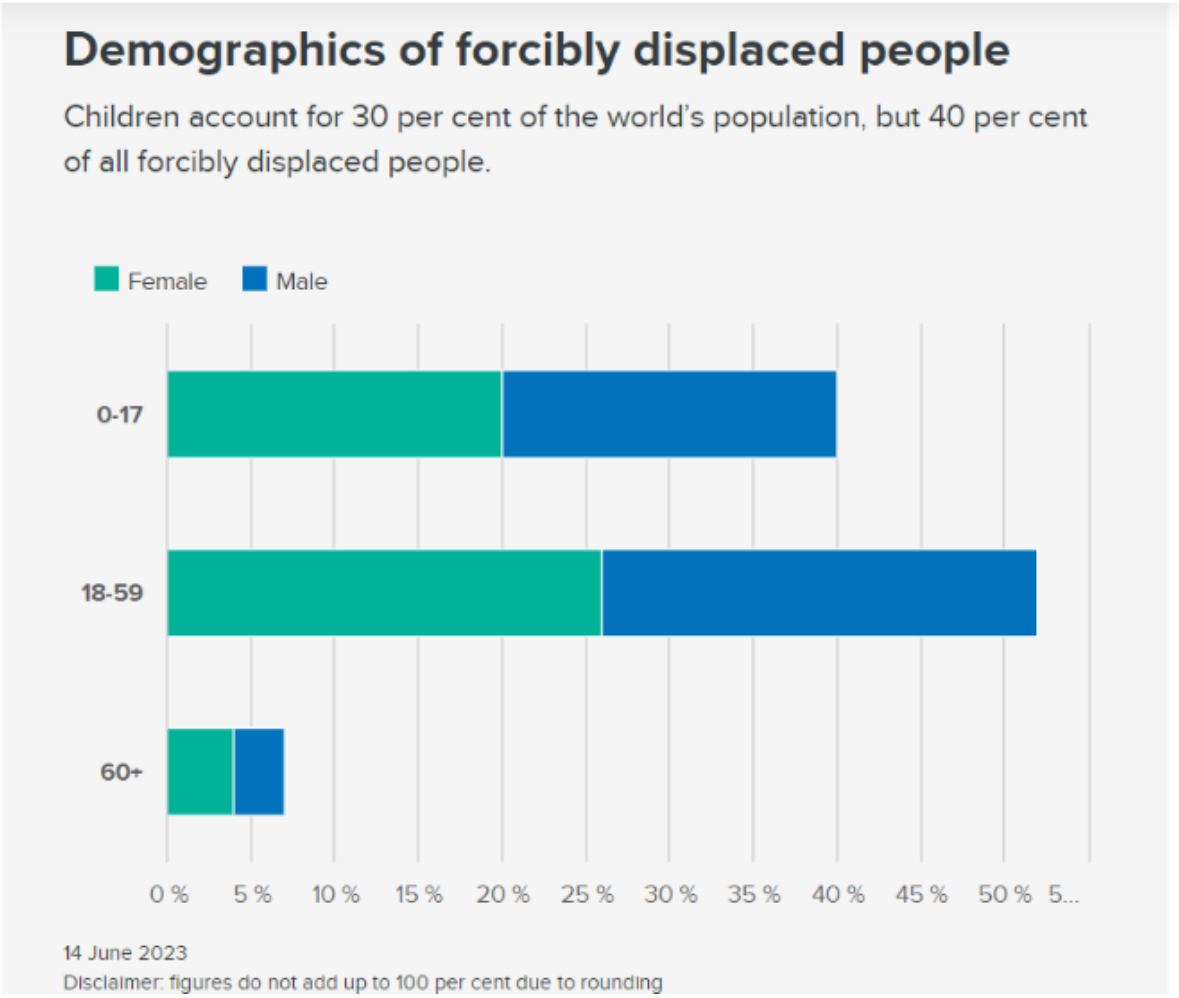
Environmental migration, similar to other forms of migration, is a gendered process. Migrants of all genders possess distinct needs and priorities and encounter various risks during their journeys. Climate change particularly affects women, who often have limited access to information, resources, and job opportunities in the communities and countries they migrate to. As climate change undermines existing livelihoods, women face a heightened risk of being left behind and remaining in hazardous conditions while also managing family and household duties when men migrate in search of better economic prospects. Furthermore, societal norms can restrict women's mobility, requiring male consent for travel, which significantly limits their ability to adapt to disasters. When women are compelled to migrate to secure a safe and healthy living environment, they frequently encounter specific dangers along their migration paths. Those already in transit may be forced to return to their home countries or risk becoming trapped and vulnerable during their journeys. Additionally, migrant women are more susceptible to various threats, including abuse, discrimination, exploitation, and Gender-Based Violence (GBV), such as human trafficking, and they often struggle to access sanitation, as well as sexual, reproductive, and mental health services.

Environmental migration has the potential to exacerbate existing gender disparities and subject women to additional vulnerabilities. Women encounter numerous oppressive challenges stemming from discrimination related to their place of origin, race, ethnicity, religion, social status, education, and ability. This discrimination is compounded by a lack of social and legal protections, which intensifies

the gendered dimensions of poverty, discrimination, and socioeconomic inequality. Consequently, this situation leads to further exclusionary factors, such as wage disparities, challenges in securing housing for single women, and limited access to information. Women from the most impoverished communities, who rely on natural resources for their livelihoods, often possess the least resilience to climate-related threats, including droughts, landslides, floods, and hurricanes. Therefore, it is essential to tackle existing gender inequalities and uphold the rights of individuals of all genders, particularly women and girls, who face intersecting forms of discrimination. In this context, the adverse effects of climate change further complicate the challenges encountered by other marginalized groups, including individuals with disabilities, migrants lacking legal status, those with diverse gender identities and expressions, and older adults, especially concerning their access to adequate healthcare and protection due to their specific vulnerabilities, increased risk of violence, and societal exclusion (IOM, 2021).

Estimates from 2022 indicate that a significant number of individuals, potentially totaling 108.4 million, have been forced to leave their homes due to violent situations. Within this group, approximately 5.4 million have sought refuge in other countries, while 62.5 million have been internally displaced, and up to 35.3 million are classified as refugees (UNHCR, 2023). The UNHCR (2023) reports that the majority of the displaced population consists of women and children, who make up 70 percent of the total, as illustrated in Figure 3.24. As a result, women face the daunting task of supporting their families under extremely challenging circumstances.

Figure 3. 24: Demographics of forcibly displaced people



3.5.1 Gender dimensions of climate-induced migration in the Horn of Africa

Similar to other parts of the world, women in the Horn of Africa bear the primary responsibility for domestic care and labor, and have limited opportunities to participate in decision-making processes that address and manage the effects of climate change. This is especially evident in rural areas, where reliance on subsistence farming is prevalent, and women serve as the main providers of food, water, and fuel. The impacts of climate change exacerbate resource scarcity, rendering these essential tasks increasingly challenging and perilous. Furthermore, women's socio-economic status and traditional caregiving roles restrict their mobility to adapt to climate change, expose them to discrimination and gender-based violence, and hinder their access to resources, services, information, employment, and participation in decision-making.

3.5.1.1 Women and Gender Issues in East Africa

East Africa is recognized as one of the regions globally with the most significant challenges in human development and pronounced gender inequality. This assessment is corroborated by findings from the United Nations Development Programme (UNDP), which has established rankings for the Human Development Index (HDI) and the Gender Inequality Index (GII) across the countries in this region. Nations such as Ethiopia, Sudan, and Uganda are positioned among the lowest on the HDI scale, which measures human development through indicators like life expectancy, education levels, and per capita income. In 2021, South Sudan was recorded as having the lowest HDI rating. These countries face severe deficiencies in access to essential services, education, healthcare, and income, underscoring their profound poverty and human development challenges. Furthermore, the Gender Inequality Index (GII) reveals persistent and significant gender disparities within the region. Women in East Africa encounter considerable barriers in accessing education, employment, political participation, and economic resources. Such gender inequalities hinder women's opportunities and their ability to realize their full potential in the region.

3.5.1.2 Women in the Agrifood Sector in the Horn of Africa

The Horn of Africa is rich in both natural and cultural resources; however, it faces considerable challenges related to pronounced gender inequality and human development. This inequality adversely impacts the resilience of local communities, especially in rural areas, and undermines the effectiveness of strategies aimed at adapting to climate change. Women in the agri-food sector of the Horn of Africa play essential roles in the production, processing, and marketing of agricultural products. Despite this, they face numerous economic and socio-cultural barriers that hinder their full development and involvement in decision-making processes. There is a pressing need for support in securing land ownership, access to credit, production resources, and innovative technologies, as well as in participating in economic decision-making (FAO, 2023). Gender disparities in accessing the necessary resources and technologies to combat climate change are becoming increasingly evident. As climate change intensifies the workload for women in certain areas, it is crucial that they have access to tools and technologies that can help ease this burden. Even when women are eager to implement sustainable climate solutions, limited resources can significantly obstruct the adoption of these technologies across

many regions (Murage et al., 2015). Therefore, it is essential to address not only material challenges but also cultural and social obstacles. Gender norms significantly influence women's access to specific technologies, often shaped by cultural perceptions of what is acceptable in a given context. These norms can restrict women's ability to adopt environmentally friendly agricultural practices, such as conservation agriculture or agroforestry. Furthermore, they may limit women's access to critical resources like fertilizers and improved seeds, as well as their capacity to use them effectively. Grassi et al. (2015) identify this as a major hindrance to devising practical and inclusive climate change adaptation strategies.

3.5.1.3 The Effects of Drought on Women's Mobility in Ethiopia

A research conducted by Grey, Dou, Mueller, and Sheriff (2020) examined how drought affects women's mobility in Ethiopia. The findings revealed that drought significantly influences women's decisions to move. Women who faced drought conditions were more likely to consider relocation than those who did not experience such events. The effects of drought were particularly evident in intra-regional movements, although they were also noted in inter-regional relocations. The study utilized a dataset of person-years to track women's mobility over time and identify the factors influencing it. This dataset included information on individual characteristics, household dynamics, community attributes, and drought exposure.

Numerous factors contribute to the increased vulnerability of women to the effects of drought in Ethiopia. Firstly, women are more likely to take on roles related to food production and water collection in rural areas. This means that they are directly affected by crop failures and water shortages. Additionally, women often face significant barriers in accessing essential resources such as land, credit, and education, which further hinders their capacity to cope with the impacts of drought. Furthermore, societal discrimination against women often complicates their efforts to find employment or housing in new areas (Gray & Mueller, 2012).

The occurrence of drought in Ethiopia can lead to numerous negative consequences for women’s mobility. Firstly, drought conditions may force women to venture into unfamiliar areas in search of food, water, and other vital resources. This journey can present significant challenges and dangers, especially for those traveling alone. Additionally, drought can adversely impact women's access to education and healthcare services. This situation may negatively affect their health and overall well-being, while also hindering their ability to secure employment. Moreover, drought can increase women's vulnerability, making them more susceptible to violence, exploitation, and abuse. The risk of various forms of violence escalates for women who are displaced due to drought conditions (Desai & Mandal, 2021; UNFPA, 2022).

Climate change has been found to have a notable influence on the necessity for Ethiopian women to migrate to Saudi Arabia. The agricultural sector in Ethiopia, which serves as a crucial means of sustenance for numerous rural people, has been negatively impacted by the shifting climatic patterns observed in the region. These changes manifest in the form of rising temperatures, occurrences of heat waves, and intensified precipitation events. Climate-related calamities such as droughts, floods, and other extreme weather events have resulted in adverse consequences such as crop failures, food insecurity, and economic instability (Semenza & Fantahun, 2019).

Consequently, young females residing in rural areas of Ethiopia are pushed to pursue different avenues for generating revenue and sustaining their livelihoods. The act of migrating as domestic workers to the Middle East, specifically Saudi Arabia, has emerged as a compelling choice for these women, offering them career prospects and the ability to assist their relatives residing in their countries of origin financially. The decision to move is influenced by the presence of limited economic prospects and the heightened vulnerability resulting from climate change (Schewel, 2022).

In summary, the adverse effects of climate change in Ethiopia, including disruptions in agriculture and economic instability, lead to the necessity for Ethiopian women to travel to Saudi Arabia as domestic servants. The dynamic nature of the climate and its associated socioeconomic ramifications exert influence on migratory trends, impacting both the economic well-being of individuals and the overall health of populations.

CHAPTER FOUR: CLIMATE CHANGE AND REGIONAL INSTABILITY

4.1 Governance and Instability in the Horn of Africa

The landscape of conflict and disputes in the Horn of Africa is currently evolving, transitioning from interstate to intra-state conflicts, and from conventional to non-conventional approaches, as well as from traditional to non-traditional threats, all amid ongoing political changes. These developments are challenging governmental structures, hindering regional integration, and creating risks to governance, peace, and security that surpass the conventional military, economic, and diplomatic spheres. While traditional methods still prevail in warfare across the region, there is a noticeable hybridization of conflict, increasingly integrating the use of drones, network technologies, and influence operations, including disinformation and misinformation (ISS, 2023).

Governance in the Horn of Africa is characterised by both progress and retrogression. However, violent conflicts, institutional fragility and socio-political instability dominate and are gradually transforming into a systemic attribute of the region. The structural dynamics fuelling this trend (economic marginalisation, political exclusion and environmental stress) are not new. However, rapid population growth and slower economic growth amplify pressure on governments in a context of higher social demands.

In 2021, IGAD noted that the countries in the Horn of Africa (HoA) face significant governance challenges, widespread corruption, violence related to elections, and low political engagement, particularly among women. The organization linked the governance shortcomings in the region to human rights abuses, a lack of political tolerance, arbitrary enforcement of the law, and ongoing conflicts (IGAD, 2021). It determined that the governments in this area experience a lack of public support and legitimacy (IGAD, 2021). Reflecting a pattern seen in other parts of Africa, the governance structures in the HoA vary widely, encompassing both autocratic regimes and electoral democracies, as well as governments that range from relatively stable to those struggling to maintain order.

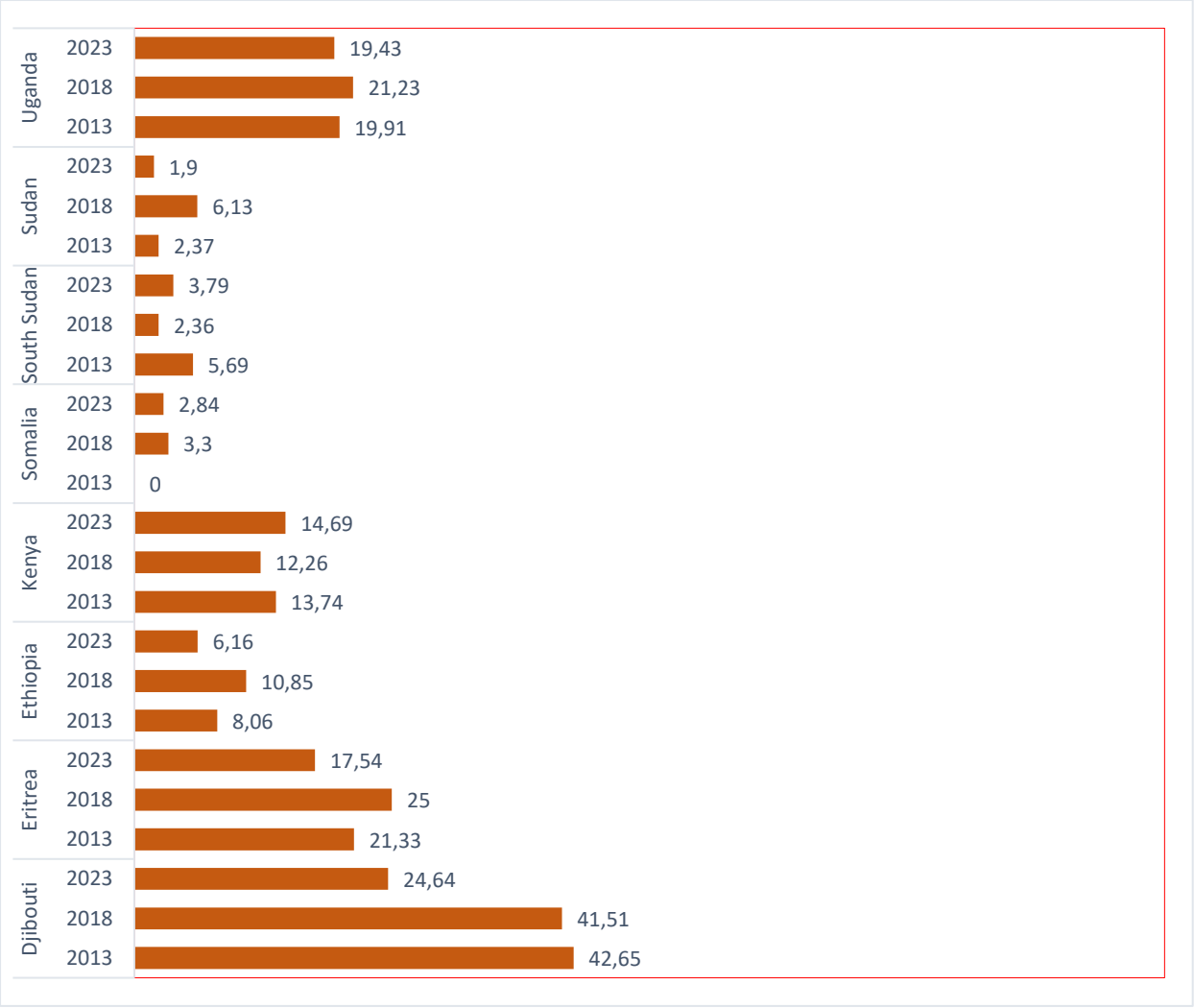
The following table and figure indicate the ranking of governments in the HoA in terms of political stability index, and Political Stability and absence of violence/terrorism.

Table 4. 1: Political Instability Index (-2.5 weak; 2.5 strong) in the HoA in 2022

Country	Political Instability Index	Global Rank	African Rank
Djibouti	-0.51	136	25
Eritrea	-0.97	163	38
Ethiopia	-2.04	184	49
Kenya	-0.94	162	37
Somalia	-2.48	190	53
South Sudan			
Sudan	-2	182	48
Uganda	-0.81	157	34

Source: The Global Economy https://www.theglobaleconomy.com/rankings/wb_political_stability/

Figure 4. 1: Political stability and absence of violence/terrorism (percentile rank 0 to 100)



Source: Worldwide Governance Indicators (www.govindicators.org)

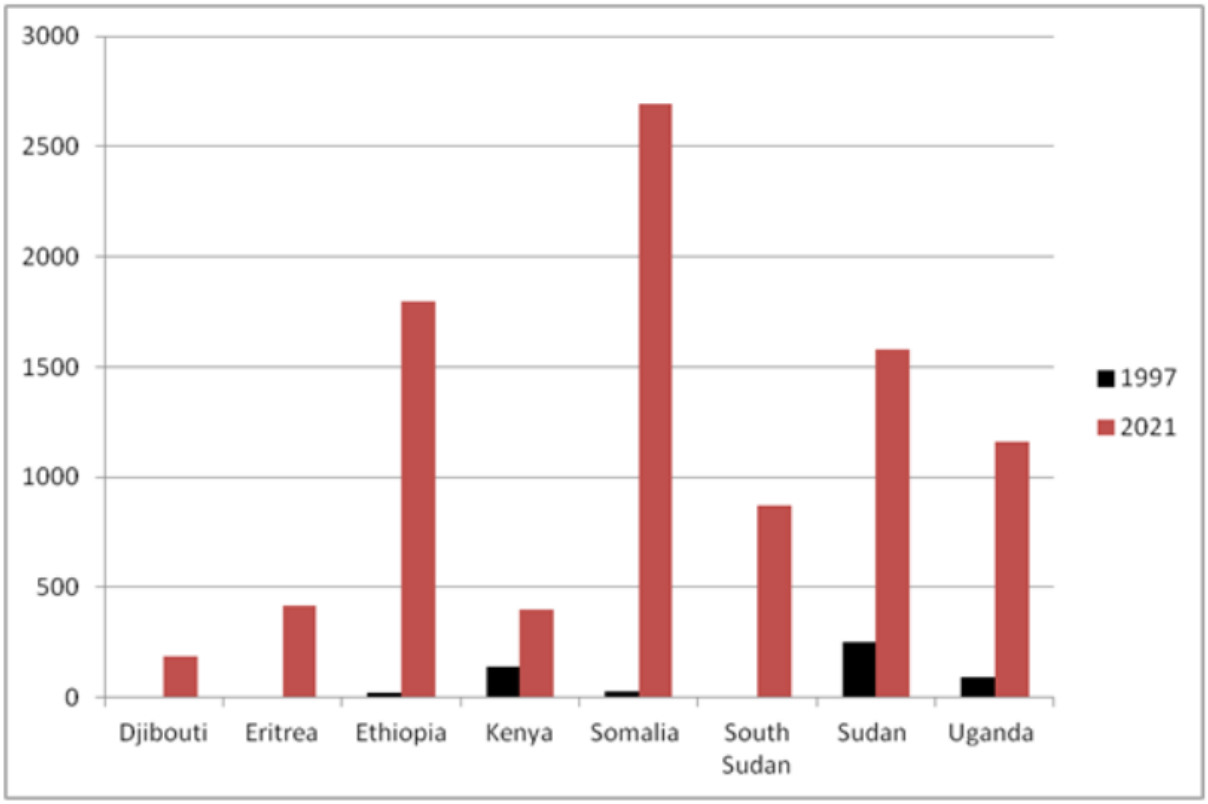
The data presented in both the table and the graph reveal that nations in the Horn of Africa rank among the lowest in terms of political instability on both global and continental scales. The political instability index, which ranges from -2.5 to 2.5, shows that all countries in this region have scores below zero. Somalia is identified as the most politically unstable nation, occupying the 190th position out of 190 countries globally, with an instability index of -2.04. Ethiopia and Sudan follow, ranked 184th and 182nd, respectively. A similar trend is observed in the political stability and absence of violence/terrorism percentile ranking, which spans from 0 to 100. In this metric, Somalia again ranks the lowest, with a percentile score of 0 in 2013, and scores of 3.3 and 2.84 in 2018 and 2023, respectively. Sudan and South Sudan are also low on this scale, with scores of 1.9 and 3.79 in 2023. Overall, the data from both the figure and the table suggest that countries in the Horn of Africa are among the most politically unstable, if not the least stable, globally.

4.2 Trends in incidences of conflict in the Horn of Africa

Based on ACLED data, Figure 4.2 below compares the incidence of conflict reported in 1997 and 2021. It reveals a significant rise in the number of conflicts within the region. This trend is especially evident in countries like Somalia, Ethiopia, and Sudan, where various factors, including climate variability, are intensifying the situation.

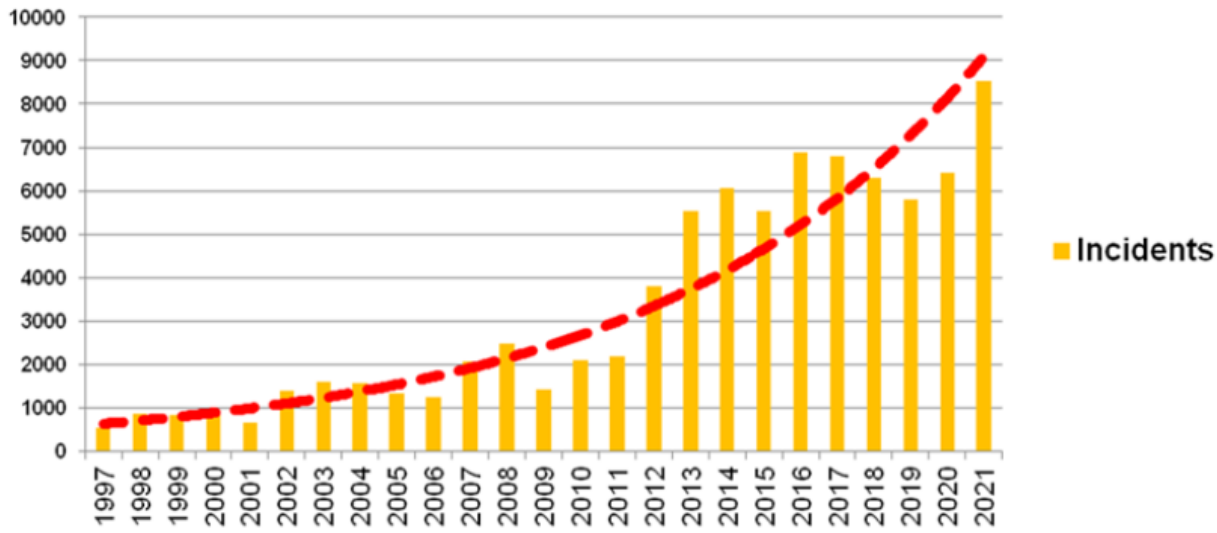
Similarly, at regional level, the IGAD region experienced an increasing trend on number of conflict incidents registered. As reported in figure 4.3, though some fluctuations on number of incidents were registered, the overall trend is an ever increasing incidents of conflict in the region.

Figure 4. 2: A comparison of reported incidents in 1997 and 2021



Source: ICPAC 2022

Figure 4. 3: Summary of Conflict Incident Trends in the HoA from 1997 to 2021



Source: ICPAC 2022

The CEWARN (IGAD's Conflict Early Warning and Response Mechanism) January – June 2022 statistics report indicates close to 5000 incidents were reported out of which more than 6000 were human fatalities (CEWARN, 2023). Studies conducted by CEWARN over a long period show that the hotspot areas have been experiencing insecurity and the absence of effective administration of justice and the rule of law. CEWARN further noted that changes in climatic conditions have forced to a greater extent the displacement and cross border migration of many people in the IGAD region (CEWARN, 2023).

Conflict trends are influenced by seasonal variations that lead to challenges regarding access to water and grazing land, often resulting in incidents of conflict. This phenomenon is particularly prevalent during the dry season, as pastoralists frequently travel long distances with their herds in search of water and pasture, establishing temporary settlements and ensuring that their routes remain unobstructed. Consequently, climate change plays a significant role in natural resource management, which is intricately connected to both micro and macro-level conflict dynamics. Recent studies have indicated that conflicts tend to arise in areas where resources that communities vie for are concentrated and accessible.

4.3 Addressing the link between climate, peace and security

As climate change intensifies risks, particularly in regions prone to conflict, it is essential to integrate climate action into preventive diplomacy and peace building initiatives. This approach could facilitate dialogue opportunities. Both severe climate events and conflicts can lead to shortages of food and water, exacerbating security threats. In certain areas, the depletion of natural resources may result in population displacement or ignite competition for these resources, both of which can potentially escalate into conflict. In 2022, climate-related disasters accounted for over half of all newly reported displacements.

Overall, 60 percent of refugees and internally displaced individuals reside in countries that are highly susceptible to the impacts of climate change.

Acknowledging and addressing the connections between climate change and risks to peace and security is increasingly vital for conflict prevention and the maintenance of peace, as highlighted by various special political missions (SPMs) overseen by the Department of Political and Peace building Affairs (DPPA). Climate change poses a growing threat to human security and influences violent conflict across the African continent; however, there are no straightforward security measures to mitigate these challenges.

While a direct causal link between climate and conflict does not exist, climate change influences political, social, and environmental pressures through various channels, exacerbating pre-existing vulnerabilities and tensions. The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5, 2014) reviews the studies that have looked into this question, and concludes that "confident statements about the effects of future changes in climate on armed conflict are not possible given the absence of generally supported theories and evidence about causality" (IPCC, 2014). Nonetheless, despite the lack of evidence establishing a direct causal link, the IPCC (2014) notes a "justifiable common concern" that climate change or variations in climate may heighten the risk of armed conflict under specific conditions, although the precise magnitude of this effect remains uncertain. This phenomenon has been referred to as the "threat multiplier," which intensifies pre-existing factors that could contribute to conflict. The IPCC (2014) further affirms that many of the factors that increase the risk of civil war and other armed conflicts are sensitive to climate change. Some studies look at the linkages from the other direction – conflict and displacement can result in significant deforestation and increased environmental degradation, thereby aggravating competition over scarce natural resources. Similarly, ongoing or recent armed conflict can have a negative effect on the capacities required to adapt to climate change. This includes damage to livelihoods and increased vulnerability of communities to the impacts of climate change as well as undermining the ability of states to prevent and respond to natural disasters and humanitarian crises (IPCC 2014). Other studies have shown that efforts to mitigate or adapt to climate change may actually increase the risk of armed conflict, for example where they make abrupt changes to the distribution of access to resources or aggravate inequalities or grievances (IPCC, 2014).

In their study conducted for SIPRI, van Baalen and Mobjörk (2018) performed a detailed analysis of 44 studies published between 1989 and 2015. This analysis employed both quantitative and qualitative methods to examine the connection between climate-related changes and local violent conflicts in East Africa and Sudan. Their findings indicate that conflicts over natural resources—such as land, pasture, and water—are notably prevalent in areas where pastoralists engaged in livestock rearing are present. Additionally, these conflicts are sometimes manipulated by external actors in their pursuit of power.

A substantial amount of academic research on climate-induced environmental changes and violent conflict in East Africa indicates that alterations in rainfall patterns, droughts, shifts in vegetation, and increasing scarcity of resources have played a role in various forms of violent conflict. This connection is particularly pronounced in conflicts involving livestock herders. Additionally, case studies reveal that local resource disputes can escalate into more severe power struggles associated with civil wars, as seen in Sudan and Somalia. However, it is important to note that climate-related environmental changes do not inherently lead to violent conflict; rather, the political, economic, and cultural contexts are often crucial factors. Below, we provide a concise overview of five explanations regarding the circumstances under which climate-related environmental changes may incite violent conflict in East Africa, along with several significant contextual elements. The effects of climate change on societies and its role in

fueling conflict are also heavily influenced by the responses of both governments and communities. The gradual rise in global temperatures, unpredictable rainfall, and flooding have complex, indirect, and interconnected consequences for peace and security. These environmental changes severely disrupt livelihoods and food security, leading to forced displacement and migration. Climate change heightens vulnerabilities and diminishes the resilience of communities reliant on agriculture. Households led by women are particularly at risk, as they often depend on agriculture for their families' sustenance and rely on natural resources such as firewood and water (Van Baalen and Mobjörk, 2018).

Political interference is increasingly impacting climate security agendas, a situation referred to as the politicization of conflicts and climate change issues (Van Baalen and Mobjörk, 2018). This trend is undermining the traditional institutions responsible for managing natural resource governance. Climate change transcends national borders and is now intertwined with ongoing interstate disputes. In their thorough analysis, Van Baalen and Mobjörk (2018) outline five factors through which climate-related changes may incite violent conflict: i) declining livelihoods, ii) heightened migration, iii) alterations in pastoralist mobility patterns, iv) strategic considerations among armed factions, and v) the appropriation of local grievances by elites.

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- ***Deteriorating livelihoods***

Numerous studies indicate that the likelihood of violence escalates, especially among farmers and pastoralists reliant on agro-ecosystems for their livelihoods, when droughts, floods, or land overexploitation and degradation result in diminished production and economic losses. This phenomenon is often attributed to the lower opportunity costs associated with resorting to violence to gain control over resources, as opposed to maintaining traditional livelihoods. Immediate crises appear to pose a higher risk than gradual events that permit adaptation. However, prolonged drought can create a persistent scenario where social bonds deteriorate due to adverse coping strategies, thereby reinforcing violent conflict.

- ***Increased migration***

Resource scarcity in a particular region can prompt individuals to migrate to more favorable areas within the same vicinity, a phenomenon frequently observed in the Horn of Africa. This movement can lead to tensions and conflicts as the local population and newcomers vie for access to land and water resources. In Darfur, for instance, migration occurred from various regions to areas with increased biomass from 1982 to 2002, coinciding with a rise in violent clashes between Arab and non-Arab communities. The disparity in resource availability was not the sole factor contributing to these

conflicts; the lack of shared institutions and conflict resolution mechanisms played a crucial role as well.

In recent years, the focus on migration has largely centered on international movements across borders, particularly in the context of the European Union. The Swedish Government's new policy framework for development cooperation addresses migration from a developmental standpoint, but it does so exclusively in terms of international migration. However, research from SIPRI and other studies indicates that migration driven by climate-related tensions is predominantly local, occurring within national borders. The UN New York Declaration on Refugees and Migrants, established in September 2016, only considers internal migration in relation to conflict-induced internally displaced persons (IDPs). Therefore, the formulation of policies and action plans aimed at mitigating the risk of climate change exacerbating violent conflict must also prioritize local migration issues.

- ***Changing mobility patterns among pastoralists***

Closely associated with the previous point are the evolving migration patterns adopted by pastoralists when traditional grazing lands become less productive due to climate change. Changes in migration routes may also stem from sedentary farmers or new landowners implementing climate adaptation strategies that necessitate larger areas or different crops, thereby disrupting the vegetation cycle that historically supported mobility across what were once post-harvest fields or fallow lands. Consequently, initiatives that foster collaborative adaptation between pastoralists and farmers will be crucial, but they must be grounded in thorough analyses of the specific conditions within each local context.

- ***Tactical considerations among armed groups***

In East Africa, livestock theft tends to rise significantly during the rainy season or when vegetation cover increases, likely because these conditions provide better concealment and the animals are in optimal condition for long-distance herding. This phenomenon illustrates how climate-related changes can impact conflict dynamics.

- ***Elite exploitation of local grievances***

The conflicts surrounding the control of natural resources mentioned earlier are typically low-intensity and geographically confined. However, local or national elites can exploit these conflicts to divert attention from their own failures or to rally support from certain ethnic groups against others, especially since pastoralists and sedentary farmers often belong to different ethnicities. This is particularly evident in Sudan and South Sudan, where such tensions are closely linked to broader regional or national conflicts.

4.4 Climate Security Pathways

Considering the significant link between climate change and conflict in the Horn of Africa, where nations impacted by one issue frequently experience the other, it is imperative to implement a regional strategy to address climate and environmental pressures. The competition for dwindling resources poses a critical threat to the area, necessitating a coordinated regional response to climate security.

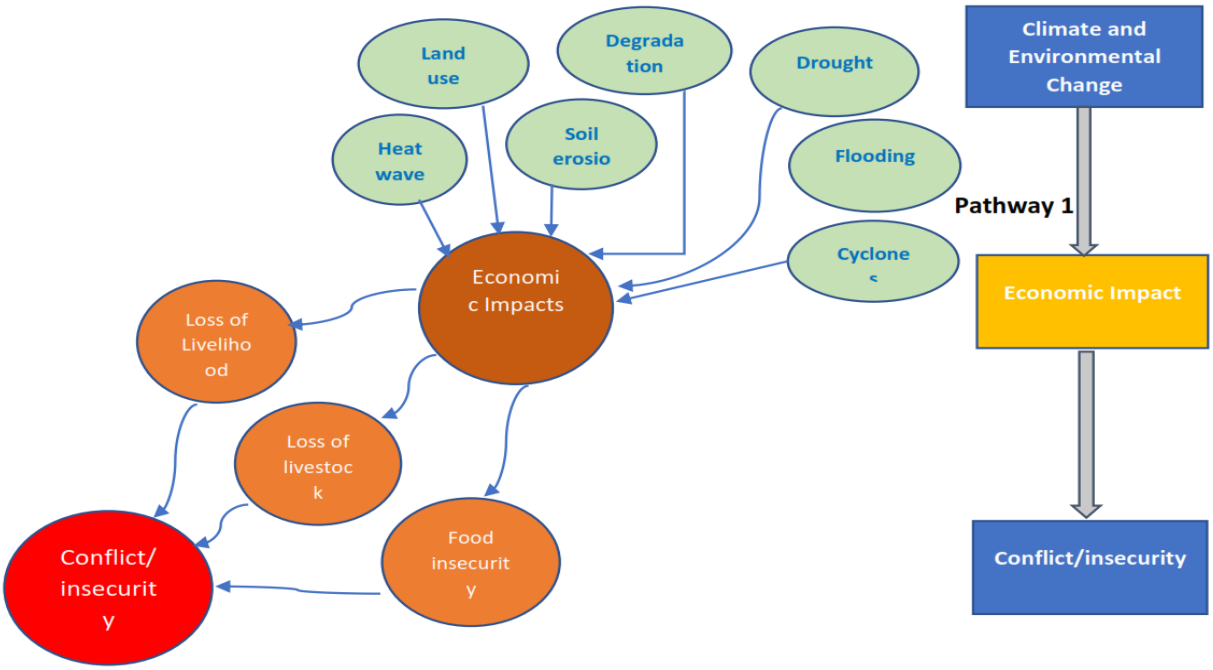
The connections between climate change and security are intricate and, in some respects, cyclical. While climatic conditions can intensify various factors that lead to conflict, human reactions to these conflicts can also exacerbate climate change. Despite the complexity of this relationship, the ICPACT has pinpointed four common pathways where intersections occur, suggesting that these should be addressed in a more integrated manner.

1. ***Threats to Food and Water Security:***

Climate extremes and environmental degradation can result in food and water insecurity, hindering vulnerable populations from escaping the cycle of poverty, especially in developing nations where many governments lack adequate safety nets. For instance, droughts have been shown to reduce productivity, negatively affect the health and body condition of livestock, increase vulnerability to diseases, and lead to higher mortality rates among animals. The effects on food production may also contribute to inflation.

The challenges facing the blue economy pose significant threats to the livelihoods of economies that depend on it. The decline in biodiversity due to rising temperatures is adversely affecting the fishing industry. Environmental degradation, including soil erosion and desertification, has led to shortages of water and pasture, further diminishing productivity. In pastoral communities where climatic changes have resulted in substantial livestock losses, there are reports of youth abandoning pastoralism as a means of livelihood. In regions with limited access to education, youth unemployment is on the rise, creating conditions that may foster radicalization.

Figure 4. 4: Pathway: Food and Water Security



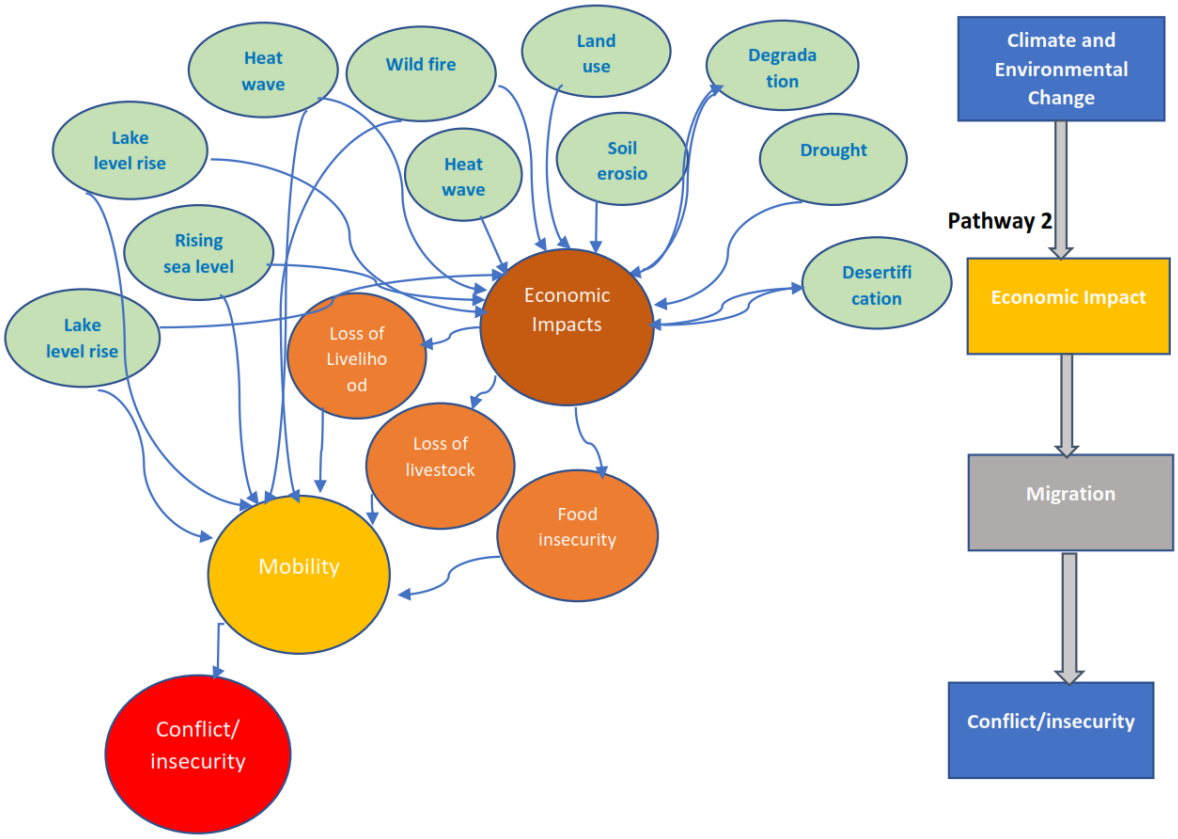
Source: ICPACT, 2022

2. ***Climate Induced Mobility:***

Climate extremes can prompt the relocation of individuals. For instance, floods have triggered movements as a coping strategy; however, in many areas prone to flooding, such actions tend to be temporary. The region has seen a rise in the frequency of cyclones and elevated lake levels, resulting in property damage and the displacement of communities. Additionally, environmental issues such as deforestation and land degradation have contributed to a higher incidence of mudslides in the area. The movement of pastoral communities is a traditional practice among many groups in the greater Horn of Africa. Nevertheless, the growing populations of both humans and livestock over the years have led to a reduction in the availability of pasture and water resources, which, when combined with drought conditions, has intensified conflicts.

The effects of drought on agriculture and food security have been identified as significant factors contributing to the migration of individuals from rural areas to urban centers. Additionally, the anticipated increase in forest fires in the region, driven by rising temperatures, is expected to result in further displacement of people. Furthermore, the projected rise in sea levels along the Indian Ocean coastline raises concerns, as it may also lead to the displacement of communities

Figure 4. 5: Pathway: Climate Induced Mobility

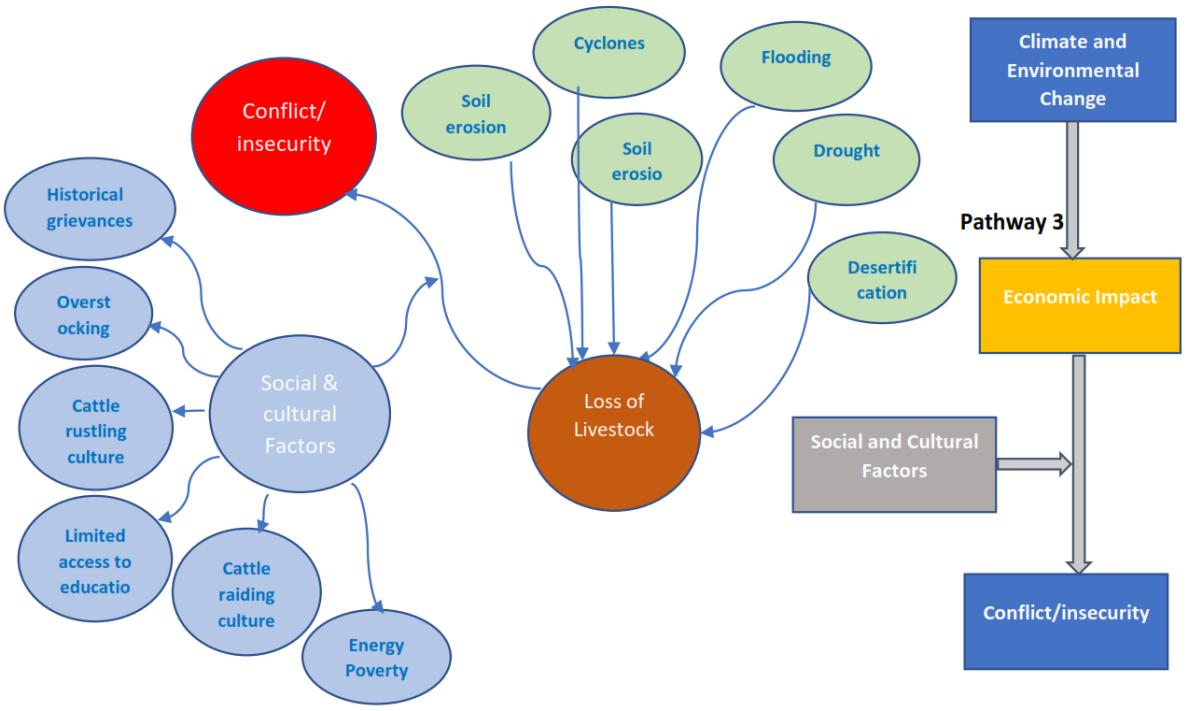


Source: ICPACT, 2022

3. Historical grievances and cultural practice:

One of the pathways identified is influenced by historical and cultural elements. For instance, cattle rustling or raiding is a traditional practice among certain pastoral communities, often employed to replenish livestock. Extreme climate events, such as floods and droughts, have heightened the necessity to replace lost cattle, which in turn has sparked conflicts. Such climate extremes can easily reignite historical grievances and foster mistrust among neighboring communities and nations when shared natural resources are compromised. Long-standing cultural disputes over scarce pasture and water resources have persisted in some countries, exacerbated by rural-to-urban migration, which complicates conflicts in urban settings. The transboundary disputes over natural resources pose a risk of escalating tensions in the region. As the area continues to seek adaptation and mitigation strategies, these tensions are likely to intensify.

Figure 4. 6: Pathway: Historical Grievances and Cultural Practices

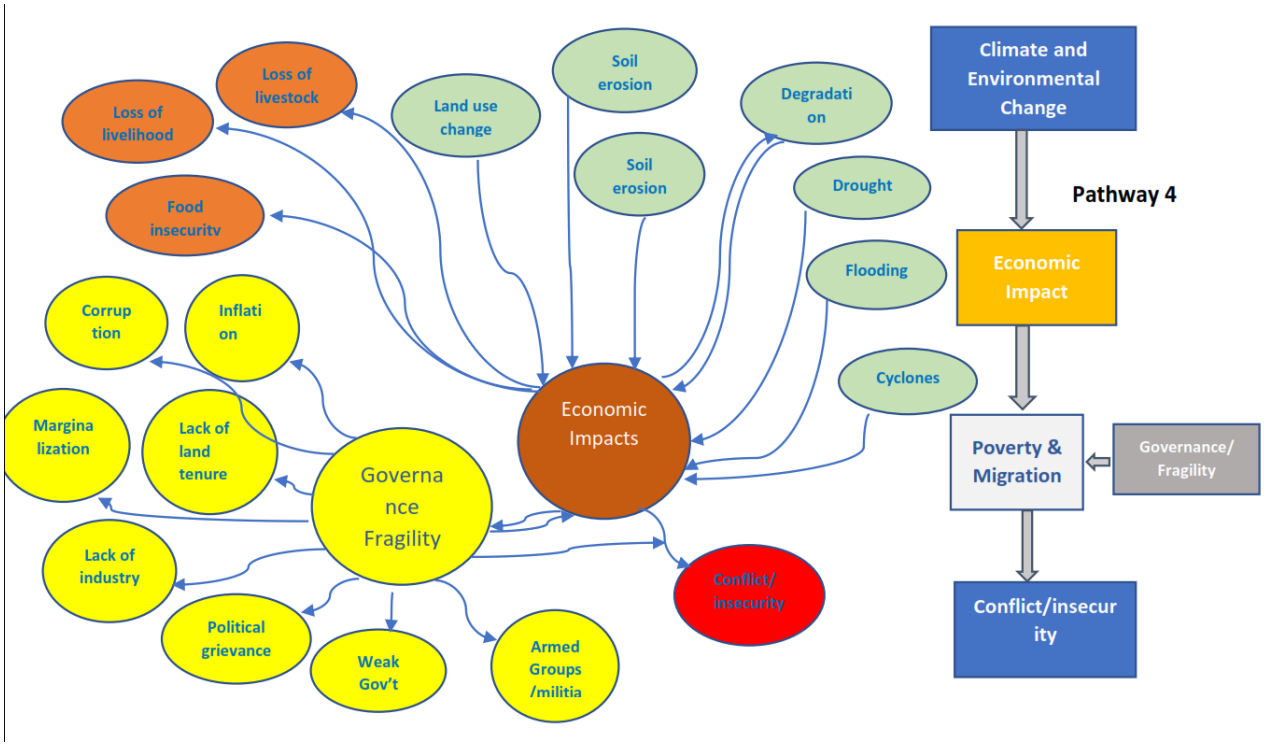


Source: ICPACT, 2022

4. Governance and Fragility:

In instances where climate variability and change have not directly caused violent conflict, their interplay with other elements, including weak governance and conditions of fragility, can intensify the underlying causes of conflict and insecurity, adversely affecting peace, stability, and security. The spread of arms, social marginalization, and insufficient access to essential services have perpetuated traditional practices like cattle rustling and raiding.

Figure 4. 7: Pathway: Governance and Fragility



Source: ICPACT, 2022

The climate crisis has been leveraged by various entities, including political figures, extremist organizations, and commercial interests, to provoke conflict and insecurity for their own benefit, especially in regions characterized by weak governance and instability. The existence of both state and non-state armed groups in certain areas has exacerbated the vulnerability of communities by obstructing humanitarian assistance and efforts to build resilience.

CHAPTER FIVE: POLICY FRAMEWORK ON MIGRATION AND CLIMATE CHANGE

5.1 Introduction

In the last decade, significant progress has been made in recognizing and understanding the relationship between climate change and human mobility within research, as well as in incorporating these insights into international policy efforts. While a unified and comprehensive legal and policy framework specifically addressing the challenges of human mobility linked to climate change and disasters is lacking, there is a growing recognition of the interplay between climate change and human rights. The existing normative and policy frameworks that tackle issues related to human mobility consist of a variety of instruments. In addition to frameworks focused on human rights and refugee protection, numerous international, regional, and sub-regional policy frameworks and processes, which include climate and disaster risk reduction as well as migration policies, also consider elements of the relationship between climate change and human mobility. For the purposes of this report, these frameworks are categorized into four distinct groups:

- Human Mobility Frameworks
- Protection Frameworks
- Climate Change Adaptation and Disaster Risk Reduction Frameworks
- Development-Related Frameworks

5.2 Human Mobility Frameworks

a) Global Compact for Safe, Orderly and Regular Migration

The Global Compact for Safe, Orderly and Regular Migration was endorsed by the United Nations General Assembly on 19 December 2018. The framework is non-legally binding and promotes collaboration among all relevant stakeholders in migration, recognizing that no single nation can tackle migration challenges independently while respecting state sovereignty and international legal obligations. The Global Compact acknowledges that migration contributes to global prosperity, innovation, and sustainable development. By enhancing migration governance, these benefits can be maximized. It establishes a framework of 'common understanding,' 'shared responsibilities,' and 'unity of purpose' to ensure that migration is beneficial for everyone, while also committing to address the specific needs of migrants in vulnerable circumstances.

The Global Compact for Migration (GCM) includes numerous mentions of environmental migration. It acknowledges that individuals may be forced to depart from their home countries as a result of sudden natural disasters and other challenging circumstances. Furthermore, the GCM emphasizes that one of its goals is to reduce the negative factors and underlying conditions that drive people to leave their countries, which encompass natural disasters, the detrimental impacts of climate change, and environmental degradation.

The Global Compact for Migration (GCM) encompasses several commitments from member states aimed at aligning strategies at both regional and sub-regional levels. This alignment seeks to enhance the analysis and sharing of information regarding both sudden-onset and slow-onset disasters, facilitating the mapping, understanding, prediction, and management of migration movements more effectively. Additionally, it emphasizes the need to incorporate displacement considerations into disaster preparedness plans and to provide humanitarian assistance that addresses essential needs while fully respecting the rights of individuals affected by such natural disasters.

Furthermore, the GCM outlines significant commitments under objective 5, which focuses on establishing pathways for regular migration. This includes provisions for the admission and duration of stay for migrants who are forced to leave their home countries due to sudden-onset disasters and other critical circumstances, based on compassionate, humanitarian, or other relevant factors.

b) Labour Related Frameworks

The International Labour Organization (ILO), since its inception in 1919, has created and refined a framework of international labor standards that address a variety of workplace issues encountered daily. Additionally, it has implemented a distinctive supervisory system to promote the effective application of these standards at the national level. In 2015, the ILO adopted the Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All, which serve as both a policy framework and a practical resource. These guidelines assist countries, regardless of their development status, in navigating the shift to low-carbon economies and support them in meeting their intended nationally determined contributions as well as the 2030 Sustainable Development Goals.

In 2016, the International Labour Organization (ILO) established the Guiding Principles on the Access of Refugees and Other Forcibly Displaced Persons to the Labour Market. This framework consists of voluntary, non-binding principles that are based on pertinent international labour standards and universal human rights instruments, drawing inspiration from effective practices in the field. It aims to assist states in facilitating access for these populations to their labour markets and in fostering the creation of decent and productive employment, while also considering the needs and expectations of their own citizens. In 2017, the ILO further advanced this agenda by adopting Recommendation 205 – Employment and Decent Work for Peace and Resilience, which serves as the sole labour standard for ILO constituents to tackle employment and related issues in crisis situations resulting from conflict and disaster.

c) IGAD Frameworks on Migration

IGAD's instruments pertinent to migration and displacement encompass the Protocol on the Free Movement of Persons within the IGAD Region, which was ratified by member states on June 24, 2021. This Protocol affirms the right of citizens from one member state to enter, reside, move freely, pursue education, engage in employment, and establish businesses in another member state. It addresses various factors that contribute to migration and displacement, such as disasters, climate change, and environmental degradation, and asserts that cross-border movement may occur "in anticipation of, during, or following a disaster." Another significant IGAD instrument is the Protocol on Transhumance, aimed at safeguarding pastoral livelihoods. The Council of Ministers adopted the final version of this Protocol on June 24, 2021. Its objective is to harness the "full social and economic potential" of pastoralism, committing member states to invest in resources and capabilities for transhumance systems while aligning national laws and policies to foster pastoral development. This includes governance, land management, cross-border security, livestock disease control, and the mapping and monitoring of transhumance corridors. The Protocol explicitly recognizes the effects of climate change and weather variability on transhumance, urging member states to facilitate adaptation strategies and ensure "free,

safe, and orderly cross-border mobility of transhumant livestock and herders in search of pasture and water." Furthermore, it acknowledges that transhumant populations frequently lack official identification documents, defining "identification document" as any document that can verify a person's identity, including but not limited to national identification cards, passports, local authority cards, or letters from government-recognized competent authorities

5.3 PROTECTION FRAMEWORKS

a) The 1951 Refugee Convention and the 1967 Protocol on Refugees

All members of IGAD, with the exception of Eritrea, are signatories to the legally binding 1951 Refugee Convention and the 1967 Protocol Relating to the Status of Refugees, which grant international protection to refugees. However, the ability to claim refugee status due to climate change and disaster-related displacement depends on the interpretation of 'persecution' and whether there exists 'a well-founded fear of persecution' in these scenarios. There is no universally recognized definition of 'persecution,' and the UNHCR has yet to successfully establish one. The fear must be deemed 'well-founded,' meaning it should be assessed objectively by others rather than solely based on the individual's subjective experience. In 2000, Chimni posited that the Refugee Convention does not inherently cover individuals fleeing from disasters. The UNHCR Handbook on Procedures and Criteria for Determining Refugee Status and Guidelines on International Protection, updated in 2019, also indicates that fear of persecution excludes those displaced by 'natural disasters' unless a connection can be demonstrated to fear of persecution based on one of the five grounds outlined in the Refugee Convention: race, religion, nationality, political opinion, or membership in a particular social group. Nonetheless, it suggests that a combination of factors, including disasters, could lead to a situation of persecution.

In 2020, the UNHCR released a document titled ‘Legal Considerations Regarding Claims for International Protection Made in the Context of the Adverse Effects of Climate Change and Disasters.’ This document posits that individuals seeking international protection due to the adverse effects of climate change or disasters may possess legitimate claims for refugee status, particularly when examining the current and potential future impacts of these phenomena on human rights. It highlights that marginalized communities are often more susceptible to the repercussions of climate change and disasters, especially in nations where the rule of law is fragile and governments are either unable or unwilling to safeguard their citizens.

The effects of climate change and disasters can worsen existing socioeconomic challenges, leading to instability and violence. For instance, these factors can heighten pre-existing conflicts over resources or generate new disputes that exacerbate social and political tensions. The UNHCR emphasizes the need for thorough analysis to comprehend how climate change and disasters intersect with other variables, including proactive assessments in cases of gradual disasters, to determine their potential impact on human rights and the risk of persecution. Such evaluations would guide preventive measures and involve relevant protection frameworks.

b) Global Compact on Refugees

The Global Compact on Refugees was established in 2018. This resolution embodies a commitment to operationalize the principle of shared responsibility and burden, aiming to engage the international community collectively and stimulate action for better responses to refugee crises. It acknowledges that international collaboration is essential for attaining sustainable solutions for refugees. The Global Compact on Refugees outlines four primary objectives: alleviating the strain on nations hosting

refugees, promoting the self-sufficiency of refugees, increasing access to solutions in third countries, and fostering conditions in countries of origin that allow for safe and dignified returns.

c) The Nansen Initiative

The Nansen Initiative on Disaster-Induced Cross-Border Displacement's Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change (2015) highlights significant deficiencies in the protection of individuals displaced across borders due to disasters. It points out the lack of a dedicated legal framework, designated organizations, and financial resources for addressing cross-border disaster displacement. The initiative advocates for leveraging existing protection mechanisms and fostering enhanced regional collaboration, while also underscoring the critical role of disaster risk reduction and national adaptation strategies in managing human mobility and formulating a holistic response to disaster-related displacement. The Agenda for Protection outlines three key focus areas to alleviate disaster displacement: improving data collection and knowledge; enhancing the application and regional alignment of humanitarian protection measures; and bolstering the management of disaster displacement in the countries of origin. This approach includes the integration of human mobility considerations into disaster risk reduction, climate change adaptation, and development policies, as well as promoting migration and planned relocation as effective strategies to mitigate the impacts of natural hazards and climate change, thereby preventing displacement.

d) Regional Refugee Instrument

The 1969 Convention Governing Specific Aspects of Refugee Problems in Africa, established by the Organization of African Unity (OAU), continues to be applicable under its successor, the African Union, and is legally binding for all member states of IGAD. This convention expands the definition of a refugee to encompass individuals who are "compelled to leave…[their] habitual residence…to seek refuge outside their country of origin or nationality" (AU, 2016). The reasons for such compulsion include "events seriously disrupting public order," which could be interpreted to include displacement caused by the "adverse effects" of climate change and natural disasters. In 2011, Kenya implemented the OAU Refugee Convention by granting refugee status to individuals fleeing the drought in Somalia.

e) Internal Displacement Framework

For individuals who are forcibly displaced within national borders, protective measures are governed by the Guiding Principles on Internal Displacement (1998). Although the Guiding Principles on Internal Displacement is not a legally binding instrument, its tenets are derived from the stipulations found in legally binding treaties related to international human rights law, humanitarian law, and refugee law. It is the primary obligation of national authorities to ensure the protection and provision of humanitarian aid to internally displaced persons (IDPs).

The Internal Displacement Framework's guiding principles assert that individuals who are displaced retain their human rights, encompassing economic, social, cultural, civil, and political rights, as well as the right to receive humanitarian aid. They are entitled to support for a voluntary, dignified, and safe return, as well as for reintegration, local integration, or resettlement. It is the responsibility of authorities to aid in the recovery of lost property and belongings; if recovery is not feasible, they should assist internally displaced persons (IDPs) in securing compensation or reparations. Furthermore, IDPs have the right to seek and obtain asylum in other nations.

The Kampala Convention, formally known as the African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa, was adopted in 2009 and reinforces the commitments outlined in the Guiding Principles on Internal Displacement, particularly for those forcibly displaced due to disasters. As reported by the African Union, as of April 2022, only Djibouti, Ethiopia, Somalia, South Sudan, and Uganda among IGAD members had ratified or acceded to the Kampala Convention. Additionally, the International Conference on the Great Lakes Region, which includes IGAD members Kenya, South Sudan, Sudan, and Uganda, has endorsed the Protocol on the Protection and Assistance to Internally Displaced Persons, establishing a legal framework to ensure that member states adopt and implement the Guiding Principles on Internal Displacement and incorporate them into their national laws.

5.4 Climate Change Adaptation and Disaster Risk Reduction Frameworks

Alongside the tools specifically created to safeguard migrants and displaced individuals in need, numerous international and regional agreements and frameworks concerning disaster risk reduction and climate change adaptation acknowledge the requirements of populations compelled or opting to relocate due to climate change and disasters. Disaster Risk Reduction (DRR) seeks to mitigate all types of disaster risks, including those associated with displacement caused by disasters. In circumstances where displacement cannot be avoided, it is essential to implement long-term DRR strategies to meet the needs of those affected by disaster-related displacement.

a) The United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992, and since the 13th Conference of the Parties (COP13), there has been a growing acknowledgment among parties of the connections between human mobility and climate change. The Cancun Adaptation Framework, introduced at COP16 in 2010, urged the implementation of "measures to enhance understanding, coordination, and cooperation regarding climate change-induced displacement, migration, and planned relocation, as appropriate, at national, regional, and international levels" (UN, 2010). Under this framework, UNFCCC parties are encouraged to formulate a national adaptation plan aimed at reducing the effects of natural hazards. This plan should be tailored to specific contexts and incorporate strategies to prevent displacement, prepare for organized evacuations, and support voluntary migration. Additionally, a national adaptation plan should focus on building resilience and creating long-term migration strategies, including labor migration programs and the facilitation of remittances and support for diaspora communities. It is the primary responsibility of states to ensure the protection of individuals residing in disaster-prone areas and those displaced by natural hazards and climate change impacts.

b) The Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction (2015) is a 15-year voluntary, non-binding agreement which establishes a direct connection between disasters, climate change, and displacement. It advocates for preparedness, response, and recovery efforts at transnational, national, and local levels, with a particular emphasis on supporting individuals displaced by disasters. The recognition of

displacement within the context of disaster risk reduction (DRR) is considered a significant policy advancement, fostering a comprehensive approach to addressing disaster-induced displacement that involves various stakeholders. The United Nations Office for Disaster Risk Reduction (UNDRR) highlights that "forced displacement is one of the most prevalent and immediate consequences of disasters," placing those who leave their homes at risk both in the short term and potentially in the long term, especially if their displacement is prolonged or if their vulnerabilities are intensified by the effects of disasters.

The Programme of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa (2017) aligns with the Africa Regional Strategy for Disaster Risk Reduction. It acknowledges migration as a contributing factor to risk and emphasizes the necessity of addressing "disasters and other risk drivers, including poverty, public health, climate change and variability, poorly managed urbanization, conflict and migration, [and] environmental degradation, in a coordinated manner." UNDRR advocates for the integration of measures into international, regional, and national disaster risk reduction strategies to avert displacement and safeguard those who have already been displaced, while also offering practical guidance for effective DRR planning.

c) DRR and Climate Change Adaptation policies and strategies

One of the key goals of establishing IGAD was to address the factors contributing to displacement by collectively safeguarding the environment and responding to both natural and human-induced disasters. Consequently, all IGAD member states are signatories to the UNFCCC and concur that policies and strategies for disaster risk reduction (DRR) and climate change adaptation should be formulated to alleviate displacement and offer protection in instances where it occurs. Notable IGAD strategies include:

- The IGAD Climate Prediction and Applications Centre (ICPAC) Strategic Plan (2016) advocates for a comprehensive approach to addressing climate change and disasters, although it does not specifically mention displacement or migration. ICPAC is expected to create displacement risk maps utilizing disaster and climate forecasts.

- The IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) launched in 2019 seeks to enhance resilience against recurring droughts and support sustainable development. This initiative encompasses the strategic objective of promoting safe, orderly, and regular migration, while also advocating for migration as a strategy for adaptation to mitigate the impacts of climate change and weather variability, including migration as a means of diversifying household income.

- The IGAD Regional Climate Change Strategy and Action Plan (2023–2030) acknowledges that the IGAD region is among the conflict-prone areas in Africa, where ongoing conflicts are often tied to the scarcity and competition for natural resources. Climate change is anticipated to act as a threat multiplier, worsening the existing challenges and dangers. The reduction in resource availability due to regional climate change impacts—such as drought and desertification—intensifies competition for these resources. This situation can lead to instability, displacement, migration, the escalation of current conflicts, and pose risks to global security. Consequently, the IGAD strategy prioritizes Security and Displacement, aiming to promote the alignment of regional immigration policies to mitigate vulnerability to extreme climate events. Additionally,

it includes a strategic initiative to establish regional guidelines for emergency evacuation plans in response to severe climate change occurrences.

- The IGAD Regional Strategy for Disaster Risk Management (2019–2030) is designed to align with the Sendai Framework, which emphasizes the necessity of incorporating displacement into disaster risk reduction (DRR) strategies, as well as the African Union Programme of Action, which also references the Sendai Framework. This regional strategy seeks to mitigate the effects of disasters on communities, minimize displacement, and facilitate recovery efforts aimed at achieving a 'build back better' approach. The strategy recognizes that anecdotal evidence indicates that vulnerabilities to disasters are heightened by factors such as gender disparities, age, and disability. However, the absence of disaggregated data hampers the ability to analyze the impact on various socioeconomic and demographic groups, thereby restricting the formulation of effective policies to address these inequalities.

5.5 Development-Related Frameworks

The United Nations 2030 Agenda for Sustainable Development offers various avenues for protective measures through prevention, adaptation, awareness-raising, and migration management, with the overarching commitment to 'leave no one behind' serving as the transformative core of the Agenda and its Sustainable Development Goals (SDGs).

The SDGs consist of 160 targets, eight of which pertain to climate change and international migration. These targets can be grouped into four distinct categories.

The first category includes targets 13.1, 13.2, and 13.3, which focus on climate change. Sustainable Development Goal 13 emphasizes the need for urgent action to address climate change and its effects. The specific targets relevant to human mobility under SDG 13 are: Target 13.1, which aims to enhance resilience and adaptive capacity to climate-related hazards and natural disasters across all nations; Target 13.2, which seeks to incorporate climate change considerations into national policies, strategies, and planning; and Target 13.3, which focuses on improving education, raising awareness, and building human and institutional capacity for climate change mitigation, adaptation, impact reduction, and early warning systems.

The second category encompasses targets 8.8, 10.7, and 17.18, which are related to migration governance. Target 10.7 is designed to facilitate orderly, safe, and responsible migration and mobility of individuals through the implementation of well-planned and managed migration policies. Target 8.8 recognizes the rights and protections afforded to migrant workers. Lastly, Target 17.16 aims to enhance data-driven and informed migration governance by advocating for increased capacity in developing countries to provide disaggregated data, including information on migration status.

The third set of Sustainable Development Goal (SDG) targets, specifically 10.c and 4.b, focuses on the intersection of migration and development. This set acknowledges the beneficial role that migrants play in fostering inclusive growth and sustainable development. Target 10.c mandates that the global community work towards reducing the costs associated with migrant remittances to below 3 percent by the year 2030. Additionally, target 4.b highlights the advantages of 'brain gain' and the accumulation of

human capital resulting from migration, advocating for a significant increase in scholarship opportunities for migrants from developing nations to pursue higher education in both developed and other developing countries.

The fourth set, which includes targets 5.2, 8.7, and 16.2, addresses the issue of human trafficking. Target 5.2 urges member states to eradicate all forms of violence against women and girls, encompassing trafficking and various forms of exploitation. Target 8.7 calls for prompt and effective actions to eliminate forced labor, modern slavery, and human trafficking, as well as to ensure the prohibition and eradication of child labor.

The 2000 Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, aims to prevent and combat human trafficking, protect and assist victims—particularly women and children—prosecute offenders, and foster cooperation among States Parties. As of October 2019, this Protocol had been ratified by 174 Member States. Similarly, the 2000 Protocol against the Smuggling of Migrants by Land, Sea, and Air, ratified by 148 Member States, seeks to address and prevent the smuggling of "human cargo." It also emphasizes that migration itself is not a criminal act and that migrants may be victims deserving of protection. Table 5.1 presents the current status of ratification for the Migrant Smuggling and Trafficking protocols.

Table 5. 1: State of Ratification of Protocols on Migrant Smuggling and Trafficking in Persons among Member Countries in IGAD

Country	Migrant Smuggling ratification year	Trafficking in Persons Ratification Year
Djibouti	2005	2005
Eritrea	Not Yet	2014
Ethiopia	2012	2012
Kenya	2005	2005
Somalia	Not Yet	Not Yet
South Sudan	Not Yet	Not Yet
Sudan	2018	2014

Source: IGAD (IGAD Migration Statistics Report) 2021

Although most countries in the IGAD have ratified both protocols, Somalia and South Sudan did not ratify both protocols.

PART TWO - THE CLIMATE MIGRATION CRISIS IN THE HORN OF AFRICA AND THE EUROPEAN UNION'S RESPONSE TO CLIMATE-INDUCED MIGRATION: PERSPECTIVES ON POLICY AND EDUCATION

CHAPTER SIX – REVIEW OF EUROPEAN UNION CLIMATE CHANGE MIGRATION POLICY

6.1 EU Research on the Climate–Migration Nexus and the Educational Dimension

In recent years, the European Union has developed a growing body of research on the nexus between climate change and migration, with particular attention to Sub-Saharan Africa. Among the most prominent initiatives is the **CLICIM** project, coordinated by the European Commission's **Joint Research Centre (JRC)**. The project aims to develop predictive tools by integrating climate, demographic, and social data to analyse climate-related mobility, with a specific focus on highly vulnerable regions such as the Sahel and Ethiopia (JRC, 2023).

At the same time, numerous academic contributions and policy briefs have explored how EU institutions are progressively incorporating this issue into their strategies, despite the absence of a consolidated legal framework. One of the recurring challenges is the difficulty of clearly distinguishing environmental drivers from broader socio-economic causes of migration, which complicates the legal recognition of the so-called "climate migrant" (Legut, 2021).

Within this context, **education** is emerging as a strategic lever to raise public awareness and support more integrated approaches. As part of the CLICIM project, the JRC has highlighted the pedagogical value of territorial data and climate scenarios as teaching tools in schools. Other policy papers, such as the one published by the **Egmont Institute** (2024), stress the urgency of embedding the topic in European educational agendas, promoting evidence-based, interdisciplinary approaches closely linked to human rights and sustainable mobility.

European research increasingly recognises the importance of promoting climate and migration education in schools—education that fosters awareness, ecological literacy, and global citizenship.

6.2 EU Legal, Policy and Educational Frameworks on Climate-Induced Migration

Despite growing institutional awareness, the European Union still lacks a recognised legal framework for the protection of individuals displaced by climate-related factors. The **New Pact on Migration and Asylum** (2020) acknowledges climate change as a factor influencing human mobility, but it does not establish any specific legal status or dedicated protection mechanisms for those affected by environmental degradation. Current EU legislation remains anchored to the **1951 Geneva Convention**, which does not consider climate change a valid ground for international protection. Although some Member States have introduced ad hoc instruments—such as humanitarian visas or temporary protection—there is no harmonised EU-level approach, leading to legal uncertainty and unequal access to protection across the Union.

In 2022, the European Commission published a **Staff Working Document** on "displacement and migration related to disasters, climate change and environmental degradation," recognising the need to

strengthen synergies between climate adaptation, resilience, and migration management. However, as noted by the **Egmont Institute** (Scodanibbio, 2024), progress remains partial and incoherent. The dominant narrative still frames climate-induced migration through a **security or development lens**, rather than as a human rights issue. Egmont calls for a **paradigm shift** towards a human security approach and climate justice, advocating for the creation of safe and legal migration pathways, specific legal instruments, and acknowledgment of Europe's historical responsibility for emissions and global inequality.

Alongside legal and policy frameworks, the **educational dimension** is gaining importance as a systemic response to the climate–migration nexus. The EU promotes **Education for Sustainable Development (ESD)** and has integrated green competencies into its European Education Area strategy. However, data from the **Education and Training Monitor 2024** shows that only 42% of young people have had substantial opportunities to learn about sustainability in school, and teachers consistently report a lack of time and resources.

Although key policy texts—such as the Green Deal and the New Pact—do not explicitly address the inclusion of climate migration in school curricula, there is **growing interest in connecting education on climate change, mobility, and global citizenship**. Initiatives like **Erasmus+** support cross-border cooperation between schools on inclusive and climate-related topics. At the same time, international actors such as the **Egmont Institute** and various research networks stress the need to empower schools and educators with evidence-based, interdisciplinary approaches that promote awareness, critical thinking, and civic responsibility.

In this context, education is increasingly recognised as a strategic tool to build resilience and social cohesion in the face of climate-induced mobility. A stronger integration of **climate and migration education** into European teaching systems would help translate abstract policy principles into concrete learning experiences, fostering solidarity, justice, and preparedness among younger generations.

6.3 EU Funding, External Cooperation and Educational Programmes on Climate and Migration

The European Union's response to climate-induced migration is strongly reflected in its **external cooperation instruments and funding programmes**, but also increasingly in its support for **educational initiatives** that link climate resilience and global mobility.

At the macro level, the EU's main financial instrument is **NDICI – Global Europe**, which funds development, climate adaptation, and resilience projects in partner countries, including in the **Horn of Africa**. Programmes such as the **Global Climate Change Alliance Plus (GCCA+)** offer targeted support for climate adaptation in highly vulnerable contexts, notably in Ethiopia, Sudan, and Uganda. Similarly, the **EU Emergency Trust Fund for Africa (EUTF)** has allocated hundreds of millions of euros to address the root causes of migration, including environmental degradation. However, a strategic audit by the **European Court of Auditors** (2024) pointed out significant weaknesses in transparency, impact monitoring, and the coherence between climate and migration-related objectives. In parallel, the EU is investing in **climate-resilient education programmes** both within and beyond its borders. The **European Investment Bank**, in cooperation with **UNICEF**, has supported school projects that combine sustainable infrastructure with climate-related teaching. The **Eco-Schools** initiative,

backed by the European Commission and the Foundation for Environmental Education (FEE), engages over 51.000 schools across Europe in voluntary environmental education, many of which already include climate migration as a transversal theme under global sustainability education.

Innovative projects such as TIES (Teaching Immigration in European Schools) have developed multilingual teaching modules (in English, French, Italian, etc.) that integrate academic knowledge on migration and climate change into school subjects such as history, geography, law, and literature. While not exclusively focused on the Horn of Africa, these resources can be adapted to include climate-related case studies from the countries participating in the IMPACT project.

Likewise, the **European Climate Initiative (EUKI)** supports cross-border education projects between schools, NGOs, and local authorities, with a focus on environmental awareness and human mobility. These initiatives demonstrate that there is already a **European pedagogical foundation for connecting climate and migration education**, one that could be further expanded and strategically managed. Additionally, **Erasmus+** plays a key role in facilitating cooperation between schools and civil society actors across Europe. It funds projects that combine climate and migration dimensions, fostering the exchange of good practices and participatory learning models.

Taken together, these funding mechanisms and educational initiatives illustrate how the EU is gradually building an integrated approach to the climate–migration nexus. However, the **link between external cooperation and internal EU policy on asylum, protection, and inclusion** remains weak—highlighting the need for a more coherent, cross-sectoral strategy that aligns global action with local educational implementation.

6.4 Critiques, Recommendations, and Future Perspectives

Within the European debate, increasingly strong critical voices have emerged concerning the way EU institutions address the nexus between climate change and migration. Prominent think tanks such as the **Egmont Institute** (Scodanibbio, 2024) have highlighted that, despite formal recognition of the issue, EU policies remain largely shaped by **security and containment logic**, rather than by a framework rooted in **human rights protection and international solidarity**.

Egmont's *Policy Brief No. 347* draws particular attention to the **absence of clear legal instruments** to protect individuals displaced by extreme climate events or gradual environmental degradation. It calls for a genuine **paradigm shift**—moving away from securitised approaches toward a **climate justice perspective**, grounded in Europe's historical responsibility and the integration of human rights into all climate and migration policies.

International organisations such as **WWF** and the **Global Compact on Refugees** have similarly advocated for the **formal recognition of "climate refugee" status**, alongside the establishment of **safe and legal migration pathways** for those affected by environmental crises. These proposals converge in urging the EU to assume a **global leadership role** that aligns with its foundational values.

In parallel, academic and policy-oriented institutions have drawn attention to the **untapped potential of education** in bridging the gap between public awareness and effective policymaking on climate-induced migration. The **European Federation of Academies of Sciences and Humanities (ALLEA)**,

for example, has called for stronger **teacher training**, improved access to resources, and the integration of **climate and migration narratives into interdisciplinary curricula**. The **Egmont Institute** likewise stresses that global citizenship and education remain **missing components** in the current European approach, both in policy and in practice.

Recent analyses suggest that the EU needs a **comprehensive strategy that recognises the role of schools as laboratories of climate resilience and mobility awareness**, capable of fostering critical thinking, civic responsibility, and long-term preparedness among students. This educational perspective underscores the strategic relevance of projects like **IMPACT**, whose outputs address these gaps by promoting climate–migration education at the school level through cross-national cooperation and context-sensitive teaching tools.

In this context, many actors recommend that **climate-induced migration be fully integrated into the next EU legislative cycle**, explicitly linked to the priorities outlined in the **European Green Deal**, EU climate diplomacy, and broader strategies for a **just and inclusive transition**—in which **education and youth engagement** must play a central role.

CHAPTER SEVEN: AWARENESS AND COMMUNICATION ABOUT CLIMATE CHANGE AND MIGRATION IN THE EU: A FOCUS ON BELGIUM, GREECE, ITALY AND SPAIN

7.1 Introduction

A survey was carried out in four European nations – Belgium, Spain, Greece and Italy - to gauge the awareness and communication surrounding climate-induced migration. This survey specifically targeted youth perceptions of climate change-related migration within selected schools in these countries, aiming to evaluate their understanding and views on the subject. The result from the survey is summarized as follows.

7.2 Sample selection

A sample of students was selected from various schools across four European countries: Belgium, Spain, Greece, and Italy. The table below summarizes the student sample by country. A questionnaire was designed to gather data and was administered online. Data was collected from a total of 617 students. However, two participants – one from Greece and another from Italy – were excluded due to their reported ages of 45 and 69, which exceeded the age limit for youth.

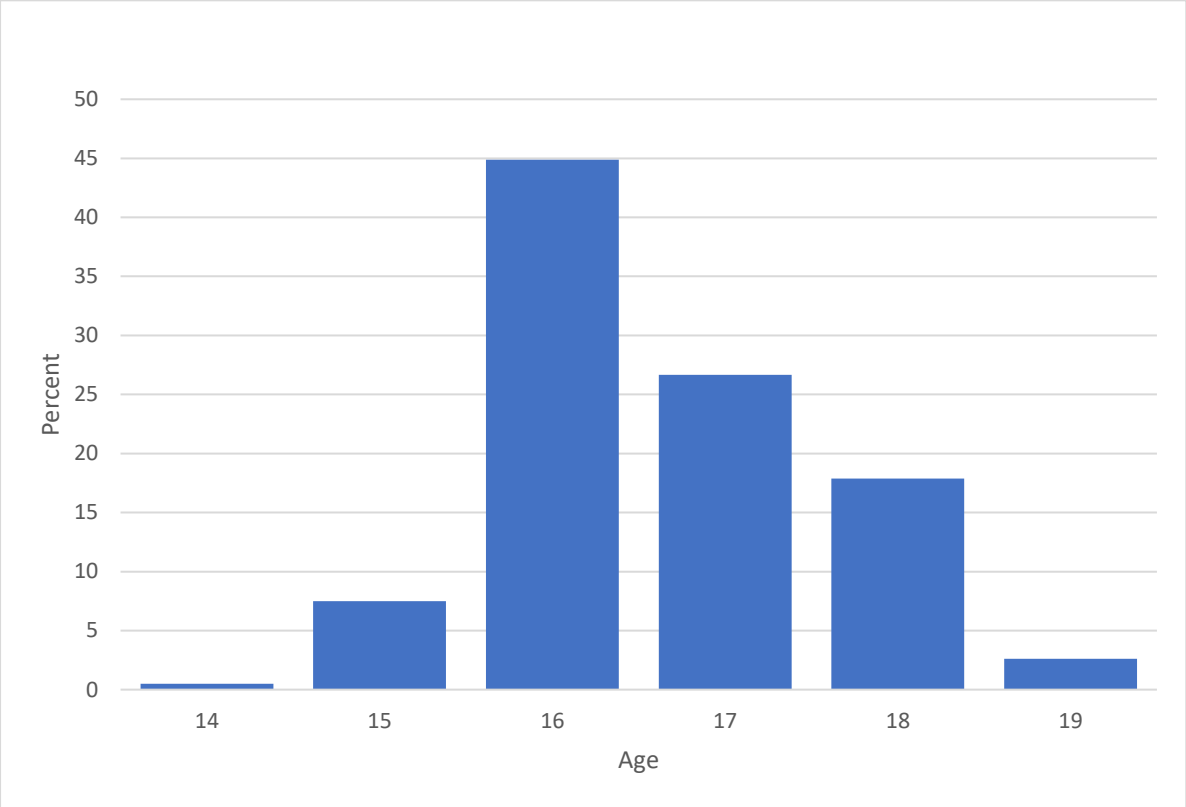
Table 6.1: Sample distribution by country

Country	**Sample size**	**Gender distribution (%)**		
		Female	**Male**	**Other**
Belgium	80	49	49	2
Greece	126	29	70	1
Italy	302	37	62	1
Spain	106	56	41	3
Total	**615**	**41**	**58**	**1**

In terms of gender distribution, there are male respondents than female with a proportion of 58 percent for female, 41 percent for male and the remaining 1 percent for other. However, there are some differences in gender distribution of the sample across countries. While male respondents exceed the size of female respondents in Greece and Italy, the opposite is true in Spain with female constituting 56 percent of the sample. In Belgium the proportion of sample distribution by gender is similar.

Regarding the age distribution of the respondents, since the survey primarily focuses on the youth within educational institutions, the ages range from 14 to 19, with the majority of respondents being 16 years old.

Figure 7.1: Age distribution



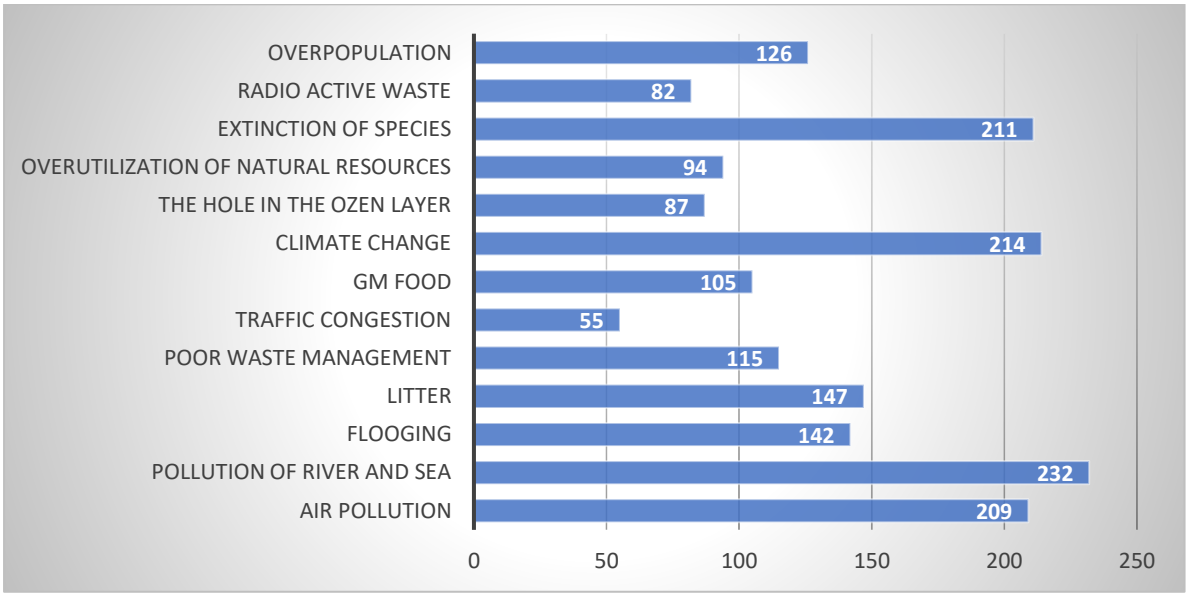
7.3 Results and discussion

7.3.1 Awareness about climate change

Researchers have highlighted that climate change awareness raising is a crucial early step in climate adaptation, paving the way to managing its impacts and reducing vulnerability. Understanding the risks to human health and lives, property and well-being means people, communities and authorities are better prepared to cope with and respond to new threats. While awareness of climate risks and action to reduce them have increased globally, progress is uneven, says the Intergovernmental Panel on Climate Change (IPCC). It is thus important to understand the level of awareness among the youth. For this, we asked about four questions to understand the attitude of the youth towards climate change.

First respondents were given a list of environmental issues from which they select three issues that concern them the most. The result is summarized below.

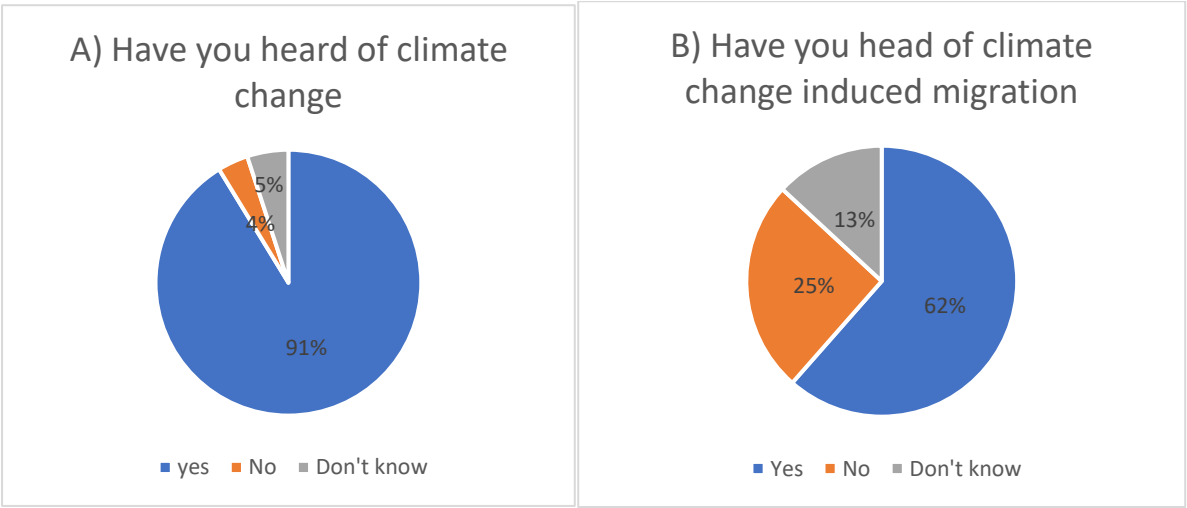
Figure 7.2: Response on Environmental Issues



The results show that students are highly aware of environmental issues, particularly pollution of river and sea, climate change, extinction of species and air pollution. Their concerns span both immediate local issues and broader global challenges, which provides a strong foundation for environmental education efforts that can focus on practical and actionable solutions.

Moreover, respondents were asked if they have heard of climate change and climate change induced migration. The responses are summarized below.

Figure 7.3: Knowledge on climate change and climate change induced migration



Panel A provides a summary of the responses regarding climate change. A significant majority of respondents (91%) indicated that they are aware of climate change, which is a favorable sign of overall awareness. Conversely, only 9% of respondents reported that they have either not heard of climate change or are uncertain about it. This indicates that, although most students are informed about climate

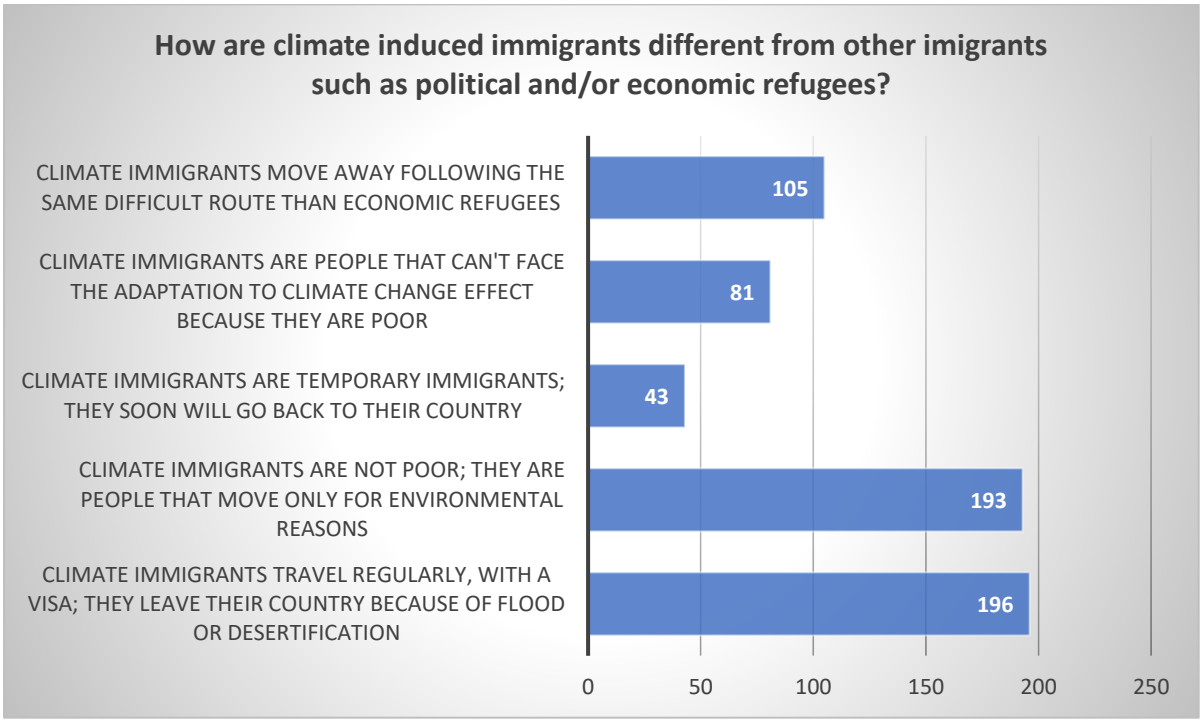
change, there exists a small yet notable group that either lacks knowledge or is unsure. These individuals may represent a potential target for initiatives aimed at increasing awareness.

Panel B summarizes the responses concerning climate change induced migration. In contrast to the awareness level regarding climate change, the percentage of respondents familiar with climate change induced migration is lower. Only 62% of respondents have heard of climate change induced migration. The remaining 38% have either not heard of it or are uncertain. This highlights the necessity for focused educational programs to enhance awareness about migration resulting from climate change.

Additionally, an open-ended question was posed to participants concerning their knowledge of climate change. The responses were diverse, with the majority of students demonstrating a fundamental understanding of the topic. The most frequently mentioned aspects included global warming, the melting of ice caps, and alterations in weather patterns, alongside a notable lack of knowledge that indicates a significant gap in understanding climate change. Many students either reported having no knowledge or only a rudimentary grasp of the subject. This underscores the necessity for more focused and comprehensive educational programs aimed at enhancing students' understanding of this critical issue.

Finally, respondents were asked how climate induced immigrants are different from other immigrants such as political and/or economic refugees. Five options were given to respondents from which they choose one. The result is summarized below

Figure 7.4: Are climate induced immigrants different from other types of immigrants



The majority of respondents, approximately 196 individuals (32%), hold the belief that climate migrants frequently travel with a VISA. The primary reason for these migrants leaving their home countries is due to flooding or desertification. In a similar vein, nearly an equal number of respondents (193 individuals or 31%) assert that climate migrants are not impoverished; they relocate solely for

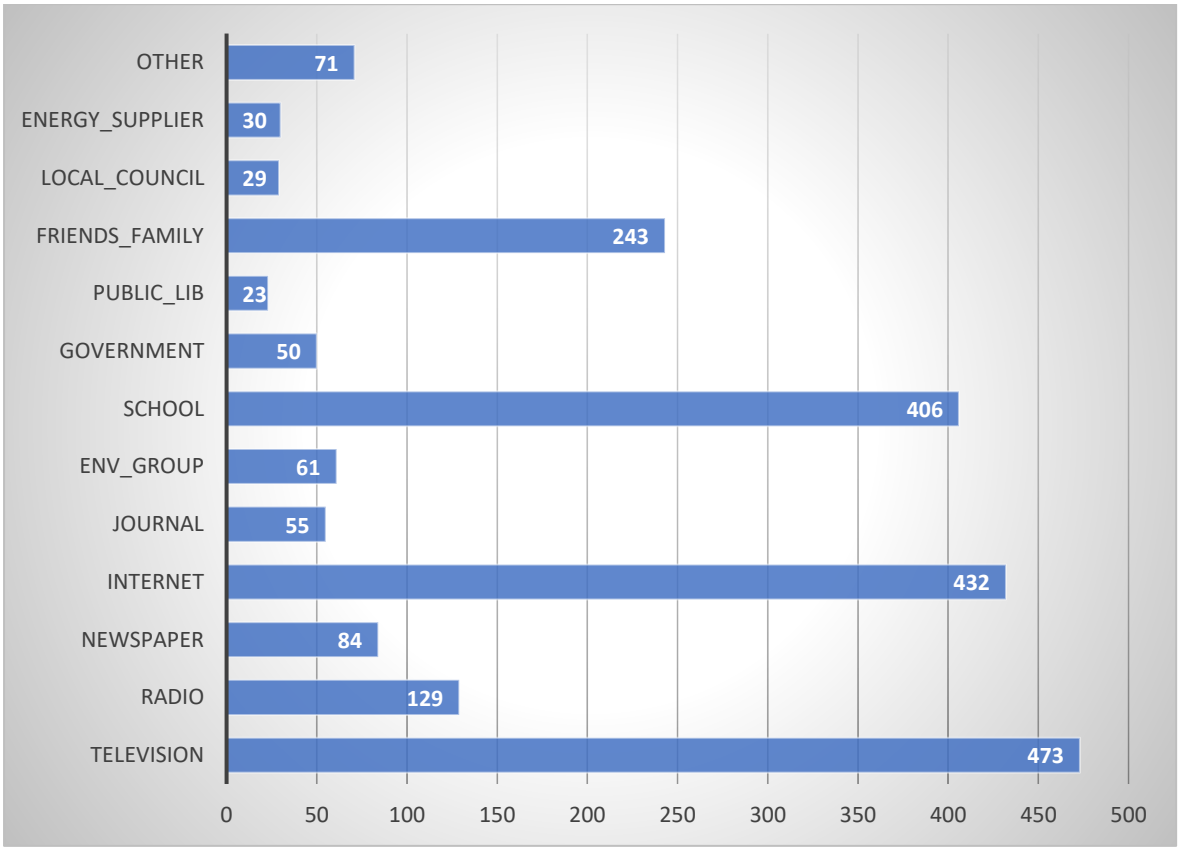
environmental reasons. The next perspective, which garnered support from 105 respondents or 17% of the total, is that climate migrants undertake more challenging journeys compared to economic refugees. Only 81 and 43 respondents, representing 13% and 7% of the total respectively, believe that climate migrants are impoverished individuals unable to adapt to climate change, and that these migrants often return to their home countries once the adverse climate conditions that prompted their migration have subsided.

In summary, the students exhibited a combination of accurate perceptions and misconceptions, with some demonstrating confusion regarding the socioeconomic circumstances of climate migrants and the nature of their migration. This overview highlights the varying degrees of understanding among students concerning climate-induced migration and indicates areas where additional education is necessary.

7.3.2 Source of Information regarding climate change and the degree of trust

Respondents were asked where they have heard about climate change, i.e. their source of information. The graph below summarizes the result.

Figure 7.5: Source of information about climate change



The graph illustrates that students primarily obtain information about climate change from television and the internet, followed closely by schools. Friends and family contribute to this knowledge, albeit to a lesser degree. Less frequently mentioned sources are public libraries, local councils, and energy

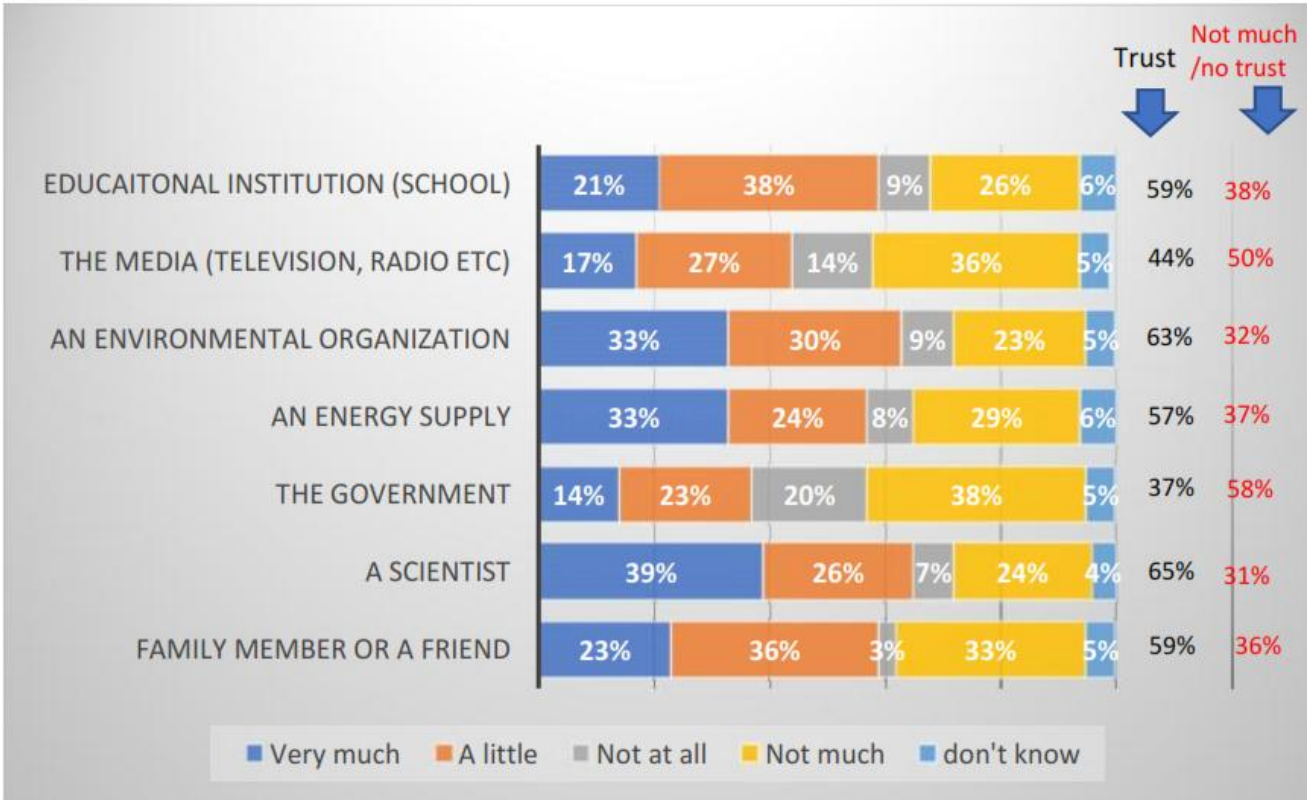
suppliers, which indicates that students predominantly depend on mainstream media and formal education for their understanding of climate change, while specialized sources have a more restricted influence. This implies that both digital and traditional media, in conjunction with educational institutions, serve as essential avenues for enhancing awareness among students.

7.3.3 Trust on information sources about climate change

Respondents were asked whether they trust the different information sources on climate change. Results are summarized in the figure 6.4 below.

Combining the responses of 'very much' and 'a little' into a single category labeled 'trust', and merging 'not at all' and 'not much' into another category termed 'not much/no trust', the trust responses are illustrated in figure 6.4. The findings reveal that scientists are regarded as the most reliable source of information, with 65% of respondents identifying information from scientists as trustworthy. This is closely followed by environmental organizations at 63%, educational organizations, and family and friends, each of which is considered a trusted source of information by 59% of respondents. In contrast, government agencies and the media are viewed as the least credible, with 58% and 50% of respondents, respectively, indicating that they do not trust these sources of information.

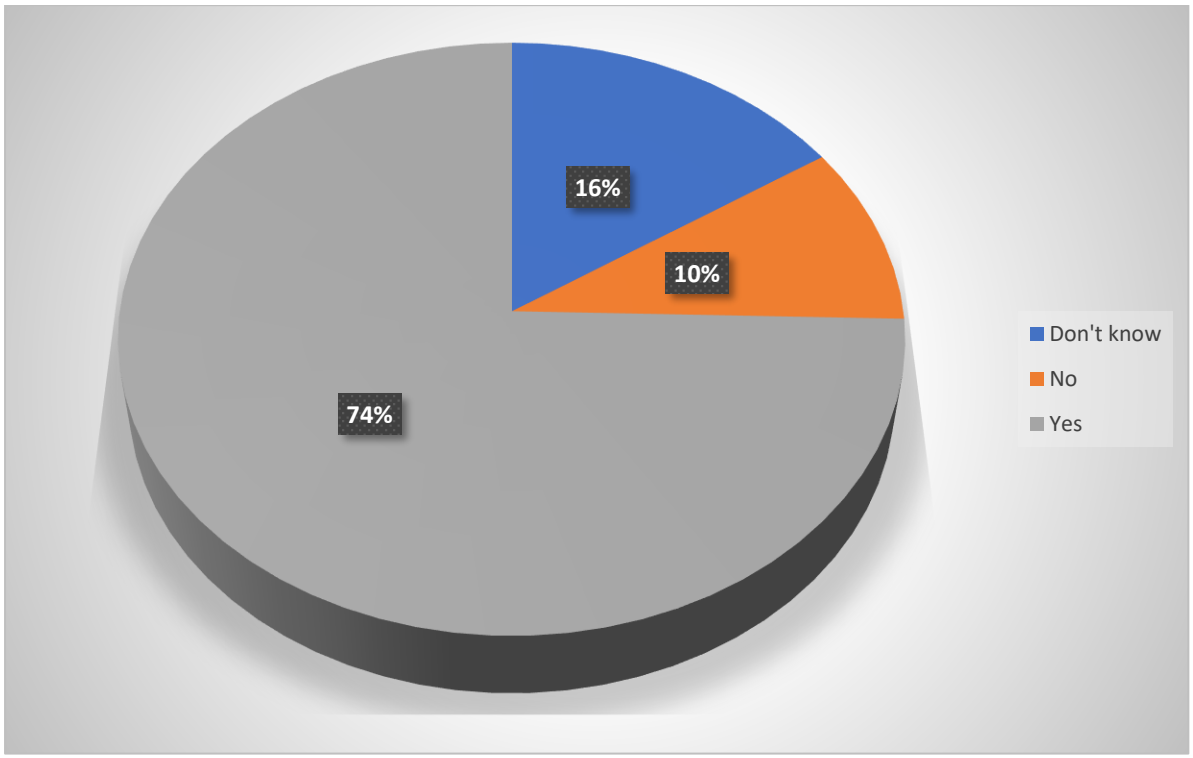
Figure 7.6: Trust about information on climate changes



7.3.4 Actions to address climate change

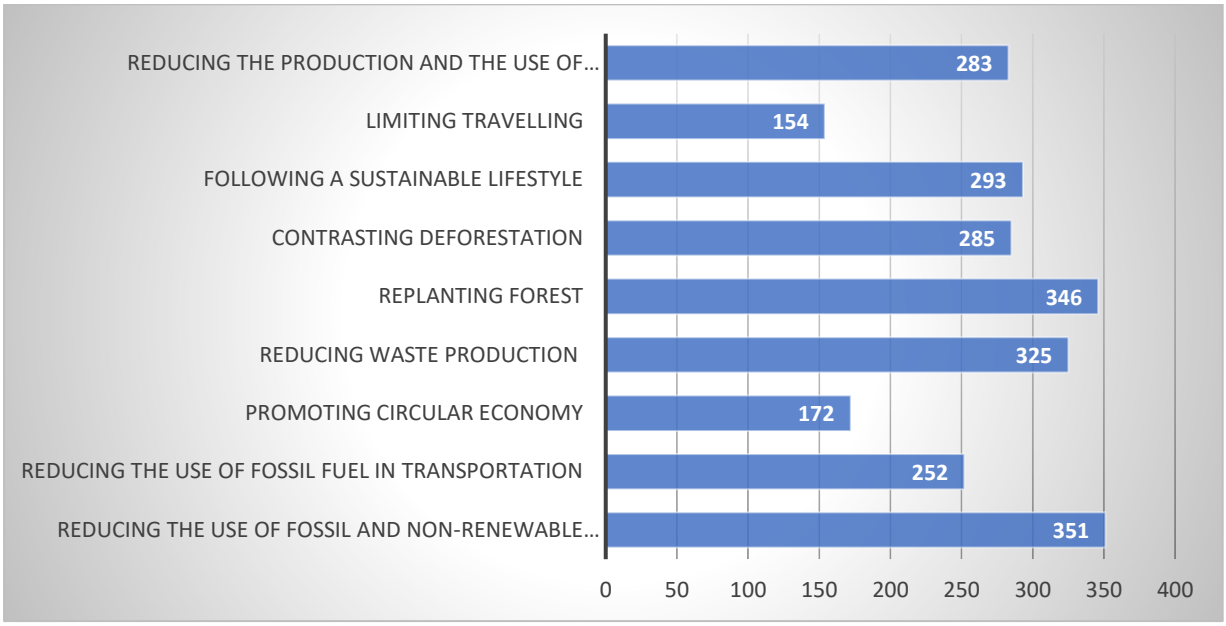
Participants were inquired whether it is feasible to take action against climate change. The summary of their responses is presented below. A significant majority of respondents, approximately 74%, are of the opinion that actions can be taken to address climate change, suggesting that a large portion of the youth is convinced that the impacts of climate change can be mitigated. Conversely, a minor segment of the students either holds the belief that no actions can be taken to combat climate change (10%) or were uncertain about potential solutions (16%). This reflects a general openness to climate action but also highlights the need for further education to address doubts and empower students with knowledge about viable climate change mitigation strategies.

Figure 7.7: Can anything be done to tackle climate change?



Furthermore, respondents were asked the actions that need to be taken to tackle the effect of climate change. The result is summarized below.

Figure 7.8: Ways of addressing climate change

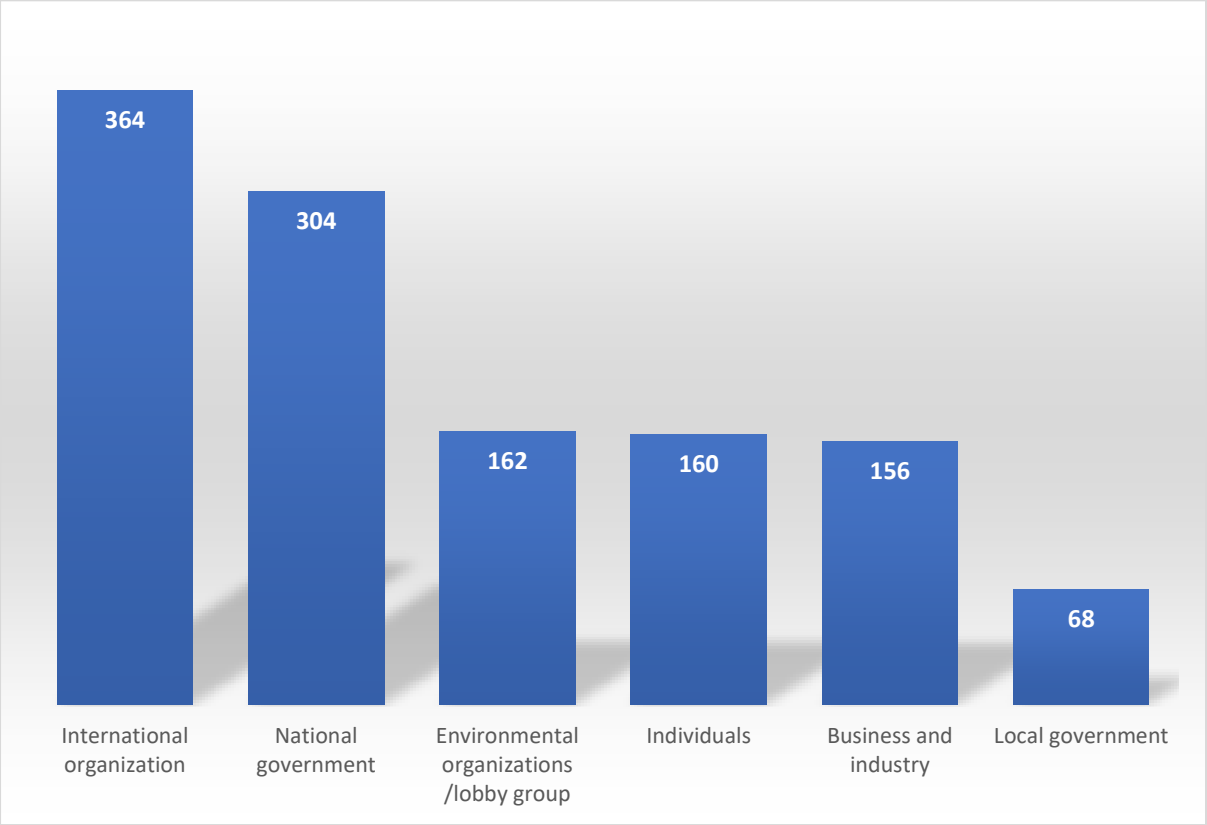


The findings indicate that students perceive a blend of extensive initiatives and personal accountability as essential for addressing climate change. The actions most commonly recommended included minimizing the consumption of fossil fuels and non-renewable energy, engaging in reforestation, and reducing waste. This suggests that students place a high value on clean or renewable energy, nature-based strategies, and sustainable waste management practices. Additionally, many students underscored the importance of adopting a sustainable lifestyle, reflecting their awareness of the significant role individual actions play in climate mitigation. The emphasis on forest conservation, the reduction of single-use products, and the decreased reliance on fossil fuels for transportation further underscores students' recognition of the consequences of deforestation and the need for sustainable economic frameworks. In summary, students demonstrate robust support for both global and local approaches to combat climate change.

Furthermore, the respondents were also asked about whose responsibility is to address effects of climate change. The result is summarized below:

The data presented shows that students perceive the primary obligation for addressing climate change to rest with international organizations and national governments, which received response levels of 364 and 304, respectively. This reflects a strong consensus that significant, coordinated efforts are essential to tackle the issue. Additionally, environmental organizations, businesses, and individuals are recognized as crucial contributors to climate action, demonstrating students' understanding of the importance of advocacy groups and the responsibilities of corporations and individuals. A smaller number of students referenced local governments (68 mentions), indicating that although local initiatives are valuable, larger entities are regarded as having the most substantial impact in the fight against climate change.

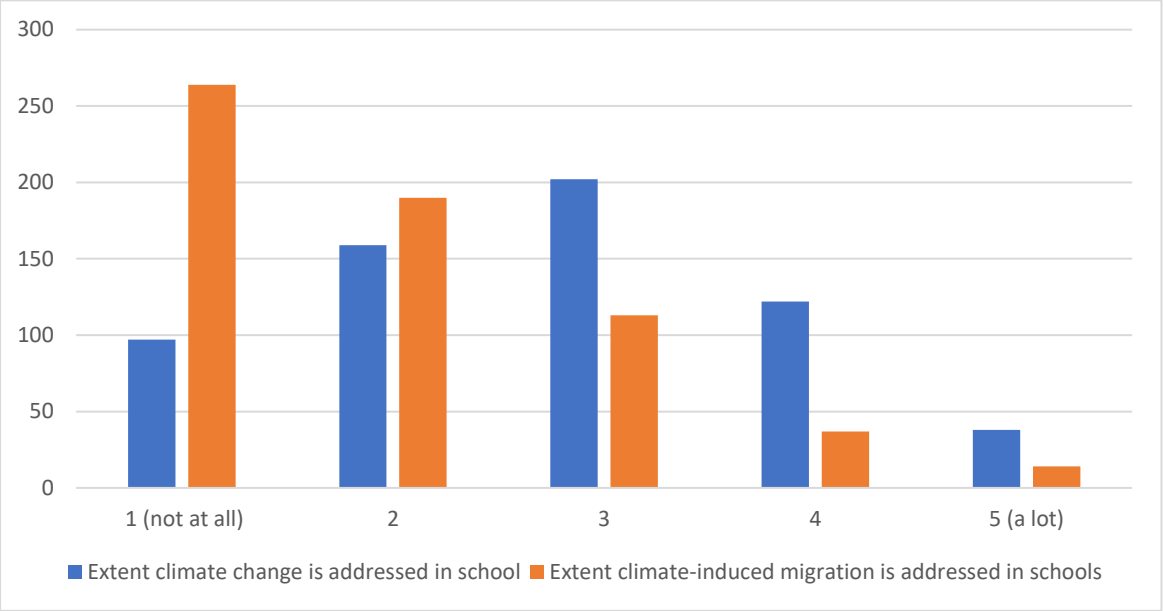
Figure 7,9: Responsibility to address effects of climate change



7.3.5 Climate change issue and schools

The students from various schools were asked about the degree to which climate change issues and climate-induced migration are addressed in their respective institutions. They were provided with options ranging from 1 to 5, where 1 signifies 'not at all' and 5 indicates 'a lot'. The results are summarized below.

Figure 7.10: Extent to which climate change and climate-induced migration were addressed in school



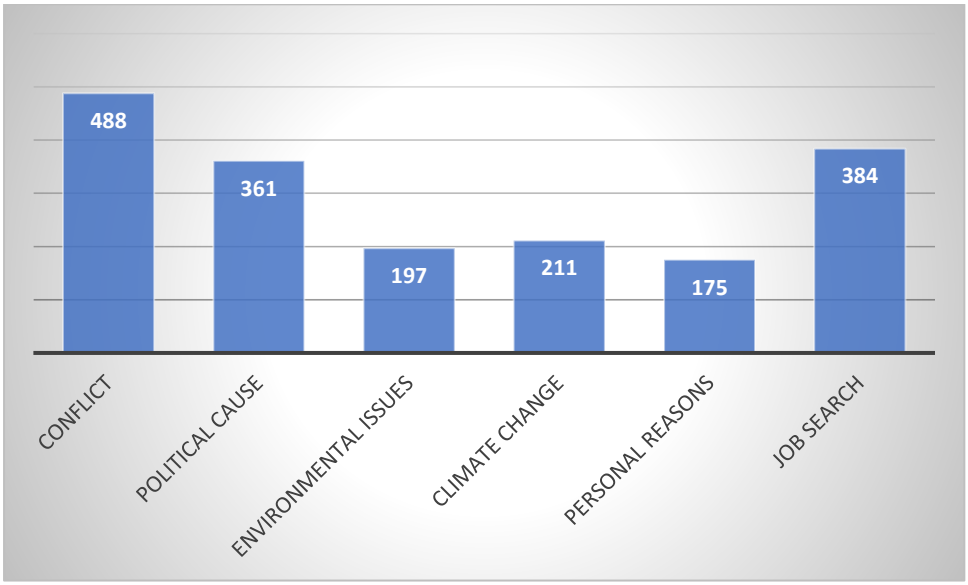
The figure presented above illustrates the degree to which climate change and climate-induced migration are addressed in educational institutions. It reveals a significant disparity between the two topics. Although the number of students who reported that climate change issues are discussed at both extreme ends of the scale (1 and 5) is minimal, a considerable number of students indicated that climate change is addressed to a moderate extent in schools, particularly within the range of 2 to 4, with a notable concentration at the value of 3. The majority of students asserted that climate change is moderately raised in their respective educational settings.

Conversely, the response regarding the treatment of climate-induced migration in schools yields a different outcome. The number of students who responded positively decreases sharply as the scale progresses from 1 (not at all) to 5 (a lot). Most students perceive that climate-induced migration is not addressed at all in their schools, followed by a response of 2, and so forth. This suggests that climate-induced migration remains largely unrecognized in educational contexts, leading to the conclusion that not only climate change issues but also those related to climate-induced migration require significant attention in schools.

7.3.6 Migration

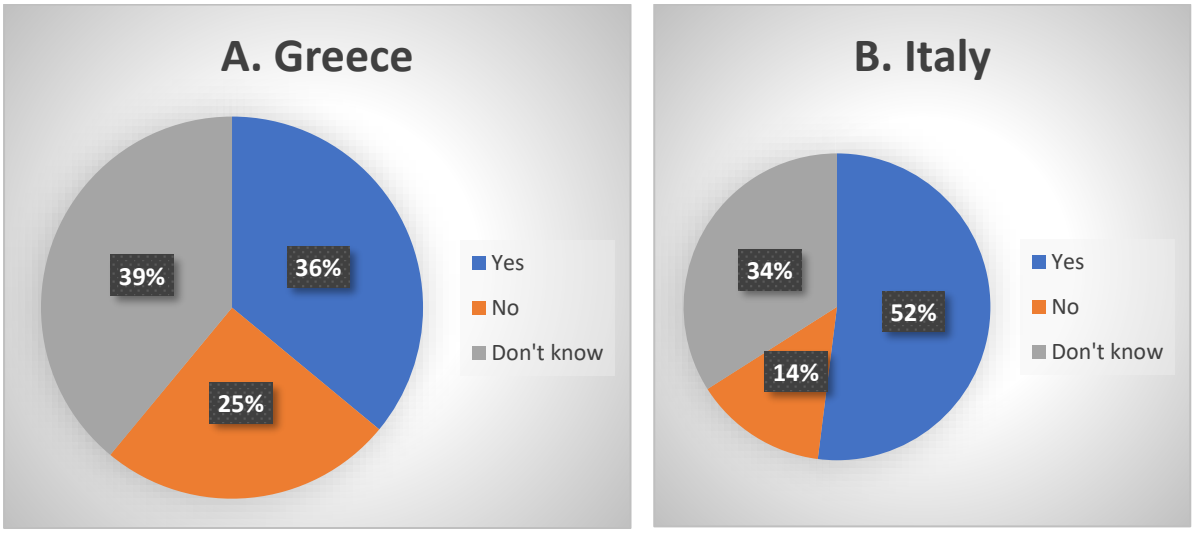
Students were surveyed regarding migration, specifically focusing on its causes. The table below summarizes the students' responses. The graph indicates that students predominantly identify Conflict (488 mentions), Job search (384 mentions), and political causes (361 mentions) as the primary reasons for migration. Personal reasons were identified as the least significant cause, with 175 respondents acknowledging it. Additionally, Climate change (211 mentions) and environmental issues (197 mentions) are also recognized as important factors. Although climate change and environmental issues were cited less frequently, they demonstrate an increasing awareness of the influence of environmental factors on migration. In summary, students exhibit a robust understanding of traditional migration causes, alongside a growing acknowledgment of climate-related factors, indicating a need for further education on the effects of climate change on migration.

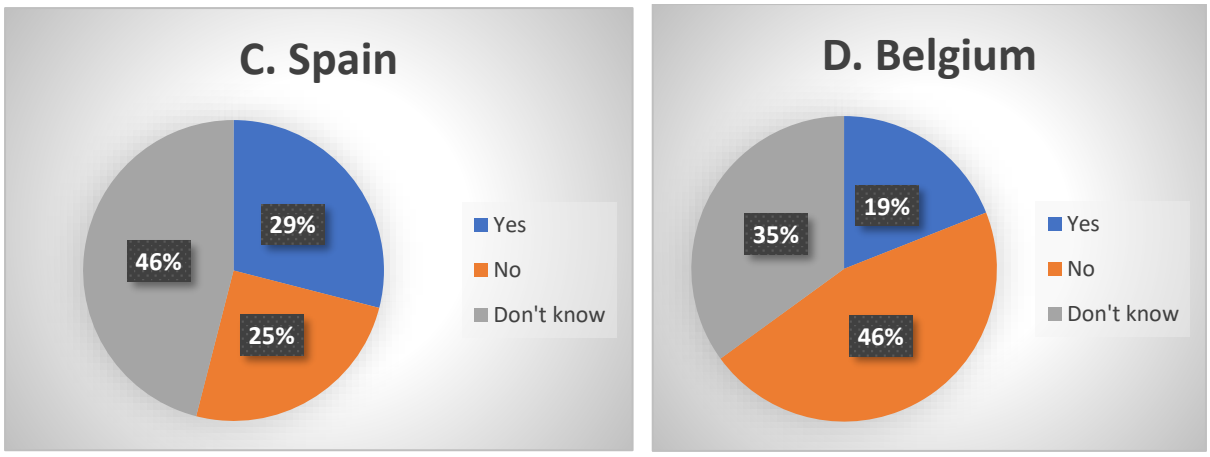
Figure 7.11: Causes of migration



Students were further asked if they believe that their respective countries are more subject to climate-induced migration than the rest of the EU countries. The results are summarized below for each of the four countries included in the survey.

Figure 7.12: Is your country more subject to climate-induced migration than any other EU countries



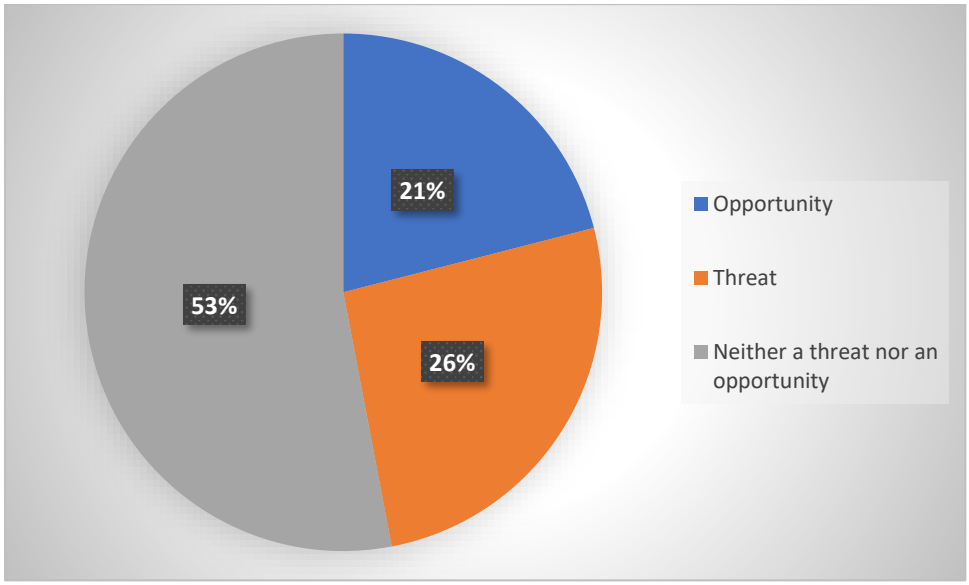


Upon examining the graph for each nation, it is evident that students from Italy perceive their country as being more impacted by climate-induced migration in comparison to other EU nations. Over half of the students in Italy (52%) hold this belief. Following Italy, students from Greece, with 36%, also feel that their country is more affected by climate-induced migration than the other EU countries. The percentages for Belgium and Spain stand at 19% and 29%, respectively. Students in Belgium predominantly believe that their country is not significantly affected by climate-induced migration when compared to other EU nations. Across all countries, a considerable number of students remain uncertain or unaware of whether their countries are particularly impacted by climate-induced migration in relation to the rest of the EU nations.

7.3.6.1 Is migration a challenge or an opportunity?

Students were asked if they consider migration process a challenge for the modern human society and culture. Three options were given – a threat, an opportunity, and neither a threat nor an opportunity. The result is summarized below:

Figure 7.13: Is climate change a threat or an opportunity?



The data presented in the graph above reveals that a significant portion of students perceives migration as neither a threat nor an opportunity. Specifically, over half of the students (53%) hold the view that migration does not pose a threat or present an opportunity. In contrast, more than a quarter of the students (26%) consider migration to be a threat, likely stemming from apprehensions regarding the social and economic difficulties linked to migration. A relatively smaller segment of the students (21%) regards migration as an opportunity, acknowledging its potential advantages, including cultural diversity and economic contributions. This spectrum of perspectives underscores the complexity of the topic and emphasizes the necessity for discussions that encompass both the challenges and opportunities associated with migration.

7.3.6.2 Consequences of migration

Finally, in an open ended question, students were asked if they can find any positive aspects or negative consequences of migration to their respective country. Results reveal that a significant number of students were unsure of the positive or negative consequences of migration to their respective countries. However, the views towards negative consequences by far exceed the views for positive outcomes of migration.

Ultimately, students were posed an open-ended question regarding whether they could identify any positive aspects or negative repercussions of migration to their respective countries. The findings indicate that a considerable number of students were uncertain about the positive or negative effects of migration in their countries. Nevertheless, the perceptions of negative consequences significantly outnumber those regarding positive outcomes of migration.

Numerous students voiced apprehensions about rising crime rates, overpopulation, and resource strain, asserting that migration results in increased unemployment, reduced wages for local residents, and economic pressure on the nation. Some students noted that migrants do not consistently follow local laws and customs, which can lead to social tensions and disruptions within communities. There is also a prevailing belief that migrants contribute to urban overcrowding, complicating the search for housing, and that they may compete with locals for employment, potentially intensifying economic difficulties. Several students linked migration to environmental harm, including increased waste and pollution. Furthermore, a minority of responses expressed worries about the cultural shifts induced by migration, fearing potential impacts on national identity.

Despite being relatively few in number, some students advocated for the merits of migration. They pointed out the economic advantages associated with migration, including enhanced productivity, the acquisition of new skills, and increased investment, all of which contribute to economic growth and address labor market shortages. A number of students noted that migration fosters cultural diversity, facilitating greater cultural exchange and expanding viewpoints by introducing various customs and lifestyles. Furthermore, migration is perceived as a means for migrants to improve their circumstances, escape conflict, and discover better employment opportunities.

In summary, the students' feedback reflects an awareness of both the benefits and challenges associated with migration. While it is encouraging that a considerable portion of the younger generation views migration as a source of economic and cultural advantages for a nation, there remains a notable segment of youth who emphasize the adverse effects of migration. The substantial number of ambiguous or uncertain responses underscores the necessity for more thorough education on migration, enabling students to cultivate a clearer and more nuanced understanding of this significant global issue.

7.4 Conclusion

The overall results from the questionnaire indicate a varied comprehension and awareness of climate change and migration among students, revealing significant knowledge gaps in multiple areas. A considerable number of students exhibited a fundamental understanding of climate change, especially regarding its impacts on the environment and the economy; however, their awareness of migration driven by climate change is markedly lower.

Although the majority of students recognize the significance of climate action, a smaller proportion perceives the direct relationship between climate change and migration, underscoring a disconnect in associating these two vital issues. This analysis suggests a pressing need for more targeted education on the specific subject of climate-induced migration, as many students lack familiarity with this dimension of climate change.

CHAPTER EIGHT: CONLCUSION AND RECOMMENDATION

8.1 Conclusion

The analysis presented in this document addresses a critical issue regarding the interrelationship between climate change, migration, and conflict, which necessitates careful consideration by governments, development actors, and other stakeholders.

It investigates the connections among climate change, migration, and conflict specifically within the context of the Horn of Africa, utilizing existing secondary data and literature on this nexus. The examination begins with an exploration of the relationship between climate change and migration, followed by an analysis of the correlation between migration and conflict in the region. Furthermore, to gather the perspectives and beliefs of the youth in Europe, a survey was conducted among students in schools across four countries: Belgium, Greece, Italy, and Spain.

The Horn of Africa is recognized as one of the most vulnerable and precarious regions in Africa, and arguably in the entire world. Each nation within this area has encountered various forms of civil conflict, political instability, cross-border violence, weak governance, and economic downturns. The region is marked by a blend of permanent, temporary, and cyclical human mobility, which includes displacement, migration, and planned relocation.

While it is challenging to completely understand the intricate causes of migration and the resulting economic and political instability, the increasing evidence of the connections between climate change, migration, and conflict raises considerable concerns. A more evident relationship pertains to the damaging effects of climate change and natural disasters on vulnerable states and societies in conflict, particularly in the Horn of Africa. There exists a strong correlation between natural disasters that lead to severe humanitarian consequences, state fragility, and the inability to accommodate investments and climate finance. In the Horn of Africa, given the region's fragility along with the susceptibility of its people and households, the effects of climate change or climate variability are widespread and these impacts are exacerbated (for example, a weather event does not have to be extreme to result in a significantly adverse effect). Nevertheless, fragile states have minimal representation in international processes and institutions that address disasters, environmental, and climate-related issues. Therefore, it is crucial to begin exploring innovative and comprehensive solutions to the complex crises that are aggravated by global climate change.

Despite the political, social, and economic consequences of climate change, particularly in relation to migration, the level of awareness appears to be insufficient. The survey carried out among students from four European nations reveals a varied comprehension and awareness of climate change and migration, with significant knowledge gaps in multiple areas. Many students exhibited a fundamental understanding of climate change, especially regarding its impact on the environment and economy; however, their awareness of migration induced by climate change is considerably lower. While the majority of students recognize the significance of climate action, fewer understand the direct relationship between climate change and migration, underscoring a disconnect in associating these two vital issues.

8.2 Recommendation

Strengthen regional protection framework on human mobility in the context of climate change and enhance coordination for effective protection responses.

Enhance data evidence on climate change, migration and conflict nexus through further research.

Enhance and decentralize climate financing, and design suitable financial instruments: to address the increasing adaptation financing gap, improving climate finance on a global scale will not only mitigate losses and damages for developing nations but will also significantly lessen the impact on developed countries through international and transboundary risk cascades. Furthermore, to respond effectively when timing may be crucial, it is essential that financing adheres to the principles of decentralization and autonomy. In nations characterized by a high level of fragility, the capacity to absorb climate finance is limited. Greater focus on regions with a heightened risk of violent climate-related developments will necessitate the creation of appropriate financial instruments.

Integrate gender issue in climate change adaptation measures as climate-induced migration is increasingly becoming a gendered process.

Enhance awareness creation on climate-induced migration:

- Schools could expand climate change education, particularly focusing on the link between climate change and migration. Introduce specific lessons on climate-induced migration, explaining how environmental changes, such as rising sea levels and desertification, can force people to leave their homes. This would help students understand migration as a global and complex issue, not just an economic or social one.
- Increase Teacher Training on climate change, conflict and migration nexus. Workshops, seminars, and online courses can equip teachers with the latest scientific knowledge and pedagogical tools to deliver lessons on these topics in a clear and engaging way.
- Promote Balanced Discussions on Migration and Leverage trusted Sources - migration should be discussed in a balanced way, presenting both the challenges and opportunities it offers. This can help students move beyond stereotypes or misconceptions and develop a more informed and balanced perspective on migration.
- Encourage Sustainable Actions - schools and governments should emphasize actionable steps that individuals and communities can take, such as promoting reforestation, reducing waste and recycling.

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