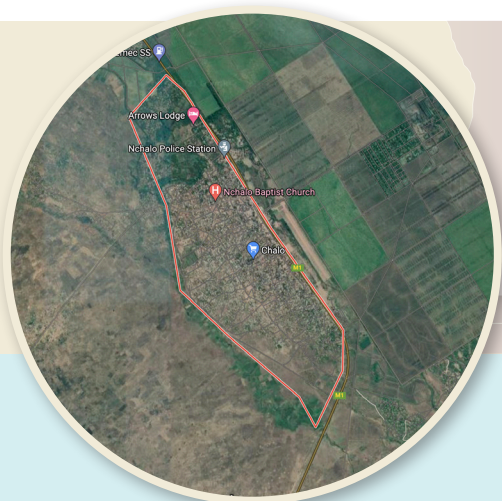
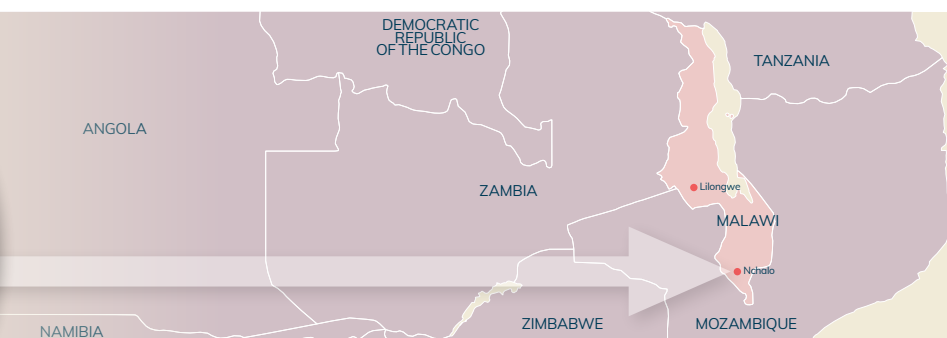


# Chikwawa, Malawi: Nchalo



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

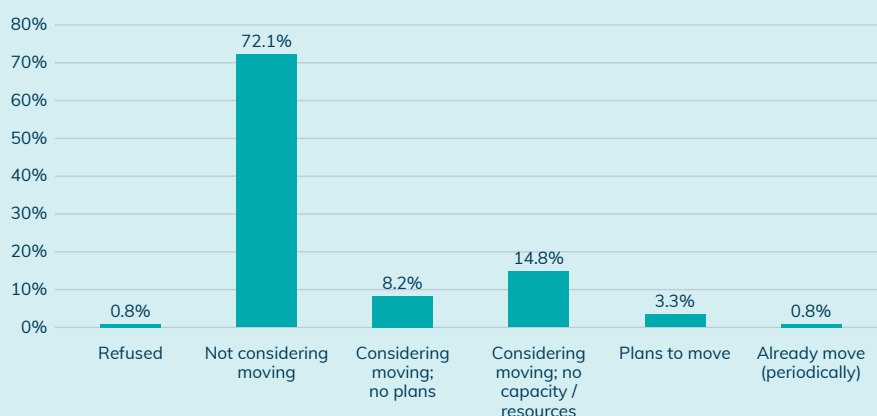
Nchalo is a town close to Chikwawa that is affected by storms and flooding, as well as drought.



## Key findings

- Common and severe effects of flooding, storms, and drought
- Some experience of temporary displacement due to flooding
- Little desire to move: most believe they have to stay because they feel attached to the land, despite expectations of worsening environmental conditions
- Uncertainty about the 'success' of migration

**Figure 1. Mobility intentions**



## Note on the data collection

A research team visited the town of Nchalo in August 2021. In total, 122 survey interviews were conducted in a section of town prone to flooding. Three focus group discussions were held with participants from households in the sample area including: young people, women aged 25 years and older, and with men aged 25 years and older. Ten in-depth interviews were conducted with people who experienced different mobility outcomes: two with people from households where someone was considering moving (one male and one female); two with people from households where someone migrated and returned (one male and one female participant); two with people who are immobile (both female); and two with people who moved (both female).

## 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 UNFCCC 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.

# Chikwawa and climate risks

Malawi has a long history of environmental hazards, with the country experiencing more than 40 climate-related disasters between 1970 and 2006. Drought and flood cycles occur almost annually. The El Niño–Southern Oscillation drives drought conditions in Malawi, while La Niña is associated with unusually high rainfall.<sup>1</sup> Weather-related disaster events are becoming increasingly frequent in Malawi.

Most recently, in March 2019, heavy rains and severe flooding in southern Malawi were caused by Cyclone Idai. Some areas were extremely affected, pushing a large number of people into poverty and food insecurity.<sup>2</sup> In 2005, a devastating drought left 40% of the population in immediate need of food aid. Drought is followed by flooding or vice versa. For example, major floods that affected Chikwawa and other districts in 2015 were followed by a severe drought in 2016. Floods in January 2019 were followed by Tropical Cyclone Idai two months later. These disasters have a cumulative effect on the population.

Strong damaging winds are also reported to frequently affect Malawi. For example, in April 2018 strong winds accompanied by heavy rains affected 1,266 households in Chikwawa district, destroying roofs and homes.<sup>3</sup> Strong winds also 1,350 households in September 2018.<sup>4</sup> The impact of winds is understood to be worsening due to climate change and deforestation.<sup>5</sup>

Chikwawa district had a population of 565,000 people in 2018.<sup>6</sup> The district borders Mozambique and has the lowest elevation in the country, at around 37m above sea level. Chikwawa and neighbouring Nsanje districts are part of the Lower Shire Valley in the Southern Region of Malawi, which experiences high rates of poverty and food insecurity.

The Shire River is the only outlet from Lake Malawi, one of Africa's largest lakes which extends approximately 600km over the Rift Valley. The Shire River Basin is a mix of forest, grassland, protected areas and game reserves. It faces a growing threat of environmental degradation stemming from developmental pressures such as rapid population growth, urbanisation, industrialisation, and deforestation both for agricultural land and for fuel. The soil on the limited arable land available is typically overused and highly susceptible to erosion and degradation during floods and droughts.<sup>7</sup> Future changes to the climate, more extreme weather events, and changes in the quantity and quality of water supply are expected to have pronounced effects on wetlands across Malawi. Crop disease is exacerbated by rising temperatures, and infestations of Fall Armyworm (*Spodoptera frugiperda*) have occurred since 2016.<sup>8</sup> This pest poses a significant threat to food security as it feeds on more than 80 plant species, including Malawi's staple crops of sorghum, millet, and maize.<sup>9</sup>



Homes in a flood-prone area of Nchalo, Chikwawa.

Photo credit: © Mavuto Kauwa, 2021

Temperatures in southern Malawi are predicted to increase. However, the predictions for future rainfall are mixed, with some models predicting drier conditions, and others wetter conditions for the same locations. While the overall amount of rain is not clear, rainfall events are set to become more intense.<sup>10</sup> Climate models project that the largest increases in temperature will coincide with the growing season (November–December), leaving many crops and livestock vulnerable to heat stress. Meanwhile, the later onset of rains would likely affect food production and increase food poverty.<sup>11</sup> Increased frequency and intensity of rain bring a higher risk of pests and diseases.<sup>12</sup>

1 World Bank. (2016) [Malawi Economic Monitor: Absorbing shocks, building resilience](#).

2 Government of Malawi (2019) [Malawi 2019 Floods Post Disaster Needs Assessment Report](#).

3 "Heavy winds displace 580 in Chikwawa", The Nation [Malawi]. 26 November 2018.

4 Government of Malawi, "Strong Winds Affect 1350 Households in Chikwawa Malawi", 12 September 2018.

5 Oxfam (2009) [The Winds of Change](#).

6 Government of Malawi (2018) [Malawi Population and Housing Census Report](#).

7 USAID (2019) [Climate Risks in Food for Peace Geographies: Malawi](#).

8 IFPRI (2018) [Malawi's New Reality: Fall armyworm is here to stay](#).

9 IFPRI (2018).

10 Future Climate for Africa (2017) [Future Climate Projections for Malawi](#).

11 Trocaire (2014) [Feeling the Heat](#).

12 FAO (2017) [Tackling Climate Change in Zambia and Malawi](#); Nanganga J., Safalaoh A.C.L. (2020) "Climate Change and Weather Variability Effects on Cattle Production: Perception of Cattle Keepers in Chikwawa, Malawi". In: Singh B. et al. (eds) *Climate Impacts on Agricultural and Natural Resource Sustainability in Africa*. Springer.

# Conditions in Nchalo

Nchalo is a small town 30km south of the district capital Chikwawa. It is located within the Lundu Traditional Authority, which has a population of 62,000 people.<sup>13</sup> A large sugar plantation dominates the small town, but much of the population practices subsistence farming. Inhabitants experience droughts and flooding frequently.

## Profile of survey participants

### 122 survey respondents

#### Gender:

63% women; 37% men

#### Age:

68% aged 25-54 years

#### Ethnicity:

75% Nsena, 13% Mang'anja, multiple others

#### Religion:

92% Christian, 4% Muslim

#### Average household composition:

6 members; 1 financial contributor;

3 members under 18 years

#### Education level completed:

19% secondary education;

62% primary education;

18% none

#### Occupation(s):

68% agriculture including 43% subsistence agriculture, 7% unemployed, others

#### Main source of food:

44% all from farming; 43% all from farming but income available for food

#### Remittances:

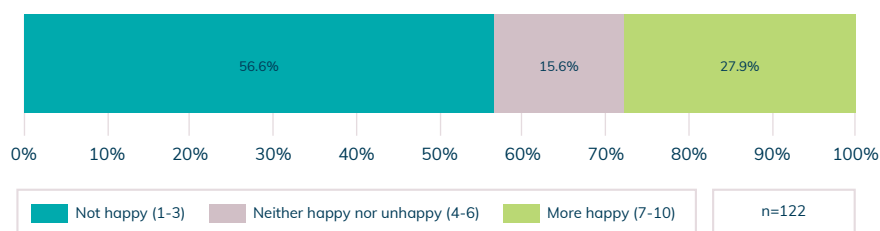
14% receive remittances

## Population profiles and perceptions

Almost half of the respondents (42%) were born in Nchalo; most of the rest came from rural areas. This was in line with the rural-urban demographic transition occurring across sub-Saharan Africa. Some 10% of respondents had lived in the community for five years or less.

The vast majority of respondents were engaged in agricultural activities. Only 10% did not depend on farming to meet their daily food needs, while 44% met all their food needs through farming. This offers an interesting profile of people living in a semi-urban community, but maintaining strong connections with farming and a heavy dependency on the land for survival. Only 12% of respondents had electricity in their own homes and 83% said they still frequently collected firewood for fuel, which is more representative of rural lifestyles.

**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.

Most respondents reported being dissatisfied with their current conditions (see Figure 2), with 47% expressing that they were 'least happy'. Low satisfaction was also expressed during the in-depth interviews and focus group discussions. A majority of survey respondents perceived themselves as being less fortunate than their neighbours in terms of income, support, and access to services.

<sup>13</sup> Government of Malawi (2018) [Malawi Population and Housing Census Report: Population Tables](#).

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*“Most people in this area have livestock but I only have chickens. This means my household has more problems than others because I have nothing to sell in an emergency. Life is hard for us compared to other households who have resources.”*

**Male farmer, aged 51**

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*“Daily life is becoming difficult now. Businesses are no longer the same here. Farming has become useless.”*

**Women’s focus group participant**

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*“I am not satisfied at all - we are living in poverty because of climate change.”*

**Female farmer, aged 40**

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Respondents reported that levels of crime and violence were very low: 89% said that there were either rarely or no incidents in Nchalo. Only 6% of respondents said there were “often” cases of crime and violence. In focus group discussions and in-depth interviews, the only mention of crime was during the youth discussion. The discussions suggested that young people were increasingly turning to crime. Repression was only considered a frequent concern by 13% of respondents, and access to services (mainly health and education) by 20%. Economic difficulties were more commonly reported, with 39% reporting it as a frequent concern, most of whom felt that the situation was deteriorating. Livelihoods in Nchalo were strongly connected to the land and natural environment, suggesting that problems with income may be linked to climate-related events.

Overall, people were not satisfied with their situation or their trajectory. Some 46% of respondents reported that they were worse off compared with five years ago. The focus group discussions revealed a high level of despondency and resignation about the deteriorating conditions. Most in-depth interviews and focus group discussions also indicated that people were far from happy with their current situation.

Despite widespread dissatisfaction and expectations of worsening conditions, 52% of survey participants expected their situation to improve in the next five years. People were generally optimistic about their own situation and that of their household; only 15% felt that they would be worse off in the future. This level of personal optimism despite the prevailing dissatisfaction about current circumstances was also evident in the other case studies.

## Common challenges

**Hunger** was identified as a main problem by all focus group discussions; hunger was associated with **floods and drought**. This suggests that current levels of consumption were less than what people want or expect. **High school dropout rates** were mentioned in all focus group discussions, with the women’s group explaining that there were numerous obstacles to education including an inability to purchase books or pay fees, children being too hungry to attend school, and schools not operating because during floods the buildings are used as refuges.

# Impacts of climate-related events

*“To survive here, we must work on farms. Without good rains, our work is always in vain. Sometimes we could have good rains but when it rains for more days, we are still in trouble because the floods come and wash our crops away. When the sun comes it is so hot that it kills the remaining crops. Truly this area is prone to all sorts of climate effects.”*

**44-year old woman**

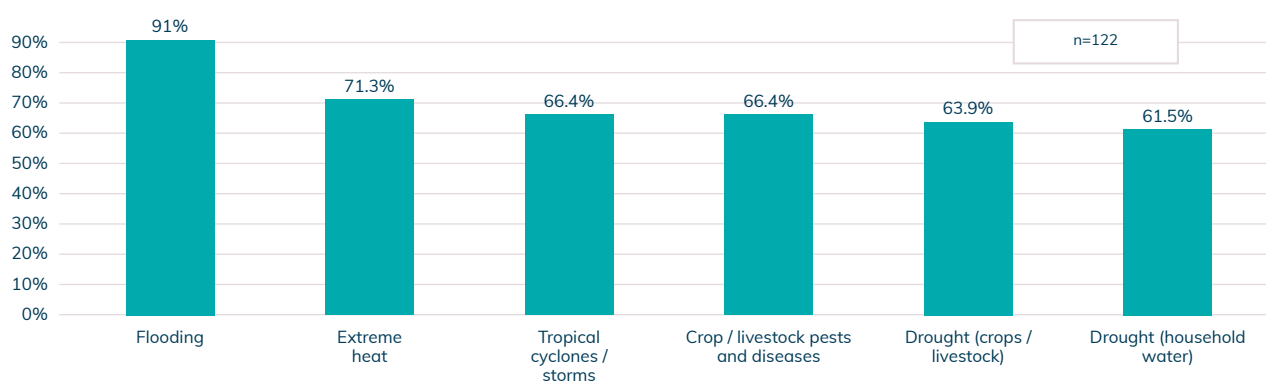
Those surveyed and interviewed in Nchalo firmly believed that environmental changes were affecting their lives and their community in a way that was previously unknown, and that these environmental changes would worsen in the future. Focus group discussion and in-depth interview participants focused on the **repeated effects of flooding and drought**, but the survey showed that the community was also **significantly affected by tropical cyclones/storms, diseases affecting crops and livestock, land degradation, unpredictable rainfall, and extreme temperatures**. The participants in this case study typically reported more types of environment-related stressors compared with other case studies (see Figures 3 and 4).

Despite being dependent on the natural environment for livelihoods, and therefore being particularly vulnerable to worsening conditions, most respondents were optimistic about their future. This is difficult to reconcile and draws attention to the complexity of attitudes and behaviours toward climate-related mobility.

**Each person surveyed had experienced flooding in the last 10 years**, with 91% affected three or more times. Some 89% reported that the flooding represented a negative shock. During in-depth interviews and focus group discussions, people told of floods washing away crops, and causing land erosion and degradation. Over 66% had experienced tropical cyclones or storms three times or more in Nchalo in the past decade. Some 80% of respondents felt that cyclones affected the community as a negative shock.

Malawi's peak temperatures, around 40°C, typically occur between October and November in the Lower Shire Valley, including Chikwawa.<sup>14</sup> Incidents of extreme heat were more frequently reported than incidents of drought. However, drought was understood to have a large impact on the community and was associated with hunger in the community. Some 64% of respondents reported that drought had negatively affected their crops three times or more in the past 10 years. The neighbouring sugar estate represented an alternate source of water during drought. Unpredictable rains were also frequently reported, and were associated with similar levels of damage to land degradation (see Figure 4). Participants observed that cutting trees was making the situation worse. Finally, crop and livestock pests and diseases were reported as frequently as storms and tropical cyclones.

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



Note: These are the most common answers.

14 USAID (2019) [Climate Risk Profile Malawi](#).

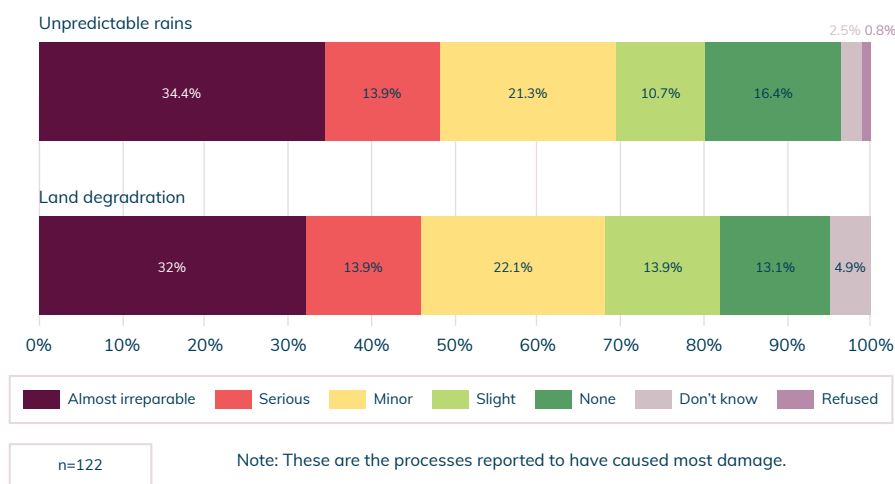


“There were times when we could easily know that after a year or two the floods will come. That is in the past, but recently the floods are just hitting us each and every year.”

Men's focus group participant

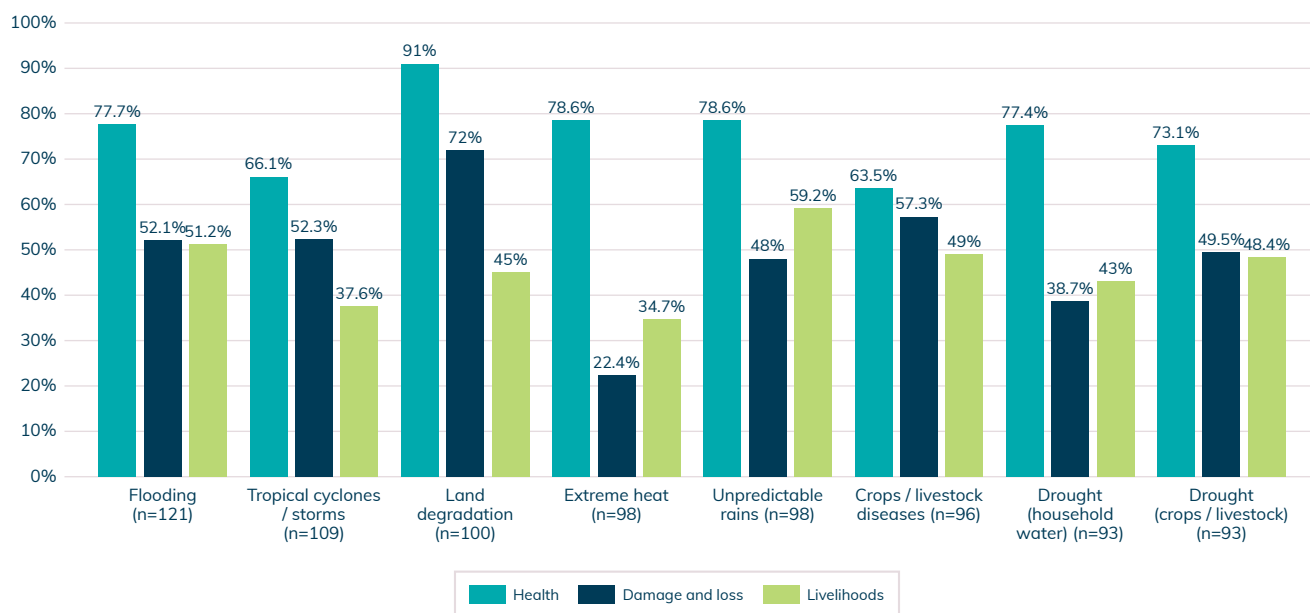
The three main effects of climate-related hazards were the same: reduced health, undermining livelihoods, and damage and loss of assets. The frequency of these effects occurred varied by hazard type and frequency (see Figure 5), yet health was most commonly cited.

**Figure 4. Climate-related processes reported to have caused damage in the last decade**



The majority of respondents that reported being affected felt that these environmental hazards had been getting worse and would continue to do so. Despite this, half of those surveyed felt their own current situation with regard to loss and damage caused by natural disasters, was improving. These apparently contradictory findings illustrate the difference between a general prognosis, and people's individual experiences and ideas about the future.

**Figure 5. Main impacts of main climate-related events**



# Responses to climate-related impacts



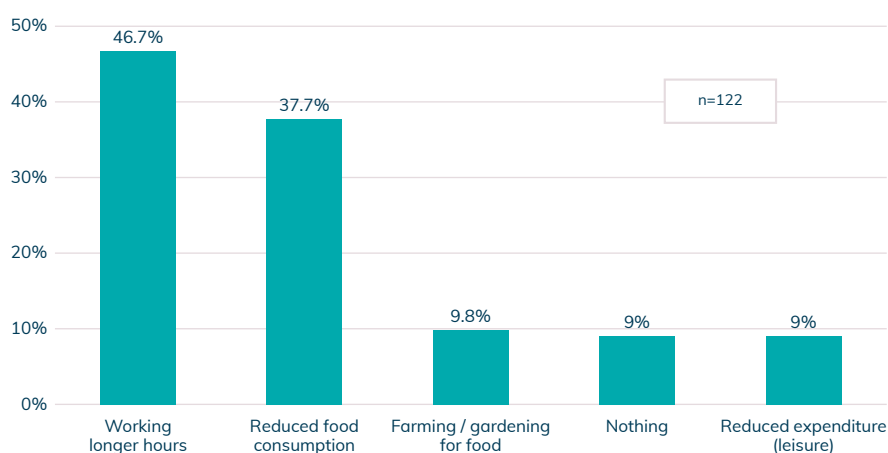
Survey interview in Nchalo, Chikwawa.

**Photo credit:** © Mavuto Kauwa, 2021

The most common strategy employed by people in Nchalo to improve their situation is to work longer hours and to reduce food consumption (see Figure 6). Most of those who increased their workload had been doing so for more than a year already; just under half felt the strategy had led to improvements in their situation. Some 36% of respondents said that they were specifically implementing this strategy because of the effects of natural disasters, while 48% mentioned that it was due to economic reasons which may, in turn, have been affected by natural disasters. By contrast, half of those that had reduced food consumption, reported that the strategy had made their situation worse. This demonstrates the risks of negative coping mechanisms.

Some focus group discussion and in-depth interview participants mentioned that they used irrigation pumps to assist their farming while others said they were conducting small businesses, or casual work at the sugar estate, alongside their primary livelihoods. Respondents mentioned that this was because farming no longer paid sufficiently and/or no longer represented a reliable source of income. Some participants mentioned that the authorities had constructed dykes, while others mentioned the sale of livestock such as goats, pigs, and chickens in times of stress.

**Figure 6. What have you talked about doing to improve your situation?**



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

Moving from the area was not considered to be a strategy given the situation. However, when asked why people do move from the area, flooding and droughts were often cited as reasons.



## Mobility

Malawi's relatively stable political climate and liberal immigration laws have made it attractive as a destination country. It now hosts a large number of refugees and asylum-seekers, as well as hosting transit migrants.<sup>15</sup> Much of the settled population in the Chikwawa district came to the area through migration over the past century including from Mozambique. In terms of destinations, Malawian nationals typically move as workers to South Africa, more recently to the United Arab Emirates, with smaller numbers of people moving to European countries and North America. Within Malawi, net rural-to-urban migration has been increasing at approximately 4.1% each year.<sup>16</sup> It is assumed that rural-to-urban migration also occurs within the Chikwawa district, and from the Chikwawa district to other large cities such as Lilongwe and Blantyre.

Most residents interviewed for this research had lived in Nchalo for decades or their whole life. However, 10% had moved to the town within the past five years, suggesting that mobility was relatively common; 49% of respondents said that someone from their household had moved away. Almost a third (29%) considered moving to be entirely normal. Participants in focus group discussions and in-depth interviews indicated that it was not uncommon for people to move.

However, people also expressed a sense that people did not move willingly. Most survey participants were not considering moving (see Figure 1), and almost half of those who were considering moving, felt that they had no choice. About half (51%) of respondents considered it exceptional for someone to move away, this was far higher than in other case studies explored as part of this study. This may suggest that movement from Nchalo, which is relatively common, felt to be forced rather than voluntary. The reasons given for leaving suggested that this might be the case. The main reasons provided for why people in general, family members or the respondent themselves consider moving from the area involved flood damage, and loss of income.

The findings of the study suggest that people typically do not move far. The most common destinations were elsewhere in the local area; three people mentioned movement to a different country, two to South Africa and one to Mozambique. Of those wanting to move, most wanted to leave permanently; although over half of the household members that had left returned within five years, and most in less than 12 months. It was not clear from the data whether any particular age group or gender were considered more likely to move away.

## Impact of climate-related events and mobility

When people do move from Nchalo, it is primarily in response to climate-related events. Flooding was the most commonly cited reason for movement followed by loss of income, a small number also indicated drought. That movement more closely resembles displacement rather than migration was supported by the relatively rapid return of people. Focus group discussion and in-depth interview participants also indicated that people left during heavy rains, and returned once water levels had fallen. Despite the accumulated and significant environmental stressors affecting Nchalo residents, long-term migration does not seem to be a common response.

In-depth interview participants expressed concerns about finding land or work opportunities elsewhere. One person who stayed behind after their family moved away, had not received any news of their family since. A couple that moved to Sekeni in the Nsanje district reported the area was also prone to flooding, and that their situation had not improved significantly. One interviewee suggested that it took a long time to adapt to a new location, so it was difficult to assess if their move had been successful. Another interviewee suggested that living conditions had deteriorated everywhere, so it was hard to tell if they were doing better in their new place. Two interviewees – including one who had moved closer to a trading centre – suggested they would prefer to live in Chikwawa town rather than the more rural areas they moved to, suggesting that migration had sometimes encouraged aspirations to move further, and that

15 IOM (2014) [Migration in Malawi: Country Profile 2014](#).

16 de Brauw, A. et al. (2014) "[The Role of Rural–Urban Migration in the Structural Transformation of Sub-Saharan Africa](#)," *World Development*, 63(C).

urban centres were considered to provide more opportunities. Overall there was a high degree of uncertainty about the opportunities afforded by migrating.

## Summary

Poverty rates are high in Malawi with 51% living below the national poverty line.<sup>17</sup> Combined with population growth, a heavy reliance on rainfed agriculture and a high disease burden leave the population vulnerable to climate shocks, variability and change. Nearly all Malawians (92%) depend on rain-fed sources of water, which are heavily affected during flooding and droughts.<sup>18</sup>

**Most residents of Nchalo were dependent on agriculture and many were subsistence farmers, which exposed them to slow-onset environmental stressors in addition to frequent rapid-onset events.** However, ties to and dependence on the land were typically viewed as stronger reasons to stay, than the push to move due to environmental stressors. **People were generally immobile, and were typically also accepting of immobility,** given the existing barriers to movement.

Most people from Nchalo who participated in this study concur with scientific projections that the environmental situation has been getting worse in recent years, and is likely to deteriorate further in future. Despite this, there was **little evidence of successful measures to combat the effects of these changes.** Movement can be expected to continue and increase, as the land becomes uninhabitable.

What kind of movement will take place? Urbanisation is likely, despite some evidence of rural–rural movement from Nchalo, and some cross-border movement into Mozambique and South Africa. Unless there is a substantial shift in strategies, there is a risk that the most likely movement will be forced displacement for survival. There is currently very little will to move. Few even perceive movement away from Nchalo as a possible solution. Instead, people are typically hopeful that the situation will improve, as was observed in other locations. This raises more important questions about **what environmental stressors and to what scale would compel people to move? Will people only decide to move when it is too late, and their resources are exhausted?**

<sup>17</sup> National Statistical Office (2021) [2020 Malawi Poverty Report](#).

<sup>18</sup> Trocaire (2014).

## Acknowledgements

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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.climate-mobility.org/>