International Migration

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Trust Me, Stay: Institutional Trust, Drought Perceptions and Migration

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ABSTRACT

Do negative perceptions of droughts increase individual's preparedness to migrate across national borders and if so, does institutional trust mediate such relationship? Only a small number of studies suggest that drought perceptions increase international migration. Yet, these insights remain to be empirically tested in Africa using a large-*N* study. We examine this claim and explore if trust in institutions can mediate this relationship. To explore this, we distinguish between trust in partial institutions that enact laws and policies, trust in impartial institutions that enforce policies and generalised in all institutions designed to create and enforce laws on the intent to emigrate. We aim to fill both gaps within the literature by using survey data across Africa between 2016 and 2018. Our results suggest that perceived intensification of drought severity over time is a motivating factor for emigration; albeit we also find robust evidence that trust in partial institutions can mediate this relationship.

1 | Introduction

As the planet continues to warm, the rising frequency and strength of extreme weather events will further disrupt and transform the natural environments inhabited by every living species. Climate change is responsible for most of the current environmental changes taking place worldwide (IPCC 2022). As a result, some scholars and policymakers have begun to 'sound the alarm' about the possible impacts that human mobility could unleash on societies across the world from sudden (e.g., floods) and slow-onset (e.g., droughts) environmental events exacerbated by climate change (Bettini 2013; Castles 2002). In 2018, UN Secretary General affirmed that 'more and more people will be forced to migrate from their homes as the land they depend on becomes less able to support them' (UNFCCC 2018, 1). This is especially relevant to Africa, a continent that has warmed faster than the global average, and where West, East and Central regions have experienced a significant augment of drying as well as more frequent agricultural and ecological droughts (IPCC 2022).

These claims and facts have spurred an increased interest over whether and how environmental changes can influence migration flows (Black et al. 2011; Doevenspeck 2011; Dun 2011; Gray and Mueller 2012; Koubi, Spilker, Schaffer, and Bernauer 2016). The bulk of academic literature on environmental migration has primarily focused on the impacts of objective push factors, which are based on collected primary and/or secondary data of the observable phenomena (Nicoletti et al. 2023; Salisu and Salisu 2025). This has left a knowledge gap regarding environmentally motivate migrants—people who, based on their subjective knowledge (personal experiences, emotions, feelings, etc.) of deteriorating environmental or climatic conditions around them, 'may leave' to escape eventual consequences. Only a handful of recent empirical articles have begun to address this gap (Hunter et al. 2015; Koubi, Spilker, Schaffer, and Böhmelt 2016).

Whereas subjective or objective information shapes an individual's decision to migrate, the literature on environmental migration largely overlooks the potential mediating role that

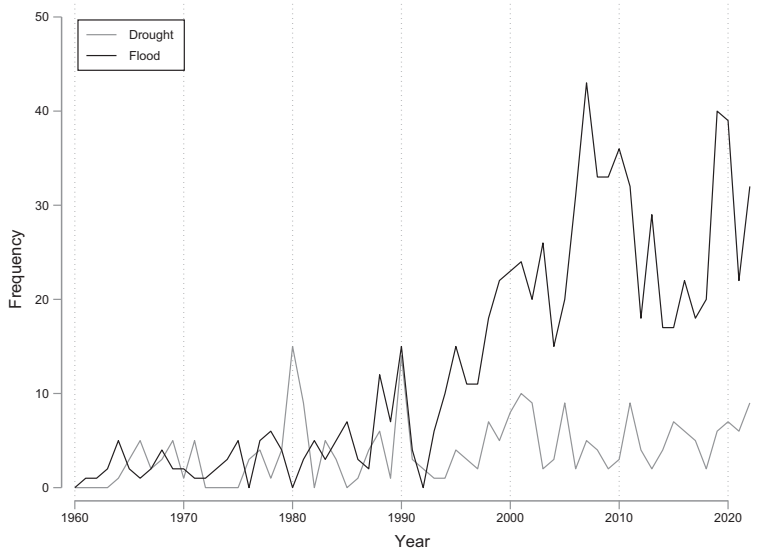

FIGURE 1 | Frequency of floods and droughts in sampled countries, 1960–2022. *Source:* EM-DAT (2024).

trust in government institutions or actors may play in the decision to move. For instance, Africans have high expectations about their government institutions in relation to climate change. The most recent survey data from the Afrobarometer suggests that 44% of Africans who self-report having heard about climate change, believe that their government is the primary responsible for trying to limit climate change and reduce its impact. Nearly three-quarters of those aware of climate change also agree that it is important for the government to take immediate steps to mitigate it, even if it entails costs or economic harm (Logan and Amakoh 2022). Moreover, when asked how their own governments were addressing the climate change problem, about 48% responded that their government is handling it badly and about 77% asserted that their government needs to do a lot more to limit climate change (Afrobarometer 2025). Because of this, it is our understanding that peoples' lack of trust that government institutions will fail to fulfil these expectations may increase the desire to migrate. Along the same line, Hiskey et al. (2014) examine whether people's perceptions about their socioeconomic and political structural environment have an impact on migration aspirations and find that when people have hope that the situation in their country will improve, they are less likely to migrate.

While deteriorating environmental conditions have been shown to drive internal migration, we decided to focus on international migration because trust in political institutions has a more direct influence on it. In contrast, internal migration is often more accessible to individuals and can be influenced by local institutions and various other factors (Aliyev and Gasimov 2020; Cirillo et al. 2022). Considering this, our study aims to make two contributions to the existent literature. First, we propose a theoretical framework associated with drought perceptions and individual preparedness (e.g., getting visa, contacting a smuggler, saving money, etc.) to migrate internationally. While preparing may not translate into actual migration, it involves taking concrete steps or actions towards leaving, rather than just contemplating the idea of leaving one's country. In other words, migration preparedness focuses on executing a plan by allocating time, capital and other resources involving a strong psychological commitment to leave. Our second contribution explores whether institutional trust can be a mediating factor between drought perceptions and migration preparedness. Borrowing from Kulin and Johansson Sevä (2021), we differentiate between trust in partial institutions that enact laws and policies and trust in impartial institutions that enforce policies to assess if partial or impartial trust can mediate the relationship between worsening drought perceptions and international migration.

The next section presents our theoretical arguments. We then describe our research design and data, followed by the results and discussion of our findings. The final section presents our conclusions and proposed ways forwards.

2 | Drought Perceptions and Migration

Objective knowledge of climate change-induced environmental events has emerged as a possible push factor behind the decision to migrate, particularly in least developed countries (Mendelsohn et al. 2006). Worldwide, environmental events internally displace twice as many people as armed conflict or socio-political violence (IDMC 2019). In Africa alone, floods outrooted more than 14 million people from 2009 to 2015—an average of 5000 per day (IDMC 2016). Figure 1 illustrates the increase of floods and droughts across the 33 African countries in our sample from 1960 to 2022. If we take the 1990–2022 period, flood average occurrence was 21.87, a sevenfold increase from the mean frequency of events (3.02) of the previous 32 years (1960–1989). Although at a lower rate, the total number of droughts also increased. During the same timeframe, the mean number of droughts was 5.03, double the average (2.07) from the previous 32 years. Due to their nature, floods give people little or no time to make long-term mobility decisions. As a result, displacement is more likely to be forced, localised and temporary—often to relief sites (Koubi, Spilker, Schaffer, and Bernauer 2016; Perch-Nielsen et al. 2008; Robalino et al. 2015). By contrast, droughts occur gradually during a longer period, which often allows people

time to plan for long-term mobility (Hauer et al. 2020; Hunter et al. 2015; Mastrorillo et al. 2016; McLeman and Hunter 2010; Mueller et al. 2014).

Conversely, a small but growing number of scholars have begun to explore the possible relationship between subjective knowledge of environmental events and migration (Robalino et al. 2015; Udmale et al. 2014; Van Praag 2021; Nguyen et al. 2024). Environmental perceptions are socially constructed (Boholm 2003; Brosch 2021). They are understood and judged in 'terms of emic, locally, defined values and concerns' (Stoffle et al. 1991, 612). Therefore, perceptions differ across temporal and spatial scales and are influenced by the socio-economic and political dynamics in which they take place (Bempah and Øyhus 2017). For instance, recent survey data suggest that 77% of Malawians and 76% of Basothos believe that climate change is making life much worse, while only 10% of Moroccans and 12% of Mozambicans agree with that same statement (Afrobarometer 2019). Furthermore, perceptions also vary within country regions: while 0% of Moroccans respondents from the Fes-Meknes region believe that climate change is making their life much worse, 48% of respondents from the continuous region to the south, Deraa Tafilalt, believe so. While these perceptions sometimes do coincide with scientific observations (Manandhar et al. 2015; Rankoana 2018), they often do not (Abid et al. 2019; Budhathoki 2017).

Recent empirical evidence from Africa suggests that people form their environmental perceptions in different ways (Gonzalez and Sanchez 2022). First, perceptions related to environmental changes are shaped by education, media and scientific discourses, which are often challenged and play an important role in exaggerating or downplaying environmental hazards (Zehr 2000). In this case, the literature suggests that, in general, people use a rational approach to understand information regarding climate change through abstract symbols, words and numbers in a logical process (Epstein 1994; Damasio 1999). Second, others perceive environmental risks through an 'affective and intuitive approach that encodes reality in concrete images, metaphors and narratives linked in associative networks' (Leiserowitz 2006, 48), which often comes in the form of religious beliefs, political ideology or sociocultural influence. Finally, there is empirical evidence suggesting that people 'perceive' or 'understand' environmental changes mostly by making judgements based on familiarity with an event or situation or their personal relationship with nature (Vining et al. 2008). For instance, common events (e.g., car accidents) tend to be viewed as low risk, while rare events (e.g., droughts) are viewed as higher risk—sometimes even overestimating such risk (Stone 2014). In this context, fear can amplify people's risk perceptions and influence their actions and decision-making processes in response to it.

Subjective and objective knowledge sometimes match (Abid et al. 2019), but other times do not (De Longueville et al. 2020). Education seems an important variable associated with such decision-making process. In Africa, Helbling et al. (2021) observed that individuals who are literate about the causes and long-term consequences of climate change show a stronger motivation to migrate across national borders. Similarly, exploring the desire to migrate based on perceptions by people facing droughts in Morocco, Van Praag (2021) exposed that international migration is more appealing to young people, while older individuals and those who report being less affected by environmental changes perceive the need to migrate as a less appealing option.

Regardless of whether subjective and objective knowledge align, people often act based on their perceptions, particularly when these are negative (Mızrak and Turan 2023). For instance, a person who is afraid of flying will likely avoid travelling by airplane. We believe, as have others, that the same is true for negative environmental perceptions and migration (Koubi, Spilker, Schaffer, and Bernauer 2016; Koubi, Spilker, Schaffer, and Böhmelt 2016). In a study about local perceptions in the Maldives, Stojanov et al. (2017) found that over 50% of the population that 'perceive future sea-level rise to be a serious challenge at the national level accept migration from islands to other countries as a potential option' (370). Droughts are slow-onset events that kill crops and livestock and can, indirectly, result in loss of human livelihoods. Case in point, a drought-induced famine killed about 260,000 Somalis between 2010 and 2012 (BBC 2013). Similarly, livestock and vegetation were severely damaged during the 2016 Ethiopian drought. A pastoralist described the impact: 'I had 400 sheep and 100 cattle'. Unlike floods, droughts can persist over months or even years and are not localised. Take Nigeria as an example, only about 8% of its total land area is susceptible to high, medium or low flood risk combined (Njoku et al. 2020). In contrast, about 83.6% of the country is prone to droughts (UNCCD 2018). Given their temporal extensiveness, droughts inflict prolonged stress and destruction, straining individual coping abilities. Still, due to their slow-onset nature, it is challenging for individuals to accurately assess its severity. Yet, the increase in frequency of droughts in the region during the last decades observed in Figure 1 and its cumulative effect is putting people on alert. Based on these arguments, we propose the following hypothesis:

Hypothesis 1. *Worsening droughts perceptions should be positively associated with an individual's preparedness to leave her country.*

3 | The Role of Trust in Partial and Impartial Institutions on the Relationship Between Drought Perceptions and Interntional Migration

Although there is extensive academic literature on the determinants of migration decision-making, limited research has focused on the impact of trust in institutions on the intent to migrate (Bertocchi and Strozzi 2008; Aliyev and Gasimov 2020). In-depth interviews with Romanian and Spanish migrants in Norway by Bygens and Flipo (2017) suggest that both groups cited similar political reasons for migrating, including a lack of trust in the political system, corruption and a bleak outlook. Similarly, Liu et al. (2024) found that, while trust in Croatian institutions increases the desire of migrants abroad to return to their homeland, there is mixed support for the idea that institutional trust is a key factor in the decision to leave one's country.

Our contribution is to explore the potential mediating role that institutional trust may play in migration preparedness among those who perceive that droughts have worsened.

Although some empirical evidence suggests that negative perceptions of environmental events may increase international migration, it remains unclear whether positive perceptions of institutional trust can influence the decision to stay. While most theoretical arguments about environmental migration acknowledge the important role of political structures in mediating this relationship, to the best of our knowledge, such a claim has not been empirically tested. Making a related claim, Helbling and Morgenstern (2023) find that positive perceptions of structural factors—such as political civil liberties, the rule of law, welfare, political corruption and economic conditions—lead to lower migration aspirations in Africa. However, the decision to leave one's country is not only determined by physical exposure and the perception of structural factors but also by the perceived level of trust in the capacity that government institutions have to anticipate, manage and recover from droughts. Migration is a high-cost response to droughts, and it will hinge on the lack of alternative coping strategies. We argue that the gradual progression of droughts allows sufficient time for institutions to implement necessary coping, mitigation and adaptation measures. When people perceive these measures as effective and sustainable over time, it may reduce their inclination to migrate. In this sense, environmental events often serve as a litmus test for governance and leadership. Citizens often evaluate how their leaders and institutions handle disaster prevention, relief efforts and reconstruction (You et al. 2020). Therefore, the way institutions manage droughts will influence the degree of trust bestowed on them since most citizens evaluate past performances to form expectations about the future ones (Weinert 2018; Schuitema and Bergstad 2018). Therefore, institutional trust serves as a stabilising force, reducing the desire for international migration by reinforcing confidence in governance, social support systems and national cohesion.

High levels of institutional trust should decrease migration preparedness for the following reasons. First, institutional trust reflects confidence in the stability and reliability of governance within a country (Norris 2017). When people believe that their institutions can effectively reduce the exposure and risks of future droughts through continued mitigation and adaptation policies, they may feel more secure in their current living situation and less inclined to seek opportunities elsewhere. Second, trust in state institutions may lead individuals to believe that their government will provide support in times of drought-related stress. This expectation of support, whether through social welfare programmes, legal frameworks, economic assistance or disaster relief efforts, can reduce the perceived necessity of migrating to seek better conditions or opportunities elsewhere during environmental stress. Therefore, trust in state institutions might serve as a stabilising force, diminishing the perceived need or desire for international migration by fostering confidence in governance, support systems and social cohesion within their country.

Nonetheless, not all institutions are the same. As Kulin and Johansson Sevä (2021) suggest, combining individual trust indicators into a single measurement can restrict the ability to compare the effects of trust on different types of government institutions. One argument is that, partial government institutions, those responsible for creating laws and policies, such as parliaments, politicians and political parties play a key role during or after a drought. Leaders from partial institutions tend to visit affected areas to express support or declare emergencies; for instance, they often experience increased approval ratings (Bechtel and Hainmueller 2011; You et al. 2020). After a disaster, a 'rally-around-the-flag' effect tends to bolster trust in partial institutions, particularly when amplified by constant media coverage (Baker and Oneal 2001; Groeling and Baum 2008). However, partial trust can erode if leaders of these institutions are perceived as failing in their responsibilities. For example, during his first term in office, U.S. President Trump faced a decline in approval ratings after his inadequate response during Hurricane Maria (Agiesta 2017). Fluctuations in partial trust often depend on how responsibility for environmental events is attributed. Leaders typically emphasise that their government did not cause the disaster while highlighting efforts to deliver public goods to affected populations (You et al. 2020). This approach aims to avoid blame while claiming credit.

A counterargument is that, impartial institutions, those tasked with implementing and enforcing these policies, such as the legal system, government bureaucracy and the police, can be seen as a less politicised alternative to mitigate against droughts when there is a lack of trust in partial institutions because they are perceived as ineffective. Take the legal system for example. Individuals may trust their court system to act as a check between the legislative or executive branch regarding laws pertaining to drought-related mitigation or adaptation policies. Alternatively, they might view the court system as a final resource to address personal environmental-related grievances. A case in point is the current case *Tsama William and Others v. Uganda's Attorney General and Others* (2020), where victims of recurrent landslides in Bududa district filed a lawsuit against the Attorney General, the National Environmental Management Authority and the Bududa Local Government for failing to mitigate against recurrent risks of landslides caused by extreme weather events.

Our expectation is that higher levels of partial trust have a stronger effect in mitigating migration preparedness since political institutions are at the forefront of initiating and driving systemic change necessary to address the climate crisis effectively trough policy and legislation, international agreements, resource allocation and prioritisation and regulation of key industries. While we impartial institutions also play a crucial role, these institutions are slow to adapt (in the case of the legal system) or in some cases can be co-opted by political institutions (in the case of the police and bureaucracy). Nonetheless, our expectation is that higher levels of partial and impartial trust make individuals less prone to make active preparations to leave their country.

Hypothesis 2. *Impartial trust should mitigate the effects of worsening drought perceptions on international migration preparedness.*

Hypothesis 3. *Partial trust should mitigate the effects of worsening drought perceptions on international migration preparedness.*

4 | Data and Research Design

In this section, we describe the dataset, operationalisation of variables and models used. We rely on a cross-national public opinion dataset from the Afrobarometer to test our hypothesis. The Afrobarometer is the leading source for public attitudes across Africa on a wide variety of topics. Specifically, we employ data from Round 7 (2016–2018), which is the first time the Afrobarometer survey included climate change-related questions. Round 7 includes responses from 45,803 individuals across 33 countries (see online supplemental material, Table S1). Our sample design is stratified by first-order political sub-national units of government and by urban or rural location for two reasons. First, this reduces the probability of different ethno-linguistic groups being left out of the sample. Second, it guarantees that individual perceptions of floods and droughts belong exclusively to the region where the survey took place (Afrobarometer 2019). On the technical side of things, stratification reduces the standard error of the estimates and works most effectively when the variance of the dependent variable is smaller within the strata than in the sample. Given that our main interest lies in individuals' migration preparedness compared to those who do not, we estimate several logistic regression models given the dichotomous nature of our dependent variable.

4.1 | Dependent Variable

4.1.1 | Migration Preparedness

We focus on international migration because we believe that high levels of trust in institutions can reduce international migration. However, the same mediating does not apply to internal migration as individuals migrating within a country remain under the governance of the same institutions. Moreover, because not everyone that considers leaving their country does so, rather than focus on the more conventional approach of a respondents' *desire* or *aspirations* to migrate, our dependent variable captures only individuals who self-report being a step closer to leaving their country. In other words, migration preparedness focuses on executing a plan by allocating time and capital, which in turn, involves a firmer psychological commitment to leave. The Afrobarometer survey data reveal a wide gap between those who do aspire to leave versus those who are taking concrete steps toward migration. From the total number of people who dream of leaving their country, 59.8% are not making any plans or preparations, 29% are planning to move and only 8.9% are actively preparing to leave (Afrobarometer 2019). Thus, our sample is a subgroup taken only from those who acknowledge that actively be preparing to leave their country. We code intent to migrate dichotomously where 1 takes the value of 'You are currently making preparations to move'; 0 if otherwise.

4.2 | Key Explanatory Variables

4.2.1 | Drought Perceptions

Our key explanatory variable gauge individual self-reported perceptions about changes in the severity of droughts over time: 'In your experience, over the past 10 years, has there been any change in the severity of the following events in the area where you live? Severity of [droughts]'. Reponses are operationalised on a Likert scale where 1 = 'much less severe', 2 = 'somewhat less severe', 3 = 'stayed the same', 4 = 'somewhat more severe' and 5 = 'much more severe'. *Ceteris paribus*, we expect individuals with a more pessimistic outlook on drought conditions to be more likely to prepare to leave their country.

4.2.2 | Conditioning Variable: Partial and Impartial Trust

We use three different measures of institutional trust, derived from questionnaire items that asked respondents about their level of trust in various institutions: 'How much do you trust each of the following [president, parliament/national assembly, ruling party, the police, courts of law]?' Our first variable, *partial trust*, combines trust indicators for the president, parliament and ruling party. The second variable, *impartial trust*, is constructed by combining trust indicators for the police and courts of law.

4.2.3 | Controls

Several controls are included in our analysis. We incorporate a measurement for respondents' *age* and level of *higher education* since recent studies indicate that young and highly educated Africans are more likely to leave their country in search of better opportunities (Appiah-Nyameky Sannye et al. 2019). We include the respondent's *gender* since the latest IOM data suggest that about 53% of all African international migrants are male (Hovy et al. 2020) and Hunter et al. (2015) identify gender as an important gap in the environment–migration literature.

Furthermore, we also include the Afrobarometers *lived poverty index (LPI)* given that environmental events disproportionately affect poor people and can also constrain the expenses associated with cross-border migration (Gray and Mueller 2012; Hallegatte et al. 2020). The LPI measures respondents' levels of basic needs deprivation by asking how often they or their families went without basic necessities—enough food, water, medical care, cooking fuel and a cash income—during the previous year (Mattes et al. 2016; Appiah-Nyameky Sannye et al. 2019; Borderon et al. 2019). Similarly, *remittances* are known to be strongly associated with mitigating the costs associated with international migration (Taylor 1999). About 58% of the population in sub-Saharan Africa lives in rural areas and about 50% are employed by the agriculture sector, which arguably should make individuals whose livelihoods depend directly on favourable environmental conditions more likely to migrate if they perceive a grim environmental future (Bezu et al. 2020; Doevenspeck 2011). However, residents from rural areas also tend to be more climate illiterate, which in turn should dissuade their intention to migrate (Dumenu and Obeng 2016). Hence, we incorporate the variable, *eco-work*, to capture respondents engaged in agricultural, fishing or forestry occupations. We assign a value of 1 to those whose primary occupation falls within these sectors and 0 if otherwise.

Finally, we include three separate dichotomous variables to account for a variety of *social, political* and *economic* push and pull

factors to account for decades-long findings about the complex interconnectedness between them (Kuhnt 2019). For each category, if the respondent self-reported that a push or pull factor was the main reason for wanting to leave their country, we assign a value of 1; 0 if otherwise. For a complete variable coding scheme and frequency distribution, see online supplemental appendix (Table S2).

5 | Main Results

Table 1 displays the coefficient effects of drought perceptions on partial and impartial trust. The first three models focus on partial trust, while the subsequent three models examine impartial trust. To account for potential economic, social and political push and pull factors, we introduce each factor into the models individually to address collinearity concerns. The final two models incorporate all three push and pull migration factors, with Model 7 controlling for partial trust and Model 8 controlling for impartial trust. All models are estimated using conditional fixed effects.

When considering drought perceptions alone, we find a strong and statistically significant positive relationship across several models: Individuals who perceive that droughts have become much more severe over the past 10 years are more likely to express an intention to leave their country compared to those who perceive no change. None of the other categories of drought perceptions report a statistical significance. This finding suggests that only individuals with more pessimistic perceptions of droughts are more likely to actively consider migration. It also supports our argument that the gradual onset of droughts may provide individuals with the opportunity to proactively plan for departure, rather than only focuse on staying to mitigate and adapt. Therefore, we find support for our first hypothesis (Hypothesis 1), which postulated that worsening drought perceptions should be positively associated with an individual's preparedness to migrate. In contrast, when we analyse the results for partial and impartial trust separately, we find no statistically significant association between any of the categories and their impact on migration preparedness across any of our models.

We now present the results evaluating our second hypothesis: That high levels of impartial trust should decrease migration preparedness among individuals with more pessimistic perceptions of droughts. We introduce interaction terms to our models to examine if migration preparedness from drought perceptions can subside by trusting government institutions. As with our previous finding, we only find statistically significant results among people who perceive that droughts have gotten much more severe over time: in three of our four models, we find some, although weak statistical evidence of a negative and statistically significant relationship between having 'somewhat' trust in impartial institutions (courts of law and police) and migration preparedness ($p < 0.05$). However, the coefficient of this interaction term fails to reach statistical significance in our full model (Model 7). Furthermore, we find no statistical association between having 'a lot' of trust in impartial institutions and holding a pessimistic view of droughts with regard to migration preparedness.

We now shift our attention to the interaction term evaluating our final hypothesis: the effect between partial institutions (president, parliament and ruling party) and drought perceptions on migration preparedness. We also find some evidence that having 'somewhat' trust in partial institutions decreases migration preparedness among individuals who perceive that droughts have gotten much more severe over time. However, as before, this term fails to reach statistical significance in our full model (Model 8). Nonetheless, we find robust evidence that having 'a lot' of trust in partial institutions and holding a pessimistic view of droughts decreases migration preparedness across all four models with different specifications.

To better understand the substantive effects of our robust interaction term, we calculate the average marginal effects (Model 7). Figure 2 illustrates the marginal effects of having 'a lot' of trust in partial institutions on international migration preparedness across varying levels of drought perceptions. Respondents with 'a lot' of trust in partial institutions, consistently across first-level administrative political boundaries, are less likely to make preparations to emigratre, when compared to respndents that report having no trust at all (baseline). Technically speaking, under perceptions of much more severe droughts, the average percentage point change in international migration preparedness decreases by −0.073 when shifting from no trust to the highest level of trust in partial institutions.

Most of our control variables are in line with our expectations. In line with previous literature, we find young Africans, particularly males and those with a higher level of education, are more likely to leave (Appia-Nyamekye and Rocca 2019; Borderon et al. 2019). Recent academic literature from Africa suggests that remittances often help households mitigate and adapt against the negative effects of droughts (Redehegn et al. 2019). However, our results indicate that the more an individual self-reports being dependent on remittances from abroad, the more likely they are to actively plan to leave their country. This can be associated with various migration facilitators: on one side, people receiving remittances could obtain more easily the required money to start the migration journey (Taylor 1999). On the other side, most people receiving remittances regularly is due to strong ties already established with networks of the desired destination, which facilitates job search and initial housing (Munshi 2003). We also find that people who depend on the land for their livelihoods are less likely to leave their country. In this regard, Anu et al. (2020) propose that after facing the impacts of environmental events, rural dwellers are more likely to opt for other coping strategies, such as reducing the consumption of food sources or asking for remittances to mitigate the impact. Finally, our results confirm decades of empirical studies that have identified economic (Constant and Massey 2005; Grogger and Hanson 2011) and social (Ng'ang'a et al. 2016) push and pull factors as common drivers of migration. Our results also indicate that social factors are by far the most significant drivers for respondents in our sample. This result is in syntony with those theories that stress that strong social networking in the destination country is a major pull factor for migrants (Munshi 2003, 2014).

TABLE 1 | Logit models: Drought perceptions on international migration preparedness in Africa.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							Partial	Impartial
Type of trust		**Partial trust**			**Impartial trust**		**Full**	**Full**
Drought perceptions								
Somewhat less severe	0.217	0.221	0.230	0.223	0.209	0.218	0.214	0.207
	(0.172)	(0.171)	(0.171)	(0.187)	(0.186)	(0.186)	(0.174)	(0.188)
Stayed the same	−0.108	−0.114	−0.108	−0.137	−0.165	−0.178	−0.150	−0.169
	(0.160)	(0.160)	(0.160)	(0.173)	(0.172)	(0.172)	(0.162)	(0.175)
Somewhat more severe	−0.037	−0.012	−0.010	−0.052	−0.070	−0.070	−0.036	−0.079
	(0.167)	(0.166)	(0.166)	(0.181)	(0.180)	(0.180)	(0.169)	(0.183)
Much more severe	0.368**	0.369**	0.372**	0.238	0.213	0.215	0.335**	0.199
	(0.154)	(0.153)	(0.153)	(0.164)	(0.163)	(0.163)	(0.156)	(0.166)
Trust								
A little	0.052	0.059	0.067	−0.164	−0.203	−0.200	0.052	−0.208
	(0.171)	(0.170)	(0.170)	(0.175)	(0.174)	(0.174)	(0.173)	(0.178)
Somewhat	−0.029	−0.015	0.0014	−0.033	−0.054	−0.043	−0.041	−0.059
	(0.171)	(0.170)	(0.169)	(0.169)	(0.168)	(0.168)	(0.174)	(0.172)
A lot	−0.034	−0.032	−0.006	−0.145	−0.178	−0.158	0.007	−0.157
	(0.155)	(0.154)	(0.154)	(0.162)	(0.161)	(0.161)	(0.159)	(0.166)
Interaction terms								
Somewhat less severe*a little	−0.250	−0.269	−0.269	−0.200	−0.172	−0.169	−0.245	−0.209
	(0.231)	(0.230)	(0.230)	(0.241)	(0.240)	(0.239)	(0.233)	(0.243)
Somewhat less severe*somewhat	−0.247	−0.271	−0.275	−0.386*	−0.388*	−0.401*	−0.230	−0.345
	(0.229)	(0.228)	(0.228)	(0.230)	(0.229)	(0.229)	(0.232)	(0.232)
Somewhat less severe*a lot	−0.260	−0.255	−0.280	−0.186	−0.165	−0.185	−0.271	−0.157
	(0.209)	(0.208)	(0.208)	(0.223)	(0.222)	(0.222)	(0.211)	(0.225)
Stayed the same*a little	0.018	0.029	0.020	0.184	0.214	0.232	0.064	0.225
	(0.212)	(0.211)	(0.211)	(0.220)	(0.219)	(0.219)	(0.215)	(0.223)
Stayed the same*somewhat	0.146	0.144	0.139	0.105	0.125	0.145	0.210	0.139
	(0.214)	(0.213)	(0.213)	(0.215)	(0.214)	(0.214)	(0.217)	(0.218)
Stayed the same * a lot	0.027	0.027	0.023	−0.033	0.005	0.016	0.053	−0.003
	(0.197)	(0.196)	(0.196)	(0.210)	(0.210)	(0.209)	(0.200)	(0.213)
Somewhat more severe*a little	0.143	0.113	0.114	0.127	0.160	0.160	0.153	0.160
	(0.219)	(0.218)	(0.217)	(0.230)	(0.229)	(0.229)	(0.221)	(0.232)
Somewhat more severe*somewhat	−0.049	−0.078	−0.083	−0.089	−0.072	−0.078	−0.016	−0.034
	(0.218)	(0.217)	(0.217)	(0.222)	(0.220)	(0.220)	(0.221)	(0.224)
Somewhat more severe*a lot	0.010	−0.014	−0.029	0.114	0.141	0.133	−0.001	0.156
	(0.203)	(0.202)	(0.202)	(0.216)	(0.215)	(0.215)	(0.205)	(0.219)

(Continues)

TABLE 1 | (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							Partial	Impartial
Type of trust		**Partial trust**			**Impartial trust**		**Full**	**Full**
Much more severe*a little	−0.335	−0.341*	−0.341*	0.004	0.040	0.040	−0.318	0.065
	(0.205)	(0.204)	(0.204)	(0.212)	(0.211)	(0.211)	(0.207)	(0.214)
Much more severe*somewhat	−0.368*	−0.400**	−0.411**	−0.349*	−0.340*	−0.348*	−0.312	−0.308
	(0.204)	(0.203)	(0.203)	(0.205)	(0.204)	(0.204)	(0.207)	(0.207)
Much more severe*a lot	−0.354*	−0.345*	−0.366**	−0.208	−0.183	−0.202	−0.322*	−0.147
	(0.185)	(0.184)	(0.184)	(0.194)	(0.193)	(0.193)	(0.187)	(0.196)
Controls								
Trust							−0.056**	−0.045**
							(0.022)	(0.022)
Age	−0.158***	−0.152***	−0.155***	−0.157***	−0.150***	−0.154***	−0.147***	−0.146***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.0194)	(0.019)	(0.019)
Male	0.332***	0.333***	0.327***	0.338***	0.338***	0.332***	0.344***	0.348***
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.0394)	(0.040)	(0.040)
University	0.403***	0.397***	0.420***	0.415***	0.409***	0.432***	0.367***	0.368***
	(0.060)	(0.060)	(0.059)	(0.060)	(0.059)	(0.059)	(0.061)	(0.061)
Eco-work	−0.142**	−0.138**	−0.151**	−0.140**	−0.138**	−0.152**	−0.107*	−0.111*
	(0.062)	(0.061)	(0.061)	(0.062)	(0.061)	(0.061)	(0.062)	(0.062)
Poverty (LPI)	−0.034			−0.037			−0.021	−0.022
	(0.025)			(0.025)			(0.026)	(0.025)
Economic factors	−0.072			−0.081			0.318***	0.323***
	(0.051)			(0.051)			(0.096)	(0.096)
Social factors		0.335***			0.351***		0.623***	0.625***
		(0.065)			(0.064)		(0.111)	(0.111)
Political factors			−0.174*			−0.185*	0.140	0.149
			(0.104)			(0.105)	(0.139)	(0.138)
Remittances							0.210***	0.211***
							(0.023)	(0.023)
Observations	12,414	12,562	12,562	12,480	12,628	12,628	12,345	12,447
# first-level political boundaries	1270	1279	1279	1272	1281	1281	1267	1271

Note: Significance levels: *** = $p < 0.001$; ** = $p < 0.01$; * = $p < 0.05$. The dependent variable making active preparations to migrate = 1; 0 if otherwise. All models are estimated with conditional fixed effects.

6 | Robustness Checks and Limitations

We conducted two additional robustness checks to validate the accuracy of our analysis. First, we re-ran our models using probit and multilevel probit models with the survey prefix command svy, which accounts for specific survey design elements (strata, sampling unit and final population correction) in Stata. To ensure proper model fit, we used the Archer–Lemeshow test, as the traditional Hosmer–Lemeshow test does not account for survey (svy) design structures (Archer and Lemeshow 2006). Second, we recoded our independent variables into dichotomous variables and re-ran the analysis

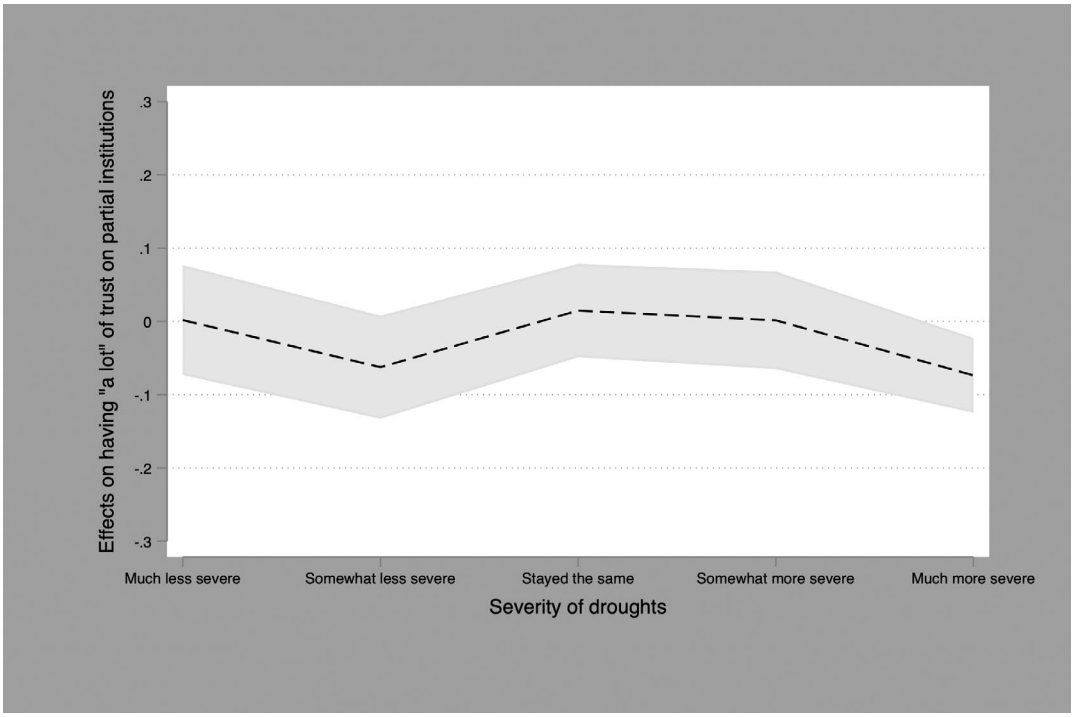

FIGURE 2 | Average marginal effects on internal migration preparedness (with 95% CIs).

using clustered errors at the first-level administrative boundaries. None of these robustness checks altered our primary findings.

Like any empirical study, we are aware that our study has certain limitations. First, our data only covers from 2016 to 2018, restricting our analysis solely to that period. Additionally, data constraints also limit us from thoroughly testing our theoretical arguments. A potential solution to this issue could be the collection of original survey data. Moreover, subjective data does not always match objective (see Helbling and Morgenstern 2023). Nonetheless, ample research on environmental psychology continuously finds that individual environmental perceptions often translate into action (Anneser et al. 2024).

Finally, people's personal resources are instrumental to explain migration. Coping options—such as wealth, education, employment and age—vary significantly among individuals and may influence the risk perceptions (Koubi, Stoll, and Spilker 2016). Consequently, people form perceptions of droughts and its long-time effect, not only based on personal experience but also on their coping capacity. Still, the literature is unclear about the direct connections, since some studies affirm that greater coping capacity may increase the inclination to migrate, whereas others affirm the opposite (Czaika and Reinprecht 2022). Because of this, a more nuanced understanding of the links between personal coping strategies with environmental perceptions and with institutional trust is necessary to grasp the complex dynamics involved in the phenomenon under study.

7 | Discussion

When it comes to objective knowledge of droughts in Africa, there appears to be an emerging consensus that drought perceptions may impact the decision to migrate across national borders, particularly among young people and males (Van Praag 2021). In line with this growing number of studies, we also find that international migration preparedness is more likely to occur among people who perceive that droughts have worsen over time. There are two plausible explanations for this. First is the element of time. Some argue that slow-onset events make people less likely to migrate because people have enough time to adapt to it developing measures such as 'investing in irrigation systems, using drought resistant plant and animal varieties, or by diversifying income sources' (Koubi, Spilker, Schaffer, and Bernauer 2016, 198). Yet, we counterargue, as do others, that slow-onset events such as droughts are more spatially and temporally extensive, and that they cause more stress and destruction in the long run straining individual coping abilities (Pelling et al. 2002). This is the case of Ethiopia, for instance, which experienced a total of 16 droughts between 1900 and 2015 causing 402,367 deaths and about $92,600,000 in damages. Whereas in the same period, the country experienced a total of 52 floods causing 1976 deaths at a price tag of approximately $19,220,000 (Shen and Hwang 2019).

Another plausible explanation is that the gradual nature of such events also allows individuals more time to make calm, calculated decisions and actively prepare to migrate. These preparations might include obtaining a visa, coordinating with smugglers, liquidating assets or simply saving money. Although both theoretical perspectives have merit, the difference may rest

on the coping options of each potential migrant. For example, people with few coping options may have little option than to find ways to adapt for future events, while people with more coping options may choose to leave. For instance, a young, university-educated person with little or no ties to the land may opt to migrate in search of better opportunities before environmental stress worsens. Nonetheless, additional research into the nuances of this relationship is in order.

We also set out to explore if trust in partial or impartial institutions has a mediating effect on migration preparedness for individuals who perceive that droughts have worsened over time. We argued in the pages above that trust in state institutions serves as a stabilising force, diminishing the perceived need or desire for international migration by fostering confidence in governance, support systems and social cohesion within a country. When included by themselves, both partial and impartial institutions are statistically associated with a decrease in migration preparedness. However, when we incorporate the multiplicative effect of drought perceptions on institutional trust, our results indicate that not all institutions have the same mediating effect. While we find some, albeit weak evidence that impartial institutions decrease international migration preparedness among individuals with a pessimistic view of droughts, we also find robust evidence that having 'a lot' of trust in partial institutions and holding a pessimistic view of droughts decreases migration preparedness across all four models with different specifications. A plausible explanation for this is that individuals with high trust in partial institutions may believe these institutions will effectively address their exposure to risks through mitigation and adaptation policies. As a result, they may feel more secure in their current living situations and be less inclined to migrate. This aligns with previous research, which suggests that public legitimacy is more closely linked to the output side effectiveness of institutions (Dahlberg and Holmberg 2014). Nonetheless, further research into the environmental migration relationship could benefit from exploring the nuanced mediating effects of independent partial institutions.

8 | Conclusion

Do negative perceptions of droughts increase individual's preparedness to migrate across national borders and if so, does institutional trust mediate such relationship? To the best of our knowledge, this is the first large-*N* study to examine the latter part of our question. We find robust evidence that subjective knowledge that droughts have gotten much more severe increase migration preparedness. This finding contributes to the environmental migration literature by challenging two dominant arguments within the literature. First, although slow-onset events such as droughts can provide people with more time to 'hunker-down', mitigate and adapt for future events, this time can also be used to prepare to leave the country, such as saving money, contacting a smuggler or getting a visa. Second, we take a page from Rueschemeyer et al. (1985) and attempt to 'bring the State back in' to the discussion on how subjective perceptions of environmental events influence migration. In other words, we argue that the State, through its partial and impartial institutions, can play a crucial role in shaping people's decisions to leave their country. In doing so, we only find robust evidence that the highest levels of trust in partial institutions, those responsible for creating laws and policies, such as parliaments, politicians and political parties can reduce the probability of international migration among people who perceive that drought conditions have gotten much more severe in their community. African policymakers should continue to make progress and improve where necessary to ensure that Goal 7 of the 2063 Agenda (focused on climate resilience and natural disaster preparedness and prevention) is strengthened, helping to prevent young talent from leaving their countries.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available in Afrobarometer at https://www.afrobarometer.org/. These data were derived from the following resources available in the public domain: Round 7, https://www.afrobarometer.org/.

References

Abid, M., J. Scheffran, U. A. Schneider, and E. Elahi. 2019. "Farmer Perceptions of Climate Change, Observed Trends and Adaptation of Agriculture in Pakistan." *Environmental Management* 63, no. 1: 110–123. https://doi.org/10.1007/s00267-018-1113-7.

Afrobarometer. 2019. "Afrobarometer Data, 7th Round." Afrobarometer Website. https://afrobarometer.org/data/data-use-policy.

Afrobarometer. 2025. "Afrobarometer Data, 10th Round." Afrobarometer Website. https://www.afrobarometer.org/online-data-analysis/.

Agiesta, J. 2017. *Post-Maria, Trump's Approval Rating on Hurricanes Down 20 Points*. CNN. https://edition.cnn.com/2017/10/16/politics/cnn-poll-trump-hurricanes/index.html.

Aliyev, K., and I. Gasimov. 2020. "Life (Dis) Satisfaction and Intention to Emigrate in Azerbaijan: Mediating Role of Institutional Trust." *Economic and Social Development: Book of Proceedings* 3: 306–313.

Anneser, E., P. Levine, K. J. Lane, and L. Corlin. 2024. "Climate Stress and Anxiety, Environmental Context, and Civic Engagement: A Nationally Representative Study." *Journal of Environmental Psychology* 93: 102220.

Anu, S., S. Surendran, K. Harald, R. Kumar, and K. Müller. 2020. "Climate Change, Drought and Rural Communities: Understanding People's Perceptions and Adaptations in Rural Eastern India." *International Journal of Disaster Risk Reduction* 44: 101436.

Appiah-Nyameky Sannye, J., C. Logan, and E. Gyimah-Boadi. 2019. "In Search of Opportunity: Young and Educated Africans Most Likely to Consider Moving Abroad." *Afrobarometer Dispatch* 288.

Appiah-Nyamekye Sanny, J., C. Rocca, and I. Schultes. 2019. "'Updata-ing' the Narrative About African Migration." MIF Joint Research Paper. https://afrobarometer.org/sites/default/files/publications/Publications%20conjointes/partenaires/afrobarometer-moibrahim-updata-ing-the-narrative-aboutafrican-migration.pdf.

Archer, J. K., and S. Lemeshow. 2006. "Goodness-Of-Fit Test for a Logistic Regression Model Fitted Using Survey Sample Data." *Stata Journal* 6, no. 1: 97–105.

Baker, W. D., and J. R. Oneal. 2001. "Patriotism or Opinion Leadership? The Nature and Origins of the 'Rally'round the Flag' Effect." *Journal of Conflict Resolution* 45, no. 5: 661–687.

BBC. 2013. "Somalia Famine 'Killed 260,000 People'." BBC website. https://www.bbc.com/news/world-africa-22380352#:~:text=Nearly%20260%2C000%20people%20died%20during,Systems%20Network%20(Fews%20Net).

Bechtel, M. M., and J. Hainmueller. 2011. "How Lasting is Voter Gratitude? An Analysis of the Short-and Long-Term Electoral Returns to Beneficial Policy." *American Journal of Political Science* 55, no. 4: 852–868.

Bempah, S. A., and A. O. Øyhus. 2017. "The Role of Social Perception in Disaster Risk Reduction: Beliefs, Perception, and Attitudes Regarding Flood Disasters in Communities Along the Volta River, Ghana." *International Journal of Disaster Risk Reduction* 23: 104–108.

Bertocchi, G., and C. Strozzi. 2008. "International Migration and the Role of Institutions." *Public Choice* 137: 81–102.

Bettini, G. 2013. "Climate Barbarians at the Gate? A Critique of Apocalyptic Narratives on 'Climate Refugees'." *Geoforum* 45: 63–72. https://doi.org/10.1016/j.geoforum.2012.09.009.

Bezu, S., T. Demissie, D. Abebaw, et al. 2020. "Climate Change, Agriculture and International Migration Nexus: An African Youth Perspective." In *CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)* (324).

Black, R., W. N. Adger, N. W. Arnell, S. Dercon, A. Geddes, and D. Thomas. 2011. "The Effect of Environmental Change on Human Migration." *Global Environmental Change* 21, no. Suppl. 1: S3–S11. https://doi.org/10.1016/j.gloenvcha.2011.10.001.

Boholm, Å. 2003. "The Cultural Nature of Risk: Can There Be an Anthropology of Uncertainty?" *Ethos* 68, no. 2: 159–178. https://doi.org/10.1080/0014184032000097722.

Borderon, M., P. Sakdapolrak, R. Muttarak, E. Kebede, R. Pagogna, and E. Sporer. 2019. "Migration Influenced by Environmental Change in Africa: A Systematic Review of Empirical Evidence." *Demographic Research* 41, no. 18: 491–544. https://doi.org/10.4054/DemRes.2019.41.18.

Brosch, T. 2021. "Affect and Emotions as Drivers of Climate Change Perception and Action: A Review." *Current Opinion in Behavioral Sciences* 42: 15–21.

Budhathoki, N. K. 2017. "Climate Change: Perceptions, Reality and Agricultural Practice: Evidence From Nepal." No. 125-17. Climate; Economics & the Environment, Issue 125."

Bygens, S., and A. Flipo. 2017. "Political Motivations for Intra-European Migration." *Acta Sociologica* 60, no. 3: 199–212.

Castles, S. 2002. "Environmental Change and Forced Migration: Making Sense of the Debate." New Issues in Refugee Research." No. 70. New Issues in Refugee Research, Issue 70.

Cirillo, M., A. Cattaneo, M. Miller, and A. Sadiddin. 2022. "Establishing the Link Between Internal and International Migration: Evidence From Sub-Saharan Africa." *World Development* 157: 105943.

Constant, A., and D. Massey. 2005. "Towards an Idea-Centered, Principle-Base Design to as Creation Approach Support Learning Knowledge." *Population Research and Policy Review* 24, no. 5: 489–512. https://doi.org/10.1007/sl.

Czaika, M., and C. Reinprecht. 2022. "Migration Drivers: Why Do People Migrate?" In *Introduction to Migration Studies*. IMISCOE Research Series, edited by P. Scholten. Springer. https://doi.org/10.1007/978-3-030-92377-8_3.

Dahlberg, S., and S. Holmberg. 2014. "Democracy and Bureaucracy: How Their Quality Matters for Popular Satisfaction." *West European Politics* 37, no. 3: 515–537.

Damasio, A. 1999. *The Feeling of What Happens*. Harcourt.

De Longueville, F., P. Ozer, F. Gemenne, S. Henry, O. Mertz, and J. Nielsen. 2020. "Comparing Climate Change Perceptions and Meteorological Data in Rural West Africa to Improve the Understanding of Household Decisions to Migrate." *Climatic Change* 160, no. 1: 123–141. https://doi.org/10.1007/s10584-020-02704-7.

Doevenspeck, M. 2011. "The Thin Line Between Choice and Flight: Environment and Migration in Rural Benin." *International Migration* 49, no. S1: e50–e68. https://doi.org/10.1111/j.1468-2435.2010.00632.x.

Dumenu, W. K., and E. A. Obeng. 2016. "Climate Change and Rural Communities in Ghana: Social Vulnerability, Impacts, Adaptations and Policy Implications." *Environmental Science & Policy* 55: 208–217.

Dun, O. 2011. "Migration and Displacement Triggered by Floods in the Mekong Delta." *International Migration* 49, no. S1: e200–e223. https://doi.org/10.1111/j.1468-2435.2010.00646.x.

Epstein, S. 1994. "Integration of the Cognitive and the Psychodynamic Unconscious." *American Psychologist* 49, no. 8: 709–724. https://doi.org/10.1037//0003-066x.49.8.709.

Gonzalez, J., and A. Sanchez. 2022. "Multilevel Predictors of Climate Change Beliefs in Africa." *PLoS One* 17, no. 4: 1–14. https://doi.org/10.1371/journal.pone.0266387.

Gray, C. L., and V. Mueller. 2012. "Natural Disasters and Population Mobility in Bangladesh." *Proceedings of the National Academy of Sciences of the United States of America* 109, no. 16: 6000–6005. https://doi.org/10.1073/pnas.1115944109.

Groeling, T., and M. A. Baum. 2008. "Crossing the Water's Edge: Elite Rhetoric, Media Coverage, and the Rally-Round-The-Flag Phenomenon." *Journal of Politics* 70, no. 4: 1065–1085.

Grogger, J., and G. H. Hanson. 2011. "Income Maximization and the Selection and Sorting of International Migrants." *Journal of Development Economics* 95, no. 1: 42–57.

Hallegatte, S., A. Vogt-Schilb, J. Rozenberg, M. Bangalore, and C. Beaudet. 2020. "From Poverty to Disaster and Back: A Review of the Literature." *Economics of Disasters and Climate Change* 4, no. 1: 223–247. https://doi.org/10.1007/s41885-020-00060-5.

Hauer, M. E., E. Fussell, V. Mueller, et al. 2020. "Sea-Level Rise and Human Migration." *Nature Reviews Earth and Environment* 1, no. 1: 28–39. https://doi.org/10.1038/s43017-019-0002-9.

Helbling, M., D. Auer, D. Meierrieks, M. Mistry, and M. Schaub. 2021. "Climate Change Literacy and Migration Potential: Micro-Level Evidence From Africa." *Climatic Change* 169, no. 1–2: 1–13. https://doi.org/10.1007/s10584-021-03241-7.

Helbling, M., and S. Morgenstern. 2023. "Migration Aspirations and the Perceptions of the Political, Economic and Social Environment in Africa." *International Migration* 61, no. 6: 102–117.

Hiskey, J., J. D. Montalvo, and D. Orcés. 2014. "Democracy, Governance, and Emigration Intentions in Latin America and the Caribbean." *Studies in Comparative International Development* 49: 89–111.

Hovy, B., F. Lazko, and K. N'Guettia. 2020. *African Migration Report: Challenging the Narrative*. Chapter 2: 'African Migration: An Overview of Key Trends'. IOM Publications. https://publications.iom.int/system/files/pdf/africa-migration-report.pdf.

Hunter, L. M., J. K. Luna, and R. M. Norton. 2015. "Environmental Dimensions of Migration." *Annual Review of Sociology* 41, no. 1: 377–397. https://doi.org/10.1146/annurev-soc-073014-112223.

IDMC. 2016. "Africa Report on Internal Displacement." https://www.internal-displacement.org/sites/default/files/publications/documents/20161209-IDMC-Africa-report-web-en.pdf.

IDMC. 2019. "Global Report on Internal Displacement 2019." https://www.internal-displacement.org/global-report/grid2019/.

IPCC. 2022. "Climate Change 2022: Mitigation of Climate Change." The IPCC Sixth Assesment Full Report. https://www.ipcc.ch/report/ar6/wg3/.

Koubi, V., G. Spilker, L. Schaffer, and T. Bernauer. 2016. "Environmental Stressors and Migration: Evidence From Vietnam." *World Development* 79: 197–210. https://doi.org/10.1016/j.worlddev.2015.11.016.

Koubi, V., G. Spilker, L. Schaffer, and T. Böhmelt. 2016. "The Role of Environmental Perceptions in Migration Decision-Making: Evidence From Both Migrants and Non-Migrants in Five Developing Countries." *Population and Environment* 38, no. 2: 134–163. https://doi.org/10.1007/s11111-016-0258-7.

Koubi, V., S. Stoll, and G. Spilker. 2016. "Perceptions of Environmental Change and Migration Decisions." *Climatic Change* 138, no. 3–4: 439–451. https://doi.org/10.1007/s10584-016-1767-1.

Kuhnt, J. 2019. "Literature Review: Drivers of Migration." Why Do People Leave Their Homes? Is There An Easy Answer? A Structured Overview of Migratory Determinants. Discussion Paper 9, 2019. German Development Institute & Deutsches Institut für Entwicklungspolitik. https://www.idos-research.de/uploads/media/DP_9.2019.pdf.

Kulin, J., and I. Johansson Sevä. 2021. "Who Do You Trust? How Trust in Partial and Impartial Government Institutions Influences Climate Policy Attitudes." *Climate Policy* 21, no. 1: 33–46.

Leiserowitz, A. 2006. "Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values." *Climatic Change* 77, no. 1–2: 45–72. https://doi.org/10.1007/s10584-006-9059-9.

Liu, Y. V., S. Kutnjak Ivković, and V. Pavlović Vinogradac. 2024. "Croatian Immigrants' Trust in the Police in Croatia and Abroad: The Roles of Police Integrity and Transnational Migration Factors." *Policing: A Journal of Policy and Practice* 18: paae105.

Logan, C., and H. Amakoh. 2022. "Afrobarometer Website." https://www.afrobarometer.org/publication/ad548-african-citizens-message-to-traditional-leaders-stay-in-development-stay-out-of-politics/.

Manandhar, S., W. Pratoomchai, K. Ono, S. Kazama, and D. Komori. 2015. "Local People's Perceptions of Climate Change and Related Hazards in Mountainous Areas of Northern Thailand." *International Journal of Disaster Risk Reduction* 11: 47–59. https://doi.org/10.1016/j.ijdrr.2014.11.002.

Mastrorillo, M., R. Licker, P. Bohra-Mishra, G. Fagiolo, L. D. Estes, and M. Oppenheimer. 2016. "The Influence of Climate Variability on Internal Migration Flows in South Africa." *Global Environmental Change* 39: 155–169. https://doi.org/10.1016/j.gloenvcha.2016.04.014.

Mattes, B. R., B. Dulani, and E. Gymah-Boadi. 2016. "Africas Growth Dividend? Lived Poverty Drops Across Much of the Continent (No. 29)."

McLeman, R. A., and L. M. Hunter. 2010. "Migration in the Context of Vulnerability and Adaptation to Climate Change: Insights From Analogues." *Wiley Interdisciplinary Reviews: Climate Change* 1, no. 3: 450–461. https://doi.org/10.1002/wcc.51.

Mendelsohn, R., A. Dinar, and L. Williams. 2006. "The Distributional Impact of Climate Change on Rich and Poor Countries." *Environment and Development Economics* 11, no. 2: 159–178.

Mızrak, S., and M. Turan. 2023. "Effect of Individual Characteristics, Risk Perception, Self-Efficacy and Social Support on Willingness to Relocate Due to Floods and Landslides." *Natural Hazards* 116, no. 2: 1615–1637. https://doi.org/10.1007/s11069-022-05731-y.

Mueller, V., G. Clark, and K. Katrina. 2014. "Heat Stress Increases Long-Term Human Migration in Rural Pakistan." *Nature Climate Change* 3, no. 4: 182–185. https://doi.org/10.1038/nbt.3121.

Munshi, K. 2003. "Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market." *Quarterly Journal of Economics* 118, no. 2: 549–599.

Munshi, K. 2014. "Community Networks and the Process of Development." *Journal of Economic Perspectives* 28, no. 4: 49–76.

Ng'ang'a, S. K., E. H. Bulte, K. E. Giller, J. M. McIntire, and M. C. Rufino. 2016. "Migration and Self-Protection Against Climate Change: A Case Study of Samburu County, Kenya." *World Development* 84: 55–68. https://doi.org/10.1016/j.worlddev.2016.04.002.

Nguyen, Q., G. Spilker, V. Koubi, and T. Böhmelt. 2024. "How Sudden-Versus Slow-Onset Environmental Events Affect Self-Identification as an Environmental Migrant: Evidence From Vietnamese and Kenyan Survey Data." *PLoS One* 19, no. 1: e0297079.

Nicoletti, A., S. Melde, L. Guadagno, and R. E. Bilsborrow. 2023. "Human Mobility in the Context of Environmental and Climate Change: Recent Data Collection Tools From the International Organization for Migration to Address Key Methodological and Conceptual Issues." *International Migration* 61, no. 5: 47–59.

Njoku, C. G., J. Efiong, and N.-A. N. Ayara. 2020. "A Geospatial Expose of Flood-Risk and Vulnerable Areas in Nigeria." *International Journal of Applied Geospatial Research* 11, no. 3: 1–24. https://doi.org/10.4018/IJAGR.20200701.1.

Norris, P. 2017. "The Conceptual Framework of Political Support." In *Handbook on Political Trust*, 19–32. Edward Elgar Publishing.

Pelling, M., A. Özerdem, and S. Barakat. 2002. "The Macro-Economic Impact of Disasters." *Progress in Development Studies* 2, no. 4: 283–305. https://doi.org/10.1191/1464993402ps042ra.

Perch-Nielsen, S. L., M. B. Bättig, and D. Imboden. 2008. "Exploring the Link Between Climate Change and Migration." *Climatic Change* 91, no. 3–4: 375–393. https://doi.org/10.1007/s10584-008-9416-y.

Rankoana, S. A. 2018. "Human Perception of Climate Change." *Weather* 73, no. 11: 367–370. https://doi.org/10.1002/wea.3204.

Redehegn, M. A., D. Sun, A. M. Eshete, and C. N. Gichuki. 2019. "Development Impacts of Migration and Remittances on Migrant-Sending Communities: Evidence From Ethiopia." *PLoS One* 14, no. 2: 1–20. https://doi.org/10.1371/journal.pone.0210034.

Robalino, J., J. Jimenez, and A. Chacon. 2015. "The Effect of Hydro-Meteorological Emergencies on Internal Migration." *World Development* 67: 438–448.

Rueschemeyer, D., T. Skocpol, and P. B. Evans. 1985. *Bringing the State Back in*, 03. Cambridge University Press.

Salisu, S., and A. Salisu. 2025. "A New Index for Climate-Induced Migration Uncertainty." *International Migration* 63, no. 1: e13384.

Schuitema, G., and C. J. Bergstad. 2018. "Acceptability of Environmental Policies." In *Environmental Psychology: An Introduction*, 295–306. John Wiley & Sons Ltd.

Shen, G., and S. N. Hwang. 2019. "Spatial–Temporal Snapshots of Global Natural Disaster Impacts Revealed From EM-DAT for 1900–2015." *Geomatics, Natural Hazards and Risk* 10, no. 1: 912–934. https://doi.org/10.1080/19475705.2018.1552630.

Stoffle, R. W., M. W. Traugott, J. V. Stone, et al. 1991. "Risk Perception Mapping: Using Ethnography to." *American Anthropologist* 93, no. 3: 611–635.

Stojanov, R., B. Duží, I. Kelman, D. Němec, and D. Procházka. 2017. "Local Perceptions of Climate Change Impacts and Migration Patterns in Malé, Maldives." *Geographical Journal* 183, no. 4: 370–385. https://doi.org/10.1111/geoj.12177.

Stone, D. 2014. "Risk Perception." In *Encyclopedia of Toxicology*. Biomedical Sciences. https://doi.org/10.1016/B978-0-12-386454-3.00981-7.

Taylor, J. E. 1999. "The New Economics of Labour Migration and the Role of Remittances in the Migration Process." *International Migration* 37, no. 1: 63–88. https://doi.org/10.1111/1468-2435.00066.

The Global Climate Change Litigation Database. 2020. Tsama William and Others v. Uganda's Attorney General and Others. https://climatecasechart.com/non-us-case/tsama-william-and-others-v-ugandas-attorney-general-and-others/

The International Disaster Database (EM-DAT). https://www.emdat.be/

Udmale, P., Y. Ichikawa, S. Manandhar, H. Ishidaira, and A. S. Kiem. 2014. "Farmers' Perception of Drought Impacts, Local Adaptation and Administrative Mitigation Measures in Maharashtra State, India." *International Journal of Disaster Risk Reduction* 10: 250–269. https://doi.org/10.1016/j.ijdrr.2014.09.011.

UNCCD. 2018. "Federal Republic of Nigeria's National Drought Plan." https://knowledge.unccd.int/sites/default/files/country_profile_documents/1%2520FINAL_NDP_Nigeria.pdf.

UNFCCC. 2018. UN Secretary-General Antonio Guterres Calls for Climate Leadership, Outlines Expectations for Next Three Years. UNFCCC Website. https://unfccc.int/news/un-secretary-general-antonio-guterres-calls-for-climate-leadership-outlines-expectations-for-next.

Van Praag, L. 2021. "Can I Move or Can I Stay? Applying a Life Course Perspective on Immobility When Facing Gradual Environmental Changes in Morocco." *Climate Risk Management* 31: 100274. https://doi.org/10.1016/j.crm.2021.100274.

Vining, J., M. S. Merrick, and E. A. Price. 2008. "The Distinction Between Humans and Nature: Human Perceptions of Connectedness to Nature and Elements of the Natural and Unnatural." *Human Ecology Review*: 1–11.

Weinert, F. 2018. "The Role of Trust in Political Systems. A Philosophical Perspective." *Open Political Science* 1, no. 1: 7–15.

You, Y., Y. Huang, and Y. Zhuang. 2020. "Natural Disaster and Political Trust: A Natural Experiment Study of the Impact of the Wenchuan Earthquake." *Chinese Journal of Sociology* 6, no. 1: 140–165.

Zehr, S. C. 2000. "Public Representations of Scientific Uncertainty About Global Climate Change." *Public Understanding of Science* 9, no. 2: 85.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.