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HABITABLE Study Area Report: Akatsi North District, Ghana

Rachel Keeton, University of Twente

Diana Reckien, University of Twente

Mumuni Abu, University of Ghana

Report

The **HABITABLE** project – Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration – aims at significantly advance our understanding of the **current interlinkages between climate change impacts and migration** and displacement patterns, and to **better anticipate their future evolution**. Running for **4 years** (2020-2024), HABITABLE brings together **21 partners**: University of Liège, University of Vienna, Potsdam Institute for Climate Impact Research, University of Exeter, the IDMC, Lund University, Sapienza Università di Roma, adelphi, Université de Neuchâtel, Institut de Recherche pour le Développement, Council of Scientific and Industrial Research, UNESCO, University of Ghana, CARE France, University of Twente, Université Cheikh Anta Diop, Stockholm Environment Institute Asia, Raks Thai Foundation, Addis Ababa University, Institut National de la Statistique du Mali and Samuel Hall.

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Lead authors:

Rachel Keeton, University of Twente
Diana Reckien, University of Twente
Mumuni Abu, University of Ghana

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Abstract

Akatsi North District, Ghana was selected as a study site for the HABITABLE project based on a number of selection criteria assembled by the project consortium. This report is intended to give project partners a brief overview of the most salient climate change and migration issues currently characterizing the wider context of Ghana, as well as the most urgent issues within Akatsi North District. Both Ghana and Akatsi North are facing a number of changing environmental dynamics and climate change-related threats. In Akatsi North District, those changes may contribute to increased migration rates. While employment, education and family reunions have been previously reported as the main drivers of migration throughout Ghana, one aim of HABITABLE and Work Package 2 in particular, is to further examine local perceptions of migration drivers and add to the body of knowledge in this area. This report aims to take a step in that direction by bringing together and summarizing a number of relevant issues as background information for project partners. The report concludes that due to its ongoing and observable environmental changes as well as increasing migration rates, Akatsi North is a relevant and appropriate study site for the HABITABLE project.

Keywords

Akatsi North District, Ghana, migration, climate change, environmental dynamics

1 Introduction

This report synthesizes information on Akatsi North District, Ghana, relevant to the EU-funded HABITABLE project. It is intended to provide a brief overview of the current demographic, environmental, climatological, and migratory conditions relevant to this site. The report is structured in two main sections, (1) first taking a national-scale perspective of current migration and climate conditions in Ghana, then (2) zooming in to the district-scale to examine the same issues at a finer grain within Akatsi North District.

The first section is elaborated with an overview of contemporary migration patterns and trends in Ghana, followed by a description of environmental dynamics across the country. As it moves to the district scale, the report discusses the demographics of Akatsi North District, contemporary migration patterns within this district, environmental and climatological dynamics, as well as an analysis of local agricultural practices. The authors have identified these issues (migration and environmental conditions) as highly relevant to the HABITABLE project, and they are discussed in this report with the aim of informing project partners and increasing their understanding of critical background context(s).

The report concludes that the aspects of the site described in the following sections support the decision to include Akatsi North District as a potential study site for the HABITABLE Project.

2 Migration in Ghana overview

Ghana has a relatively mobile population: a recent national survey reports that 40% of Ghanaians are migrants (GSS 2019: 109). The Ghana Statistical Service defines migrants in two ways, using the temporal indicator of one year to distinguish 'migrants' from seasonal workers, and encompassing both internal and international movements: "Respondents born outside their current place of residence are classified as in-migrants. Persons born at their current place of residence but who had moved out and lived outside their localities of birth for more than a year and have stayed in the current locality for a year or more or intend to do so are referred to as return migrants" (GSS 2019: 109). This statistic provides some insight into the mobility of Ghanaians, however, much of the internal migration within Ghana remains undocumented as people often move around without official registration processes (Awumbila et al. 2011). It is likely, then, that the Ghanaian population is actually more mobile than previously reported.

In individual households, the decision to migrate is usually the result of a complex decision-making process weighing perceived costs and benefits. Migration itself can be seen as an adaptation tool to address adverse circumstances, and in Ghana, multiple studies have found that rural to urban (internal) migration has a net positive effect on welfare among migrants (and migrants' households). For example, Litchfield and Waddington (2003) find that migrants in Ghana had either a lower probability of being poor than non-migrants, or a zero-welfare gap. Boakye-Yiadom and McKay find that migration increases (on average) the welfare of migrants in Ghana, and that "the average welfare increment derived by rural-to-urban

migrants is proportionately much higher than what accrues to their urban-to-rural counterparts" (2006: 2).

Concerning gender at the national scale, females are more likely to migrate than males, with 42.9 percent of the female population classified as migrants compared to 36.9 percent for males (GSS, 2019: 109). There is some speculation that this difference may be influenced by the traditional practice of brides moving to their (prospective) husbands' hometowns, however this needs additional study to confirm.

The 2019 census report from the Ghana Statistical Service further suggests that migration within Ghana is largely circular, with migrants generally returning to their places of origin at different periods in life, and after retirement – a mobility pattern that can be identified in many Sub-Saharan African countries (GSS, 2019: 111).

2.1 Internal migration

Internal migration rates within Ghana can be differentiated across four types: (1) rural-to-rural, (2) rural-to-urban, (3) urban-to-rural, and (4) urban-to-urban. The following table shows that while a relatively high number of migrants are moving from urban and rural areas into other urban areas, a massive number of migrants are also moving from urban to rural areas. The fact that there is considerable exchange between urban and rural areas rather than a one-directional flow towards urban areas (as media often chooses to highlight) may be partially explained by the common practice of returning to places of origin among people of retirement age. This could potentially be an interesting direction for future migration research.

The number of people moving between rural areas is also significant, and, notably, similar to the number of rural non-migrants.

With regard to gender, young males and females reportedly migrate at a similar age with slight variation according to the distance moved. The median age of a female (internal) migrant in Ghana is 27 for both intra- and inter-regional movement (GSS 2011: 24). The median age of a male (internal) migrant is 25 for intra-regional movement and 29 for inter-regional movement (GSS 2011: 27).

Population and Structure of migrant Population Aged 5 or Older at the Place of Destination by Type of Migration Flow (2010)

Type of migration flow	Population	Percent of total
Urban destination		
Urban-urban migrant	1,904,336	18.2
Rural-urban migrant	2,752,623	26.3
Urban non-migrant	5,827,192	55.6
Rural destination		
Urban-rural migrant	6,942,785	70.4
Rural-rural migrant	1,498,750	15.2
Rural non-migrant	1,425,239	14.4

Table 1 is based on 2010 census data (GSS 2011).

At the regional scale, a study of Volta Delta residents by Codjoe et. al. identifies key differences between people who migrate for economic reasons (usually male) and those who migrate for family formation or education (usually female). Economic migrants were also very likely to be permanent migrants, never married, cohabiting or separated (Codjoe et al. 2020). Within the Volta Region, the 2019 Ghana

Statistical Survey reports that the migrant population totals 947,472, with 50.4% of those migrants remaining in their destinations for more than 10 years (2019: 113). These findings show the complexity and geographic specificity of migration decision-making.

2.2 International migration

The movement of people in Ghana is highly dynamic – the country is simultaneously a site of origin, transit, and destination for migrating people (IOM 2019: xiii). At the international scale, Ghana has a net migration rate of -0.319 per 1000 population (United Nations, 2021). This number indicates that slightly more people are leaving Ghana than entering it, although this number has varied significantly over the last decades, partly due to regional political developments. Currently, international migration into Ghana is mainly from neighboring ECOWAS countries. According to the IOM, there were 466,780 international migrants in Ghana in 2019 (2020: xiii) - the majority of these originated from Togo (101,677), Nigeria (79,023) and Côte d'Ivoire (72,728) (IOM 2020: xiii).

Emigration from Ghana is characterized by a large geographic spread, with African countries as destinations for about half of all Ghanaian emigrants, and the United States and United Kingdom as main destinations outside of the continent (UN DESA, 2019). In 2019, there were 970,625 Ghanaians living outside Ghana (UN DESA, 2019). Male emigrants outnumbered their female counterparts by 6 percent; and the main regions of origin were Ashanti and Greater Accra (GSS, 2013).

3 Migration drivers

Migration is a highly personal and often complex decision. It may be made individually or negotiated at the household or even community level. It can be simultaneously motivated by both “push and pull factors” ranging from financial conditions, to perceived opportunities, to health and safety. The final decision may be catalyzed by a single, acute event (conflict, loss of harvest or herd, loss of employment or new employment opportunity, marriage or family formation), or may be the result of smaller influences compounded over a longer time period.

Environmental change as a result of climate-change has resulted in what is called ‘climate-driven migration’ or ‘environmental migration’, however, these terms are still highly contested – partly because of the multiplicity of factors and complexity that drives most migration decisions. Dun and Gemenne (2008), for example, have explored the disputed definitions of ‘environmental migration’ and suggest that while a definition is crucial for precise projections and appropriate policy, there is no consensus on this term, and definitions that are either too broad or too narrow would fail to protect those in need. However, as an emerging focus within the larger field of migration studies, some research has been done on the complex linkages between environment and migration, and there is consistent movement towards an appropriate definition.

In Ghana, environmental or climate change is observable and measurable, but does not appear to be a main motivation for migration. In a recent nationwide survey, the Ghana Statistical Service (GSS) found that most migrating people in Ghana (nearly 72%) describe their main motivation for migrating as family-related reasons, including: “accompanying a parent (23.8%), marriage (14.9%), spouse's employment (3.2%) and other family reasons (29.7%)” (GSS, 2019: 113). *Flood, famine*

or drought (environmental disasters) were listed by only 0.2% of the migrating population as the main reason for their most recent migration (GSS, 2019: 114). These results give some insight into the priorities of migrating populations, and hints at the multidimensional nature of the migration decision-making process. It is entirely possible that environmental changes or disasters were indeed one among many motivations, but not the main motivation, as indicated in the survey results.

In contrast to these findings, in their analysis of human mobility and vegetation dynamics in Ghana, Van der Geest, Vrieling and Dietz conclude that “environmental factors play an important role in causing migration from northern Ghana to Ghana's middle belt, and within southern Ghana to the cocoa frontier settlement” (2010: 121). These regional distinctions reveal key differences within Ghana, that may be connected with the severity of climate change as its impacts vary across the country. For example, people may perceive rapid-onset climate change threats such as flooding, differently than slow-onset events such as prolonged drought, and may react differently to them as a result. These discrepancies provide fertile ground for further research into perceptions and migration decision-making.

4 Environmental conditions in Ghana

Climate variability and change affects every region in Ghana and extreme weather events are predicted to increase around the world over the coming decades. The risks from these extreme events include loss of property, loss of livelihood and loss of life, among other health hazards. A recent report by the Ghana Ministry of Environment, Science, Technology and Innovation (MESTI) considers over 80% of disasters in Ghana to be climate-related (2015).

Environmental Changes in Ghana

Slow-onset environmental changes	Sudden-onset environmental changes
Drought (Famine)	Flooding
Desertification	Wind storms / cyclones
Environmental degradation	Mudslides
Soil salinization	Wildfires
Sea level rise	Sudden-onset environmental changes
Temperature increase	
Seawater temperature increase	

Table 1: Environmental changes in Ghana range from sudden (rapid) onset events to slow-onset events that can build in intensity and over time (MESTI 2015; OECD 2020).

Drought and flooding are the most common environmental threats in the Volta Region (which includes Akatsi North District), as it follows the Volta river to its delta at the Gulf of Guinea. (Codjoe et al. 2020). Flooding may be riverine or coastal, and has caused repeated displacement of communities, including the displacement of 10,000 people from the Keta district in 1996 (Oteng-Ababio et al. 2011). The delta shoreline experiences coastal flooding which has increased erosion and shoreline recession (Ly 1980). Erosion rates are very high, with an average of 8m per year, despite infrastructural interventions. Human activities such as mangrove harvesting may contribute to increased erosion and flooding (Anim et al. 2013), and coastal sand mining (although illegal) is commonly practiced and known to increase

erosion. For farming communities, the salinization of groundwater related to flooding presents a threat to traditional agricultural practices. Flood water and standing water may also pose significant health threats to the local human and livestock populations.

Conversely, water shortages, rainfall variability, and drought may also adversely affect crop production and the health of livestock. A majority of agricultural practitioners in the Volta region rely on rainfed crops, and the average holding size is 0.46 ha. (MOFA 2021b). The relatively small scale and dependence on natural processes rather than irrigation puts these farmers at increased risk for loss of livelihood when rainfall is insufficient or unpredictable.

The National Disaster Management Organization of Ghana (NADMO) identifies a number of water-related disaster risks present in the Volta Region, as listed in the following table (2010). These events can take place at any time of year, leaving populations vulnerable to overlapping or consecutive threats.

Hydrometeorological Disasters Occurring in the Volta Region, Ghana

Disaster type	Period of occurrence
Floods (Rainfall / runoff)	May-June & September - November
Man-made floods (Dam-burst / spillage)	January – December
Tidal waves	August – October
Rain/wind storm	March – May & June - August
Drought	November – April & May – October

Table 2: NADMO has identified a number of hydrometeorological disasters occurring in the Volta Region, Ghana at different periods throughout the year (NADMO 2010; OECD 2020).

5 Akatsi North District

Akatsi North administrative district is one of two districts established in 2012 when the former Akatsi district was divided into North and South. Akatsi North is located in the southeastern part of the Volta Region of Ghana, within the Volta delta area. The Volta delta is a 4562 km² region located at the mouth of the Volta River, downriver of the Akosombo Dam, where the Volta empties into the Gulf of Guinea. Akatsi North has an area of 314.15 km². It borders Akatsi South district to the south and west, Ketu North to the east, Agotime Ziope to the west, and the neighboring country of Togo to the west.



Image 1: The boundaries of Akatsi North District are indicated in orange. The map is oriented with North at the top of the image. Akatsi North district partially aligns with Ghana's national border with Togo. Base map and data © OpenStreetMap contributors See: openstreetmap.org

Akatsi North is relatively rural, with densely settled areas concentrated around Ave Dakpa and Xevi. Ave-Dakpa is the district capital. Accessibility throughout the district is limited by infrastructural challenges, and the Ho-DakpaDenu road (linking Dakpa to Ho and Denu) is “the only first class road in the District. The extent of road development is

not satisfactory in terms of average road length, quality and distribution” (ANDA 2014: 5). Akatsi North district has 9 public health facilities serving its inhabitants. There are 27 kindergarten, 27 primary schools, 17 Junior High Schools and one (1) Senior High school (ANDA 2014: 5).

5.1 Demographics of Akatsi North

There are 132 communities in Akatsi North (GSS 2014: 14). The Akatsi North District Assembly reports that as of 2014, the population has increased to almost 45,000 (ANDA 2014: 5). Of this total, 45.9% are males and 54.1% are females – or, for every 100 females there are about 85 males (ibid).¹

Inhabitants of the district are relatively young compared to global averages, with 38% between 0-14 years, 53.3% between 15-64 years and only 8.7% older than

¹ The Volta region also features a lower sex ratio than the national average, with 88 males per 100 females, as compared to the national average of 95.2 males per 100 females (Addo et al. 2018). Atiglo and Codjoe attribute the lower sex ratio and higher proportion of female-led households to high out-migration of males (2015).

65 years (GSS 2014: 15).² Akatsi North district has the highest crude death rate³ in Ghana, at 18.7 per 1000 population (GSS 2014: 18). In contrast, the regional average for the Volta region is just 8.8 per 1000 population (ibid). Relatively high fertility rates in comparison to other districts (4.1 births per woman) and limited access to health care may be contributors to this high rate.

Households are relatively small for Ghana, averaging 3.7 people per house compared to a national average of 4.4 (GSS 2014: 21). Of the approximately 8000 households in the district, 30.6% of household heads are male, while 24% of household heads are female (GSS 2014: 22).

Three-quarters (66.8%) of the district population aged 11 years and older is literate while one-third (33.2%) are not literate (GSS 2014: 26). 68.3% of the literate population is able to read and write in both a Ghanaian language and English and 25.3% is literate in only a Ghanaian language (GSS 2014: 27). The main Ghanaian language spoken in this district is Ewe, as Ewe is also the dominant ethnic group. Ewe is a language of the Kwa branch of the Niger-Congo family.

More than half of the district population identifies as Christian (57.0%), about one-third (32.2%) are African traditionalists, 6.4% identify as non-religious, and 3% of the population identifies as Muslim (ANDA 2021).

5.2 Migration in Akatsi North

The 2010 census records a total of 6,539 migrants in the district, of whom "4,333 (66.3%) are born elsewhere in the Volta but are resident in the district. Of the migrants who were born outside of the Volta Region, majority come from Eastern Ghana (25.9%), outside Ghana (24.6%) and Ashanti (20.3%) (2014: 20). Of the 6,539 migrants, 17% have lived in Akatsi North for less than a year, 30.4% have resided in the district for 1-4 years, and 19.0% have been present for at least 20 years (ibid).

In line with larger national trends, "very few individuals cite direct environmental factors as the main reason for migrating" in the Volta region (Codjoe et al. 2020). Codjoe et al. (2020) identify economic (employment opportunities), education, and family reunion as main drivers for local migration. Further investigation of the ways in which these drivers overlap and influence decision making may help disentangle the role of environmental or climate change in the decision to migration.

5.3 Environmental conditions in Akatsi North

Akatsi North is characterized by two rainy seasons: a major rainy season between March and July and a minor season between August and November. From November to February the dry season features harmattan winds and the mean temperature remains above 25°C (Awadzi et al. 2008).

² Like the rest of Ghana, the Volta region also has a relatively young population, with 38% of the population under 15 years and only 7% above 65 (GSS 2013). Female headed households account for 45% in the Volta Delta, which is significantly higher than the national average of 34% (GSS 2013).

³ A crude death rate indicates "the number of deaths occurring among the population of a given geographical area during a given year, per 1,000 mid-year total population of the given geographical area during the same year" (UN 1991).

Williams et. al. (2017) observe an annual increase of 6.7 mm of rainfall per year in Akatsi North between 1984 and 2014, and an increase in mean annual maximum temperatures of 0.05°C over the same 30-year period. This result concurs with warming and increased rainfall trends in West Africa reported by the IRDC (2015), as well as the projections for Ghana to become hotter, wetter in the rainy season and drier in the dry season (Arndt, Asante and Thurlow 2015). In addition to anthropogenic factors such as sand mining and damming, climate change has caused extreme weather events and resulting environmental crises throughout Ghana and within Akatsi North itself. According to the Ghana Rice Inter-Professional Body (GRIB), Akatsi North experienced drought conditions in 2021 that disrupted rice production and local farmers were expected to lose their entire 2021/2022 harvest (Reuben 2021). The following section discusses agriculture in Akatsi North in more detail.

5.4 Agriculture in Akatsi North

The local District Assembly reports that 67% of the population practices agriculture (ANDA 2014: 4), with a total of “6,712 households representing 83.9 percent engaged in farming activities” (GSS 2014: 39). Almost all farming households are engaged in crop production, while just 36.1% rear livestock (ibid). The most common livestock are chicken, goats, cattle and sheep, in that order (GSS 2014: 39). There is almost no tree planting or fish farming within the district, which may indicate potential opportunities to counteract the district’s deforestation. The Ghana Statistical Service also recommends fish farming as an economic opportunity and potential contributor to greater food security for the district (GSS 2014: 53).

The vast majority of the local agricultural activity is characterized by small holder subsistence and commercial agriculture, meaning most farming families primarily produce crops and raise livestock to feed themselves and sell excess produce at market. Cassava, sweet potato, maize, pineapples and tomatoes are considered the main economic potentials of the district (ANDA 2014: 4). Mining and quarrying, construction, manufacturing and the services sector are also popular sources of employment locally.

6 Conclusion

The main drivers of migration in the Akatsi North district are economic and social factors like education and marriage. Environmental factors are not usually mentioned as one of the main factors, but they are factors that drive some of the economic and social reasoning. This observation about drivers of migration in the district is reflects similar tendencies in other districts in Ghana.

The Akatsi North district is a rural district with a young population that has over 70% of the population engaged in farming as their main livelihood activity. The continuous failure of crops due to poor rainfall and the lack of market for farm produce has served as a disincentive for young people in the district to continue with farming over the last decade. In diversifying their livelihood activities, some of the inhabitants in the district have resorted to doing transport business and petty trading across the Ghana-Togo border because of the proximity of the district to Togo. Also, some of the inhabitants migrated from the district into the Greater Accra region in search of alternative sources of livelihood. The migration to Accra is

because of the existence of networks in the city that facilitates the integration of new migrants.

Drought and flooding are the most common environmental threats in the district that negatively impact agricultural productivity, but there is little evidence about the impact of these environmental threats on migration in the area. Additionally, even though economic and social reasons dominate the drivers for migration in the area, it is not clear what alternative livelihood options are available to the inhabitants and the threshold at which such migration decisions are made.

This report has shown that the Akatsi North district, one of the study districts for the European Union funded project – HABITABLE, presents an opportunity to study climate change and migration in poor rural agricultural settings among populations that are vulnerable to environmental threats.

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