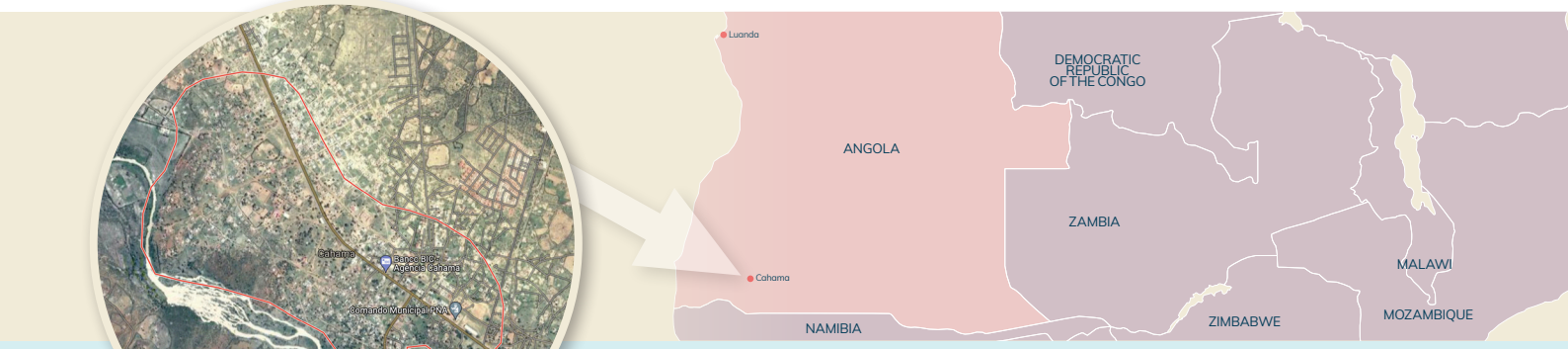
Mixed Migration Centre

Climate and mobility case study

January 2023

The Mixed Migration Centre initially shared these case study reports with ACMI in November 2021, to inform the extensive consultation process and ACMI's final report.

Cunene Province, Angola: Cahama



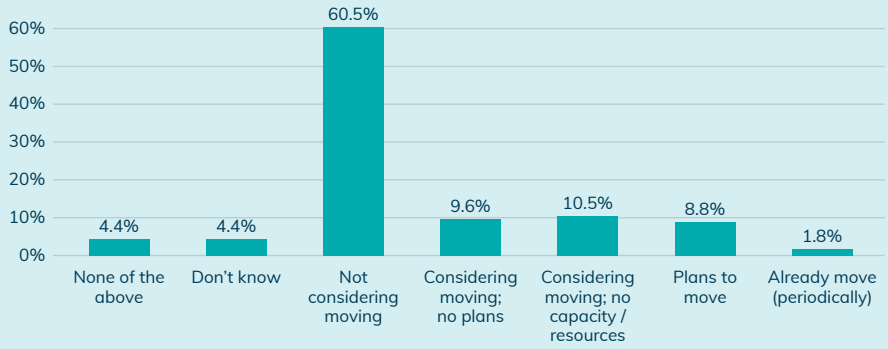
Map: © CNES/Airbus, Maxar Technologies, Google Maps 2021

A small town in a rural area subject to long-term dryness.

Key findings

- Long-term drought in the region has led to forced displacement. Cahama hosts a camp for people in need of food assistance
- The drought affects access to water, health, and livelihoods
- Migration from Cahama is relatively common, and the drought contributes to the decision to migrate
- In most cases, part of a household leaves for a nearby city; in a minority of cases, people head to Namibia
- Those who migrated had family connections in the destination

Figure 1. Mobility intentions



Note on the data collection

A research team visited Cahama municipality in August 2021. In total, 114 survey interviews were conducted within three zones across the town. Two focus group discussions were held with participants from households in the sample area with young people who were students, and women aged 25 years and older. A third focus group discussion was held with residents from a camp housing people displaced from their villages by drought and food insecurity. Ten in-depth interviews were conducted with two people from five households in Cahama who experienced different mobility outcomes: one household where a member had migrated abroad and returned (the migrant and a relative were interviewed); one household where a member had migrated (the migrant and a sibling were interviewed); two households where part of the household was planning to move; and one household where one member did not want to move, and another wanted to but did not have the resources.

Global Centre for Climate Mobility · Africa Climate Mobility Initiative · United Nations Climate Change · African Union · UNDP · The World Bank IBRD • IDA · IOM UN Migration

About this project

The Mixed Migration Centre (MMC) undertook this research with the aim of identifying how climate-related factors affect aspirations and capabilities to migrate, and migration outcomes. MMC developed a framework based on Carling's aspiration / ability model of decision-making in migration, as well as literature on adaptation, adaptive capacity and resilience (J. Carling, 2002, "Migration in the age of Involuntary Immobility: Theoretical Reflections and Cape Verdean Experiences", Journal of Ethnic and Migration Studies 28 (1): 5–42). This research considers the effects of climate-related environmental stressors on populations across Africa, and how they impact mobility outcomes, taking into account the full range of (im)mobilities, and the continuum from voluntary to forced movement.

Data collection took place in seven locations that were selected to cover a range of climate-related hazards across Africa, and various kinds of (im)mobilities. From July to September 2021, teams conducted research in Lagos, Nigeria; Cahama, Angola; Moroto, Uganda; Alexandria, Egypt; Chikwawa, Malawi; Beira, Mozambique; and Tatki, Senegal. In each site, more than 100 household surveys were conducted and three focus group discussions were held to better understand the impacts of climate-related hazards and environmental stressors on individuals, their attitudes and behaviour around mobility, and to identify linkages between the two. In-depth interviews were then conducted with five households that represent various kinds of 'migration outcomes'. Where possible, two representatives from each household were interviewed. These interviews aimed to find out more about experiences of mobility, connections to climate-related hazards, and the perceived outcomes of migration. See the synthesis report for more information on methodology.

MMC conducted this research as part of the Africa Climate Mobility Initiative (ACMI), with the results presented for discussion at ACMI Consultations, and informing the ACMI Report "African Shifts. The Africa Climate Mobility Report: Addressing Climate-Forced Migration and Displacement". MMC takes full responsibility for all research and findings presented in this study. The analysis and reflections in this study do not necessarily reflect the position of ACMI, the institutions leading ACMI, or any of the donors supporting the work of ACMI or MMC.

A note on terminology

MMC developed a list of key terms used throughout this project including:

- Climate change: A change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer (IPCC (Undated) IPCC — Intergovernmental Panel on Climate Change).
- Climate-related environmental stressors: Perceived and experienced long-term meteorological impacts on the ecosystem that may affect the functioning of the biological system (e.g. NCBI (2016) National Center for Biotechnology Information).
- Climate-related hazards: Natural meteorological events that pose danger to humans and the environment. These events occur due to deficiencies or excess of precipitation, destructive winds and anomalous temperatures (based on WMO and UNFCC terminology around climate-related risks / hazards and extreme events).
- Resilience: The ability of individuals, households, communities, cities, institutions, systems, and societies to prevent, resist, absorb, adapt, respond and recover positively, efficiently, and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning and without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all (IOM (2019) Glossary on Migration).
- Vulnerability: The limited capacity to avoid, resist, cope with, or recover from harm. This limited capacity is the result of the unique interaction of individual, household, community, and structural characteristics and conditions (IOM (2019) Glossary on Migration.)

A note on limitations

This is a comparative project looking in-depth into people's perceptions across a range of locations. The scope and timeframe were limited, however, and additional expert knowledge of locations and populations could further enrich a more detailed understanding.

This is a pilot study. It is expected that the tools and methodology will be refined based on lessons learned. The study provides insights into perceptions of climate-related environmental stressors and adaptation that merit further exploration.

Cunene and climate risks

In recent years, the Angolan economy has been heavily affected by climate change in the form of prolonged drought, damaging flash floods, forest fires, reduced crop production and reduced water supply.[1] The province of Cunene has been at the epicentre of recent droughts and was prioritised for disaster assistance in the 2012 to 2016 period. Some 55% of people in the province were affected by drought in 2012, 2013 and 2014, rising to 78% in 2015.[2] In 2019, southern Angola, including the Cunene province, faced a severe drought.[3] High temperatures and low rainfall continued into the 2020/21 growing season with "severe implications" for outcomes in 2021.[4] The drought has been most severe in the western part of Cunene. The province is also subject to periodic flooding along rivers in the Cunene river basin,[5] with the river basins and the provincial capital of Ondjiva have been "severely affected" by flooding in the last 10 years.[6]

Cunene is one of the poorest provinces in Angola, with most livelihoods in the province being based on rain-fed subsistence agriculture.[7] Livestock is an important livelihood asset in the region, especially cattle but also goats, sheep, pigs and poultry. Livelihoods are typically based on some combination of: livestock raising, milk production, cereal production, market food purchases, seasonal fishing (coastal and riverine areas), horticulture and gardening, as well as employment in trade and industry.[8] The prevalence of rain-fed agriculture combined with limited water infrastructure, exacerbate water scarcity and contributes to food insecurity, serious health problems such as outbreaks of cholera, child malnutrition, and very low household incomes.[9]

The predicted rise in temperatures due to climate change is predicted to negatively affect farming due to increased evaporation, more frequent drought periods and prolonged dry spells.[10] It is estimated that annual household production will fall up to 60% in Cunene.[11]

Conditions in Cahama

Approaching the outskirts of Cahama town.

Photo credit: © Katalabano Research 2021

Cahama is situated within the arid and semi-arid agro-ecological zone of southern Angola characterized by desert, savannah grassland and woodland. Cahama is one of six municipalities in the Cunene province. While the region is subject to recurrent drought and flooding, 80% of people surveyed had not experienced flooding in the last ten years. The current population of the province is estimated to be just over a million people; Cahama has approximately 72,000 residents, 12,000 of whom live in the town (2014 census data).

This research took place on the edge of Cahama town, among a fairly diverse population engaged in both agriculture and more urban-orientated occupations. While the area was connected to the electricity grid, 40% of respondents did not have a household supply, and most people used firewood for fuel. Most of the study focused on settled residents living in the area, but focus group discussions included residents from a camp housing people who left rural areas due to food insecurity.

1 World Vision International (undated) The devastating effects of climate change in Angola.
2 Government of Angola (2016) Post Disaster Needs Assessment: Droughts in Angola 2012 - 2016.
3 Prates, M. (2019) Children out of school: the impact of the drought for education in Angola. UNICEF. Also, UNICEF (2020) UNICEF Angola Humanitarian Situation Report No.2 for the period 1 Jan - 30 June 2020.
4 FAO (2021) GIEWS Update: The Republic of Angola - Drought expected to significantly reduce cereal production and pasture availability, with severe consequences for food security in 2021 (19 April 2021).
5 Green Climate Fund (2019) Integrated programme to build climate-resilience in the Province of Cunene in South West Angola.
6 Ibid.
7 Climate Change Counts (2014) Angola Country Report.
8 Government of Angola (2016).
9 Green Climate Fund (2019).
10 Green Climate Fund (2019).
11 IFAD (2020) Research Highlights – Climate Change and Future Crop Suitability in Angola.

Population profiles and perceptions

Profile of survey participants

114 survey respondents

Gender:
54% women; 46% men

Age:
73% aged 25-54 years

Ethnicity:
31% Mbundu; 17% Nhaneka; 15% Mundimba, multiple others

Religion:
99% Christian

Average household composition:
77 members; 1 financial contributor; 4 members under 18 years

Education level completed:
62% secondary education; 26% primary education; 6% did not complete any schooling

Occupation(s):
25% studying, 17% trade and services, 13% farming; 9% manufacturing, construction, and infrastructure; 6% unemployed

Main source of food:
18% all food from farming; 44% all food from farming but income available for food

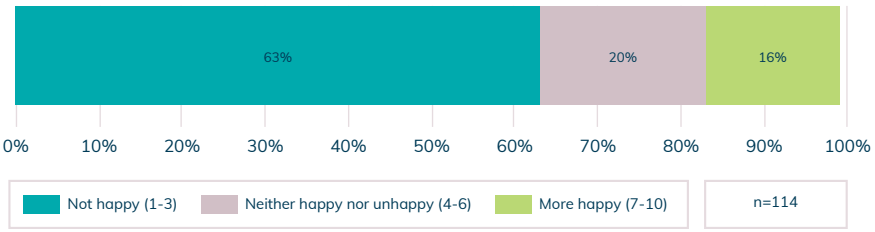
Remittances:
10% receive remittances

Many survey participants were long-standing residents of Cahama: 45% lived there for more than 20 years, including 20% who were born in the area. Only 16% of respondents had lived in the area for five years or less. The town was generally understood to be safe, with nearly all respondents reporting that crime or violence was either rare or never happen.

Most people (63%) were dissatisfied with the lifestyle and living conditions of their household in the past 12 months (see Figure 2). In addition, most respondents (61%) felt their household was doing worse compared with five years ago and were uncertain about the prospects for the next five years (51%). Only 30% of respondents expected their household situation to improve in the next five years. Generally, people felt that their household was worse off than others in the community, with almost half reporting that they owned much fewer (29%) or a bit fewer (33%) goods.

Across the relatively diverse sample, there was a negative overall perception of wellbeing, and most were pessimistic about the future drought conditions and economic opportunities.

Figure 2. How happy are you with your household's conditions in the past 12 months?



Note: Respondents are asked for a score between 1 and 10. One person refused to answer.

Common challenges

The main challenges identified by participants in focus group discussions and in-depth interviews related to: **unemployment, despite low rates among respondents; and access to services and utilities** such as health facilities, schools, electricity, water and other state-provided infrastructure. A majority of respondents who cited these challenges indicated that the situation was worsening. Corruption was most commonly mentioned as a challenge by youth.

When listing challenges faced, all in-depth interview participants made reference to **drought, high temperatures, dryness, empty rivers and waterholes that lack fish, increased food prices and the unavailability of certain foods**. Challenges accessing water and food dominated assessments of the present situation, and expectations of what might improve if they moved elsewhere. Drought and food deficiencies were particularly highlighted in the focus group discussion with women.

Drought has led to **higher expenditures** due to price increases, and people purchase more food because they are less able to provide for themselves. When discussing hope for the future, increased rain was frequently considered a critical factor.

All residents living in the camp for displaced persons who participated in the focus group discussion arrived between June and September 2020 and came from agropastoral communities elsewhere in Cunene and Huila provinces. They decided to come to Cahama because they had heard of food distributions occurring in the area. They all mentioned that they were **forced to leave because of hunger**; only those that were wealthy or had livestock were able to avoid displacement.

Impacts of climate-related events

Survey interview in Cahama.

Photo credit: © Katalabano Research 2021

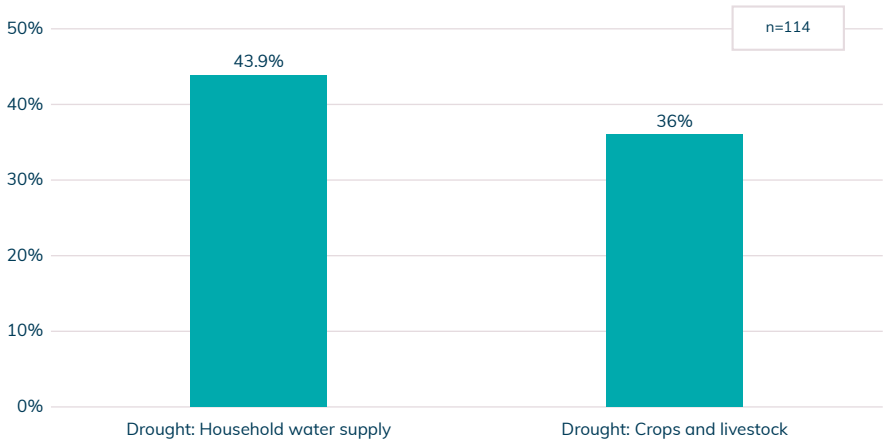
Cunene is often cited as a province where different staple crops will no longer be viable and other crops, such as the widely planted sorghum, will experience reduced viability.[12] The data gathered as part of this research reflects this grim outlook, even though the study focused on populations less dependent on environmental conditions for their livelihoods.

The effects of the environment on participants living in the camp were devastatingly clear. Drought has left them unable to feed their households, and forced them to leave their homes and livelihoods. However, even participants from the town spoke frequently about the effects of the crisis, especially the reduced availability of water. Most respondents have to buy water from private providers or receive water from the municipality. The increased price of food was a common observation among interviewees and focus group discussion participants.

Generally, study participants frequently mentioned worsening trends of dryness and increasing temperatures, and how these trends had affected people in recent years. The majority of those who said they were affected by these phenomena expected these trends to continue.

While town residents often run businesses or earn regular wages elsewhere, the majority supplement their livelihoods with farming and gardening. Only 13% reported that they worked primarily in agriculture or pastoralism, however even among others, the effects of heat and drought were felt quite strongly. Specifically, 44% of respondents reported their household water supply had been affected by three or more drought events in the past decade (see Figure 3), and 60% reported it had occurred at least once.

Figure 3. Main climate-related events: Participants reporting 3 or more in the last decade



Note: These are the most common answers.

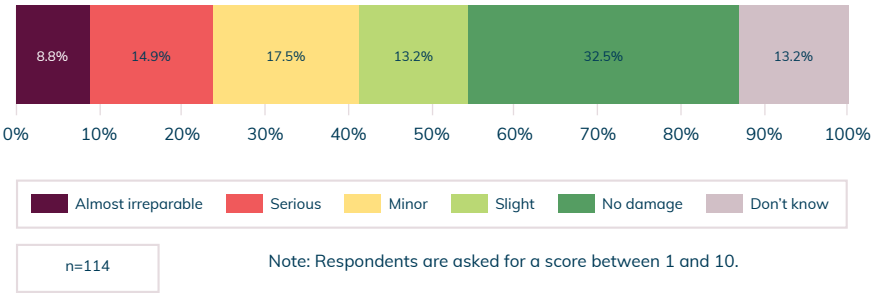
12 IFAD (2020).

"It has really changed a lot, it seems to me that each year the temperature is rising and it's becoming much hotter, much drier. The river has dried and it's becoming difficult for us to grow our crops ... The rainfall is no longer consistent and when it rains, it doesn't rain enough like it used to rain, also these days it is too windy with a lot of dust."

36-year old policeman

The majority of people affected by reduced water supply due to drought, drought-affected crops and livestock, and increasing temperatures reported that these events had a negative impact on **health and livelihoods** The majority expected the situation to worsen in coming years.

Figure 4. To what degree has increasing temperature caused damage in your community?



Note: Respondents are asked for a score between 1 and 10.

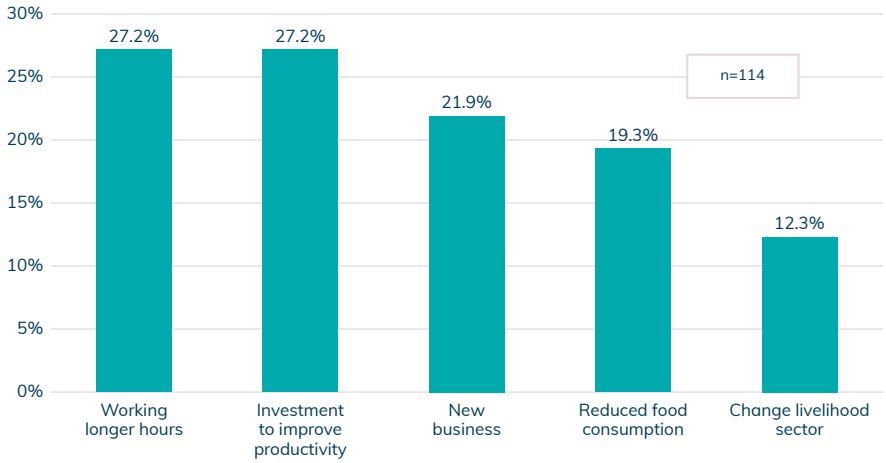
Responses to climate-related impacts

"We all depend on agriculture, since these 3 years there was no rain and we couldn't grow our crops, we decided to all come here to this camp."

Displaced person staying at the temporary camp

Focus group discussions with people who moved to Cahama for emergency relief highlighted the extreme extent to which people outside the town were affected by the drought. People discussed how their livestock had perished, and their crops had failed, some even spoke of returning to their fields to dig up seeds to eat. They felt they had no option but to leave their homes and farms. Some people moved to other areas of southern Angola, some to Namibia, and others came to Cahama. Despite wanting to return to their farms, and saying that agropastoralism functioned, participants also mentioned that they would have to depend on other livelihoods in the future.

Figure 5. What have you talked about doing to improve your situation?



Note: These are the most common answers. Respondents can provide more than one answer.

Respondents living in Cahama town were less dependent on rain-fed agriculture or livestock, but people still had to adapt to the changing conditions. Survey respondents mentioned that they had implemented different strategies to address their current situation, including working longer hours, improving productivity, or setting up new businesses (see Figure 5). Some 19% who mentioned reducing food consumption had also actively implemented this strategy. The widespread implementation of this negative coping mechanism is concerning. Most respondents mentioned that they were implementing changes for economic reasons (84%), but 22% said they needed to make these changes due to environmental changes in the area. The majority of those who reported implementing changes said that the strategies had a positive impact on the situation of their household, except those searching for alternative employment and the few that had sought support from the government or non-government organisation; potentially because these strategies were not met with success. During focus group discussions, many insisted that the government had a duty to assist them, especially with access to water.

Mobility

"Most move to seek new opportunities ... to further studies, they will go to Lubango or Ondjiva."

Youth focus group discussion participant

Cunene province is becoming increasingly urban: the capital Ondjiva has experienced rapid growth through in-migration since the end of Angola's civil war in 2002.[13] This sense of mobility was reflected among survey respondents, with most indicating that movement away from Cahama was not at all unusual. Some 44% of surveyed respondents said that someone from their household had moved away at some point, most of whom had not returned. Nonetheless, while only 21% of respondents were born in Cahama, the majority had lived in the town for many years.

The main reasons given for the movement were the inter-related factors of seeking livelihood opportunities and the effects of the drought. When asked about specific recent cases of household members leaving, the main reasons given were pursuing education and livelihood opportunities (42% each) followed by drought (30%).

In almost all cases, only part of the household moved. Younger men and women (under 25 years) were the main demographic to move away; men moved away more frequently than women. Around half of respondents who had a member of their household move away reported receiving remittances (20/38), either regularly or sporadically.

People most commonly moved to towns or secondary cities close by, such as Lubango (11 of 43 respondents) or Ondjiva (9 of 43 respondents), or the national capital Luanda over 1,250km away (7 of 43 respondents). Cross-border movement is common in this region of Angola.[14] While respondents reported that people in the area commonly moved to different countries, and focus group discussions talked about moving to Namibia to stay with family or work on farms, only one survey respondent mentioned a specific case of a person moving internationally, to Namibia. It was understood that crossing international borders was a strategy more commonly employed by people living in rural areas. This movement was facilitated by shared ethnic ties and compelled by successive droughts and natural disasters.[15] Internal migrants living in the camp mentioned that other people from their places of origin had moved to Namibia, but they also mentioned that it was rare for people to leave their farms permanently. Instead, seasonal migration for paid work on farms was more common, with people returning when the rains came.

13 Rodrigues, C.U. (2010) Angola's southern border: entrepreneurship opportunities and the state in Cunene; Rodrigues, C.U. (2007) From Family Solidarity to Social Classes: Urban Stratification in Angola (Luanda and Ondjiva)

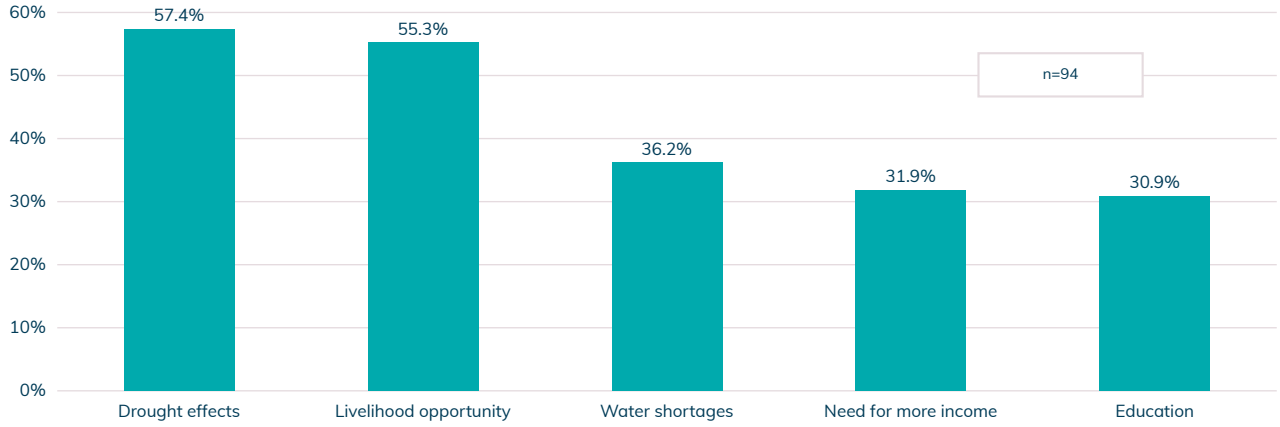
14 See, for example, "Bought and sold on the border", The New Humanitarian, 11 November 2008; the area on each side of the border is sometimes referred to as the 'Trans-Kunene' region.

15 IOM (2015) Migration in Namibia: A Country Profile 2015.

Climate-related impacts and mobility

This survey suggested that it was relatively common for people to move away from Cahama town, and that people have been moving as a direct response to the climate-related pressures in recent years. Some 57% of respondents who understood that people in the community had moved mentioned that it was because of drought while 55% mentioned livelihood opportunities (see Figure 6).

Figure 6. Why do people move?



Note: These are the most common answers. Respondents can provide more than one answer.

"The only way to change our present situation is changing the content of the information we have, and this can happen by changing beliefs or places."

Man who moved to Luanda

"If you give me travel fees with some pocket money, even now I will go."

Man who wants to move but does not have resources

"This drought took our ability and resources to provide for our family."

Focus group discussion participant

Over 66% of people affected by drought reported that it impacted how they thought about moving. However, moving was not widely considered to be forced, only 10 respondents that have considered moving, felt they had little choice.

The majority (61%) of respondents were not considering moving (see Figure 1). Female respondents were less likely to report that they were considering moving than male respondents (see Figure 1). Females were more likely to report experiencing difficult living conditions, with the reasons provided including challenges accessing water, and further distances to collect firewood. Females also experienced high rates of unemployment, lower rates of education, and more children and dependents in their households. There is a risk that this demographic becomes more vulnerable and less able to employment movement as a coping mechanism).

In-depth interviews with households where a member had moved, or was planning to move, indicated that the drought – and its impact on water access, food prices, livelihoods and health -- was a driver of migration. One man borrowed money from a friend to move to Luanda after losing his job; he was also affected by rising food costs, and suffered from asthma. The move enabled him to provide assistance to his family in Cahama, and his health has improved. He mentioned that Luanda provides more opportunities, and plans to bring his siblings to the capital when they finish their studies. He was also considering moving abroad. This experience suggests that moving to a city can be a springboard where people develop the aspirations and resources to engage in international migration. Another man sold a cow to finance his move to Namibia, where he had relatives and learned to drive. He returned after a year due to Covid-19 and concerns about the effect of the drought on his family. He had earned sufficient money to set up a business as a driver, and was able to improve his situation despite deteriorating circumstances in Cahama. During his absence, he provided financial assistance, but other family members took over his household

Residents of the temporary camp for displaced people in Cahama.
Photo credit: © Katalabano Research 2021

responsibilities. For another household, a mother and her children plan to move to Lubango to access cheaper food, job opportunities and due to family connections in the city. The father planned to stay in Cahama for work. For another family, the younger members intended to move their surviving livestock to the land of a relative with better access to water.

By contrast, camp residents were forced to move due to the effects of the drought, having exhausted all other options. These respondents were keen to return to their farms if and when they can, and cannot see any alternatives. The case of Cahama suggests that migration is a more feasible adaptation strategy for people who are less dependent on the climate for their livelihoods, and that it can be a successful strategy for those who have the resources to prepare and plan. For those who are most affected by environmental stressors and more tied to the land – culturally and for their livelihood opportunities – migration is not generally considered a viable long-term strategy.

Summary

Drought was the most severe environmental stressor faced by participants in this case study, and was understood to occur increasingly frequently. **People from rural communities have been forcibly displaced due to climate conditions** to locations where they access aid or find work – some migrate to towns and others (predominantly men) cross the border into Namibia. As climate change hazards increase, **mobility is set to become a more frequently employed coping mechanism** in these rural communities.

While people in towns were more insulated from the direct impacts of environmental stressors, they were still affected by water and food shortages. People from these areas were moving away but not in large numbers. **The survey found that households typically sent out individual members while others remained;** these household members typically moved to urban areas nearby, but sometimes further away to the capital Luanda. If conditions continue to deteriorate as many respondents anticipate, it is not clear whether more people will leave Cahama. Young people were more likely to move than other groups and mentioned the drought less frequently.

Given the predicted climate effects in the Cunene province, many living in rural areas will likely be left with no other option but to move to the towns and cities. However, urban areas are also already under pressure. Climate-induced mobility within and from Cunene is likely to grow, the question is more about the form that it takes, the viable mobility options that people can access, and who is left behind.

Acknowledgements

This project was led by the Mixed Migration Centre (MMC). This case study was written by Chris Horwood of Ravenstone Consult, reviewed by Jane Linekar and Bram Frouws of MMC, and edited by Stephanie Matti. MMC would like to thank the research participants for their time and generosity in sharing their thoughts. We also extend our thanks to TRi Facts, Ravenstone Consult, and Dalberg Research and their field research teams, for their work on the design and implementation of this project. ACMI's technical advisory group members provided valuable advice and input, and our colleagues from Columbia University were particularly helpful. This project was generously supported by the Ford Foundation, the Mayors Migration Council, the Open Societies Foundation, Porticus, and the Danish Ministry of Foreign Affairs.

ACMI was launched in September 2021 by the African Union Commission, World Bank, United Nations Development Programme, United Nations Framework Convention on Climate Change, and the International Organization for Migration, to bring a sharp global focus on climate-forced displacement and migration on the continent. ACMI will support the African Union and African nations to harness the potential of mobility in the context of the climate crisis, and address climate-forced displacement and migration. ACMI's report was launched at COP27 in November 2022, and more information on ACMI's work so far can be found on its website https://africa.climatemobility.org/