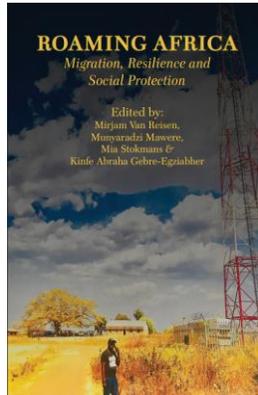# Out of the Frying Pan into the Fire: Are Climate Disasters Fuelling Human Trafficking in Kenya?

Radoslaw Malinowski & Mario Schulze

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Migration, Resilience and Social Protection

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Connected and Mobile: Migration and Human Trafficking in Africa

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Chapter 6

Out of the Frying Pan into the Fire: Are Climate Disasters Fuelling Human Trafficking in Kenya?

Radoslaw Malinowski & Mario Schulze

Introduction

The term 'climate disaster' is used to describe events that, through their intensity, adversely affect vulnerable populations and their surroundings. In Kenya, the most common type of climate disaster is drought (Mata-Lima, Alvino-Borba, Pinheiro, Mata-Lima & Almeida, 2013). Over the years, Kenya has experienced a number of severe droughts that have impacted on the agricultural sector, which relies heavily on rainfall to sustain production. It is important to note that only 20% of the country is covered by rainfall in regular intervals, while 80% is made up of arid and semi-arid lands (Mbogo, Inganga & Maina, 2014). Consequently, in the absence of rainfall, there is often no viable alternative to continue agricultural production, the effects of which are usually felt immediately.

Kenya is experiencing increased droughts, which are impacting on food security and vulnerability. This study investigates whether people affected by drought in Kenya are at higher risk of being trafficked. The study finds that drought-affected populations are more vulnerable to human trafficking, especially when combined with conflict and in locations where alternative sources of income are not available. The association between climate change and human trafficking is worrying. The findings confirm the need to strengthen resilience as a key element in policies to counter human trafficking. There is an urgent need to address the underlying causes of vulnerability, including climate change, as a relevant and important element in the fight against human trafficking.

Food security in Kenya deteriorated significantly during the drought in 2017. In July of that year, 2.6 million people (19% of the population) were classified as 'in crisis' and 'emergency' (Phase 3 and 4 in the Integrated Phase Classification), requiring urgent humanitarian assistance. This number increased to an estimated 3.4 million (25% of the population) from August to October 2017, as the drought persisted. Most of the acutely food-insecure population live in the pastoral counties of Turkana, Marsabit, West Pokot, Baringo, Wajir, Mandera, Tana River and Garissa, as well as parts of the coastal, marginal agricultural areas of Kilifi and Lamu (see Figure 6.1). The number of people in urgent need of humanitarian assistance (Phase 3 or above in Integrated Phase Classification) doubled between late 2016 and mid-2017, and increased again by almost a million between August and October 2017 (Food Security Information Network, 2018).

Drought is posing problems not only in Kenya, but on a global scale. Since the beginning of the 21st Century, episodes of drought have intensified worldwide and are predicted to become two to three times worse in the coming years (Sheffield, Herrera-Estrada, Caylor & Wood, 2011). To give some examples, Australia was plagued by what has become known as the Millennium Drought, which lasted for approximately 15 years from 1995 to 2009. In addition, drought in north eastern Spain forced the large-scale import of water from France in 2008. Then, in 2017, roughly 5.6 million Ethiopians were in need of assistance due to drought caused by El-Niño between 2015 and 2016 (Reliefweb, 2019). Meanwhile, the intensity and impact of each of these droughts as well as the coping mechanisms adopted in response to them differ from one region to the next. This is because all regions of the world have different geographical, climatological and other characteristics, and because different nation states have distinct economic and logistical capacities to react to climate disasters (IMF, 2016).

One area of interest in relation to climate disasters is the impact of such events on societies and how affected communities react to these

extreme, and often unforeseen, changes to their natural and social environment. Of great concern is the fact that climate disasters can increase the vulnerability of affected people to human trafficking. In his book *Blood and Earth. Modern Slavery, Ecocide and the Secret to Saving the World* (2016), Kevin Bales notes:

> *Well, we know environmental change is part of the engine of slavery. The sharp end of environmental change, whether slow as rising sea levels and desertification, or disastrously sudden like hurricane or tsunami, comes first to the poor. I've seen men, women and children, families and whole communities impoverished and broken by environmental change and natural disasters. Home and livelihoods lost, these people and communities are easily abused. Especially in countries where corruption is rife, slavers act with impunity after environmental devastation, luring and capturing the refugees, the destitute, and the dispossessed.* (Bales, 2016, pp. 8–9)

According to Bale (2016), climate disasters disrupt the economic and social environments of those they affect, thereby increasing people's vulnerability to crimes that exploit the volatility of their income and livelihoods. Presuming that this is correct, societies who depend on stable climate conditions would also be among those most at risk. As many African countries, including Kenya, rely heavily on agriculture and self-subsistence farming (Muller, Cramer, Hare & Lotze-Campen, 2011), they must then be seen as particularly vulnerable to practices like human trafficking.

This chapter looks at the relationship between climate disasters and human trafficking. It examines the ways in which climate disasters increase the vulnerability of affected populations to human trafficking. It also analyses cross-cutting issues such as conflict, attitude and preparedness in relation to vulnerability to trafficking during and after a climate disaster. Finally, based on the findings, the study attempts to develop a concept in relation to the interplay between climate disasters and human trafficking.

Nexus between human trafficking and climate disaster

In the last decade of the 20ᵗʰ Century, with the end of the Cold War era and beginning of globalisation, a sharp increase in trafficking cases was recorded globally (Gallagher, 2010). Since then, human trafficking has become one of the most lucrative illicit businesses, generating an estimated USD 150 billion in illegal profit for traffickers annually (May, 2017). Since 2000, human trafficking has been defined internationally in the Palermo Protocol as:

> …*the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation.* (UNODC, 2004, p. 42)

This chapter uses this definition. The components of this definition – the act, means, and purpose – serve as the basis for formulating the methodology and obtaining results. According to the Palermo Protocol, the three main variations of exploitation in human trafficking are:

- The exploitation of the victim's manpower through forced labour, slavery or servitude
- The exploitation of the victim's sexual properties
- The exploitation of the victim through the acquisition and sale of his or her organs

In practice, many cases of human trafficking may entail elements of the first two manifestations simultaneously.

According to the United Nations Office on Drugs and Crime (UNODC), a number of factors can contribute to vulnerability to human trafficking. Among them are: being a child, gender, poverty, social and cultural exclusion, education, political instability, war or conflict, social, cultural and legal frameworks, mobility and demand for cheap labour (UNODC, 2008). Natural disasters are thought to

increase the vulnerability of potential victims of trafficking in a number of ways: by forcing or compelling them to migrate, by causing the death of income earners and livestock, by causing the destruction of property, as well as by deepening social and economic exclusion (e.g., access to education), among other things.

Even though human trafficking is addressed by several national, regional and international policies, a possible link with environmental disasters is not their main focus (IOM, 2015; c.f. IOM, 2016). In turn, interventions during and after an environmental disaster concentrate on humanitarian aspects, with little or no regard for possible incidents of human trafficking among the affected population (IOM, 2015). This could be because human trafficking is still largely conceptualised as an international crime perpetrated by organised criminal networks (such as gangs, mafias and terrorist groups). It is not surprising then that international human trafficking for the purpose of sexual exploitation has become the focus of policymakers, given that its features are the most congruent with the convention.

Unfortunately, this means that local and regional human trafficking undertaken by opportunistic individuals, rather than organised criminal groups, is likely to fly under the radar. Outside the context of organised crime, human trafficking may be linked to cultural traditions, customs and rites. In Kenya, for example, these traditions include child marriage, which is practised by several ethnic communities. Environmental disasters such as drought typically have an impact on the income-generating activities of affected populations (IOM, 2015). In places where the local population ensures their livelihood through activities that rely on favourable weather patterns, and where alternatives are not available, the effects of drought are likely to be profound, leading to increased vulnerability to human trafficking. This is because the affected population could potentially be forced to engage in negative coping mechanisms such as child marriage, child labour or commercial sex work to ensure survival. While it is entirely possible that criminal organisations see a chance to exploit the vulnerability of the affected population and recruit them into exploitative situations, trafficking in this context is more

likely to be perpetrated by opportunistic local offenders. This could also be attributed to the fact that the effects of environmental disasters are in most cases felt most strongly in remote areas without any developed infrastructure, such as roads or communication networks. Such conditions may complicate the process of recruitment, thereby making it either costly or not logistically viable for organised trafficking groups to operate in environments affected by climate disaster, especially when demand can be satisfied elsewhere (Malinowski, 2016; Malinowski & Schulze, 2017).

Another reason why organised criminal groups might be less interested in trafficking populations affected by environmental disasters (such as drought, in the case of this study), is the short-term nature of vulnerability caused by these phenomena. In other words, environmental disasters such as drought make people vulnerable only for a period of time, and once the effects wear off, vulnerability is likely to diminish. A previous study by one of the authors (Malinowski, 2016) conducted among internally displaced persons (IDPs) in Kenya established that those who were displaced due to floods were not only less frequently targeted by traffickers, but also more resilient to trafficking offers. This was probably because they understood that the floods were going to cease or subside in the near future. International trafficking for the purpose of sexual exploitation, however, often requires established structures and resources. As a result, organised criminal groups are unlikely to invest resources in order to traffic people who may only be vulnerable temporarily. It is more feasible to invest such resources in trafficking people who are vulnerable in the long term or permanently. This includes people living in slums, street children, unemployed urban youth, orphans, and single mothers. To further strengthen this point, a study conducted by IOM (2007) established that events that create time-bound vulnerability (though the case used, an international sports event, was unrelated to environmental disasters) do not guarantee profits to organised criminal networks. Accordingly, this discourages them from investing resources to exploit such vulnerability. However, when there is no need for previous investment because exploitation simply occurs as a result of cultural

and other social dynamics, environmental disasters such as drought may create situations in which even temporary vulnerability increases the likelihood of victimisation.

Research question

The main objective of this research was to strengthen the existing anecdotal knowledge base on the nexus between human trafficking and environmental disasters with empirical data. Statistical data was collected to allow the researchers to gain an impression of the scale of the issue, rather than just its nature. The primary interest of the researchers lay in understanding the coping mechanisms of people affected by drought, with a view to providing insight as to why individuals may adopt measures that potentially expose them or others to human trafficking. As discussed in the introduction, societies that depend on certain climate conditions are thought to be highly vulnerable to crimes that exploit the volatility of their income and livelihoods. As many African countries, including Kenya, rely heavily on agriculture and self-subsistence farming (Muller *et al.*, 2011), they must then be seen as particularly vulnerable to practices such as human trafficking. Based on this assumption, the research started with the hypothesis that drought is a catalyst for vulnerability to human trafficking. The main research question was: *What is the nexus between climate disaster-related drought and human trafficking in Kenya?*

The conceptual framework of this study took into account the influence of drought on individual behaviour. It assumed that drought-affected people are more likely to engage in activities that increase their vulnerability to human trafficking. Nevertheless, this study is guided by the argument that the relationship between drought and human trafficking is not straightforward, as explained in the introduction. Given the complex nature of the latter, drought might have three possible associations with human trafficking:

- Drought increases the vulnerability of the affected population to human trafficking

- Drought decreases the vulnerability of the affected population to human trafficking
- Drought is neutral (neither increases nor decreases) the vulnerability of the affected population to human trafficking

Research methodology

This research used a mixed method approach to data collection. In order to ensure the reliability and validity of the research instruments, they were subjected to revision based on previous research experience, consultations with research experts and a literature review. The research tools were then pre-tested and several variables adjusted with a view to increasing the reliability and validity of the quantitative instrument. For this purpose, a test group was invited from the drought-affected areas in Kenya to partake in a testing-session of the research instruments. This was done to ensure that the survey and interview questions were relevant and would ultimately provide the desired results.

Qualitative and quantitative tools
Both qualitative and quantitative tools were used for data collection. During the data collection, respondents were coached on human trafficking and how to position this phenomenon against other types of migration, especially human smuggling, forced displacement or economic migration. Qualitative data was gathered through semi-structured interviews with affected persons, drought relief organisations, and recruitment agencies.

Quantitative data was also collected from persons living in drought-affected areas using a survey, which was divided into three sections. Section 1 focused on information about the respondent and questions about migration patterns during drought. It also included questions on the quality of life before and after the drought to enable the estimation of whether the respondent was actually affected by drought or not. Respondents were asked to rate this quality of life during the drought on a scale of 1 to 10 (where 1 meant terrible, 2 – very poor, 3 – poor, 4 – poor, but manageable, 4 and 6 – moderate, 7 – good, but with room for improvement, 8 – good, 9 – very good, 10

– perfect). Responses were compared and calculated with those about 'quality of life' before the drought (using the same scale). Negative responses represented cases of those whose quality of life had improved (they scored higher for quality of life during the drought). Those at 0 (quality of life at least remained the same as before the drought) were not considered in the analysis of the impact of drought on human trafficking. A score from 1 to 7 indicated that the drought affected their lives in a negative way, with 1 being moderate impact and 7 very significant impact of drought on the respondents. Table 6.1 indicates the distribution of responses on quality of life before and during drought.

Table 6.1. Distribution of responses on quality of life before and during the drought

Responses by sub-county	Ranking of quality of life before and during drought (number of respondents)											Total
	-3	-2	-1	0	1	2	3	4	5	6	7	
Kilifi County												
Kaloleni	1	1	5	9	7	18	17	3	3	0	0	64
Kilifi	0	0	0	29	1	2	3	3	23	3	0	64
Mandera County												
Lafey	1	0	0	0	6	28	20	11	4	0	0	70
Mandera East	0	0	0	0	2	1	9	9	44	7	0	72
Samburu County												
Samburu Central	0	0	1	4	15	25	19	6	1	0	1	72
Samburu North	0	0	0	1	5	17	16	12	12	1	0	64
Total	2	1	6	43	36	91	84	44	87	11	1	406

Section 2 of the survey was concerned with the respondent's drought experience. Interviewees were asked to rate 12 indicators of drought effects and scores were made accordingly. A low score indicated less effects, while a high score represented severe effects of drought on the respondent.

Section 3 dealt with the respondent's human trafficking experiences. For the purposes of this study, the components of human trafficking were grouped into three main categories (act, means and purpose). For each category, elements of the definition of human trafficking were specified. Respondents were asked questions about each element of human trafficking and, from their responses, the research assistants identified the corresponding component. A score of 1 was assigned for 'Yes' (element was experienced) and a score of 0 for 'No' (element not experienced). If they scored at least one component from each column, they were assigned 1 point. Three points meant that the respondent or his or her child was a victim of human trafficking. Two points meant that the respondent was likely to have been in a situation in which human trafficking could have occurred. One or zero points meant that there was no exposure to human trafficking.

Sampling

As the 2016/2017 drought has been affecting East Africa and the Horn of Africa in a cyclical way, the three most affected counties in Kenya were purposively selected for this research: Samburu, Kilifi and Mandera. As can be seen, these are arid areas. The selection was based on data derived from the Kenya National Drought Management Authority (NDMA) Vegetation Condition Index (VCI). The drought observation time period ranged from December 2016 to May 2017. According to VCI standards, the three selected counties ranged between the categories of 'Severe Vegetation Deficit' and 'Extreme Vegetation Deficit' (National Drought Management Authority, 2017). In each county the data was collected in two sub-counties; one remote and one situated in the centre. By choosing one sub-county located in the centre and one in a remote location, the study attempted to capture the difference in the impact of drought on remote areas and county centres (as the county headquarters provide

more opportunities, such as access to government institutions, businesses, and civil society initiatives).
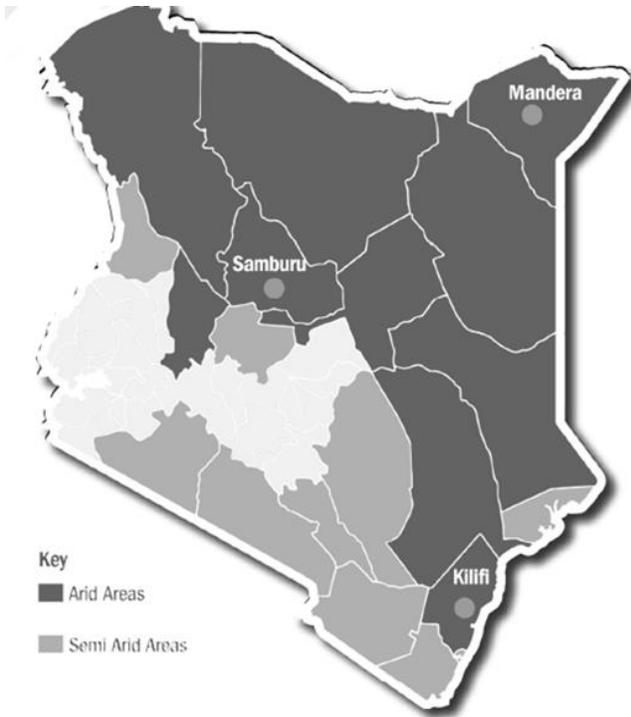
Figure 6.1. Map of Kenya showing counties where data was collected
Source: Kenya Livestock Marketing Council (2017)

The population was divided into two sub-samples: those severely affected and those mildly or not affected by drought. To distinguish the two, the study used the objective criterion of displacement. When drought forces people to migrate in order to mitigate negative impacts, the study assumed that the effects of the drought were severe, contrary to a scenario where no migration ensues (Burton, Kates & White, 1993; Perch-Nielsen, 2004; Raleigh, Jordan, & Salehyan, 2008). The total estimated population for the three counties was 2,359,438 (Kenya National Bureau Statistics, 2010).

Using the sampling formula proposed by Krejcie and Morgan (1970):

$$s = \frac{\chi^2 N(1-P)}{d^2(N-1) + \chi^2 P(1-P)}$$, the minimum sample size was 384. To enable generalisation, the sample size obtained using the above formula was divided equally among the three counties (Table 6.2).

Table 6.2. Geographic distribution of all respondents and those affected by drought

	Mandera	Kilifi	Samburu	Total
	N (%)	N (%)	N (%)	N (%)
All respondents	142 (35.0%)	128 (31.5%)	136 (33.5%)	406 (100%)
Respondents affected by drought	141 (39.8%)	83 (23.4%)	130 (36.7%)	354 (100%)

The research team also verified whether the interviewed persons indeed represented the desired target group. Section 1 of the survey contained questions related to the respondent's quality of life before and after the onset of the 2016/2017 drought. It turned out that a proportion of respondents actually felt that their personal situation did not become worse during the drought, despite having stated that they were affected by the climatic conditions. While this appeared like a contradiction at first, it seems plausible that in certain situations the life of the affected persons could remain the same or improve, regardless of the hardships that could be expected in such a situation. Drought mitigation measures exerted by the affected person or civil society organisations, for instance, could mean that the respondent feels affected, but ultimately not worse off than before.

Data analysis
The descriptive and inferential statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) software. Selected variables were cross-tabulated and a chi-square test of association was applied. Non-parametric tests were conducted for the data for respondents who were only affected by drought, as well as for those who had two or more human trafficking components. A

simplified content analysis process was used to analyse the qualitative data.

Ethical considerations

This research was done within the confines of 'do-no-harm'. Whenever there was a chance of harm occurring, the research team was instructed not to proceed. Consent was obtained from the participants before proceeding with the interview or survey. The participants were also informed that they could decide to stop the interview at any time. Underage children were not interviewed for this study for ethical reasons. Finally, the research assistants were required to provide identified victims with the contact information of a specialised organisation, counsellor or social worker, in case they needed care.

Results: All respondents

Correlation between quality of life and risk, optimism, support, age, vulnerability and human trafficking

In order to test the association between drought and vulnerability to human trafficking, several variables were correlated using Spearman's Rho correlation. The results indicate that the Spearman's Rho correlation between the quality of life before and during drought is only 0.401 ($p<0.001$, 2-tailed). This means that the quality of life before drought is a significant, but rather weak predictor (only 16% shared variance) of the quality of life during drought. All three indicators of quality of life (before and during drought, and the difference between before and during drought) were explored. Next, the relationship between the factor quality of life (before and during drought, and the difference between before and during drought) and other variables such as vulnerability and experiences with human trafficking should be looked at. Table 6.3 presents the Spearman's Rho correlation.

Table 6.3. Spearman's Rho correlation between the indicators of quality of life and the other variables

	QLB-QLD	QLD	QLB
Risk	0.080	0.363***	0.439***
Optimism	0.215***	0.315***	0.537***
Support	0.095	0.289***	0.366***
Age	0.250***	-0.092	0.146**
Vulnerability	0.404***	-0.532***	-0.032
Human trafficking	0.275***	-0.064	0.176*

Notes: * Correlation is significant at the .05 level (2-tailed); ** Correlation is significant at the .005 level (2-tailed); *** Correlation is significant at the .001 level (2-tailed). The table presents only the significant correlations at p<.05.

Variables:
QLB = Quality of life before the drought
QLD = Quality of life during the drought
QLB-QLD = Difference between quality of life before and during the drought
Risk = Readiness to risk taking an opaque offer of job/education/marriage in unknown place
Optimism = Rate of optimism that the current situation will improve
Support = Support received from others
Age = Age of the respondent
Vulnerability = Indicators of being affected by drought
Human trafficking = Human trafficking component

The highest value (0.537) in Table 6.3 relates to *optimism* and *quality of life before the drought* and depicts a relation between past experiences and expectations for the future. A lower, yet recognisable association was also identified between *optimism* and *quality of life during the drought* (0.315). Drought, which is a natural phenomenon, can be perceived as a temporary occurrence that eventually ends with the passage of time. A similar manifestation was noted when analysing the predisposition to migration (specifically to human trafficking) among internally displaced persons (IDPs) in Kenya. The IDPs who had been displaced by flood were less eager to migrate and take a risk than IDPs who had been displaced by other causes (such as inter-ethnic violence or post-election violence) (Malinowski, 2016).

Readiness to risk taking up an opaque offer of job/education/marriage in an unknown place correlates strongly with *quality of life before the drought*

(0.439) and *quality of life during the drought* (0.363). The moderately strong, positive correlation with the taking of risk variable means that quality of life played a significant role in people taking risky offers (such as those that led to human trafficking) and could catalyse the respondents to take risky decisions.

The *difference between life before and life during the drought* variable scores a significant correlation with *vulnerability* (0.404), *human trafficking* (0.275), *age* (0.250) and *optimism* (0.215). The strong correlation with *vulnerability to drought* can be explained by drought having an impact on the difference between quality of life before and during the drought. As for human trafficking, *the difference between quality of life before and during drought* impacted on respondents' experiences with human trafficking. This implies that the greater the difference between quality of life before and during the drought, the higher the chances of being trafficked. It is also important to note that the *difference between life before and life during drought* variable has a stronger association with *human trafficking* (0.275) than *quality of life before drought* (0.176) and *quality of life during drought* (-0.064). This means that it is not necessarily the quality of life before or during the drought that causes vulnerability to human trafficking, but the difference between them.

Next, the research team explored the relationship between the other variables to get an idea of the interplay between the variables that may affect human trafficking (see Table 6.4).

Table 6.4. Association of the other variables with human trafficking experiences

	Risk	Opti- mism	Sup- port	Age	Vulner- ability
Optimism	0.264***	1			
Support	0.370***	0.471***	1		
Age	-0.016	0.028	0.076	1	
Vulnerability	-0.184***	-0.074	0.01	0.185**	1

Human trafficking	-0.03	0.211**	0.105	0.053	0.203**

Notes: * Correlation is significant at the .05 level (2-tailed); ** Correlation is significant at the .005 level (2-tailed); *** Correlation is significant at the .001 level (2-tailed). The table presents only the significant correlations at p<.05.
Variables:
Risk = Readiness to risk taking an opaque offer of job/education/marriage in unknown place
Optimism = Rate of optimism that the current situation will improve
Support = Support received from others
Age = Age of the respondent
Vulnerability = Indicators of being affected by drought
Human trafficking = Human trafficking component

Looking more closely at the interplay between optimism and human trafficking, it seems that the former can play an ambiguous role in preventing or exposing a potential victim to human trafficking. For instance, optimism can sometimes make the victim neglect warning signs that could be indicative of trafficking. Optimism, especially in the context of a natural disaster that is perceived by the affected population to be temporary, could, however, contribute towards the targeted person's rejection of an offer made by a potential trafficker. This could be because of the expectation that economic conditions will improve in the near future and, hence, there is no need for a drastic change in lifestyle. In order to rule out that the association between the two variables is subject to the second scenario, and that optimism prevented respondents from a taking risky offer and ending up in a trafficking situation, there is a need to consider other correlations. The *optimism* and *risk* variables correlated at 0.264, which is a moderately positive correlation. This means that optimism increased the tendency to take the risk of the unknown, thus making the person vulnerable to trafficking. In this context, it means that optimism played a negative role in the connection with human trafficking, explaining why *optimism* scored a moderately positive correlation (0.211) with the *human trafficking* variable.

The readiness to risk taking an opaque offer of job/education/marriage in an unknown place correlates strongly with *support received from others* (0.370). This indicates that the risk-taking variable increased with support

received. In a trafficking scenario, support, just like optimism, can play an ambiguous role. While support from others can improve one's life, it can also increase the likelihood of a person being trafficked. People who are trafficked internationally frequently receive support (both words of encouragement and financial) from family and friends. Often, victims would not be in a position to be drawn into a trafficking situation without the help of family. In some scenarios, help can even become a pressure that drives the person to take up a risky offer. Some forms of family support can also be detrimental, for instance, where the affected family is offered support in the form of accommodating their child, but instead that same child is subjected to child labour or some other type of exploitation.

Correlation between human trafficking and vulnerability

The correlation between human trafficking and vulnerability (0.203) is significant (p<.05). However, it is important to clarify that the association between the two is moderate at best, if not weak. A more significant correlation emerges when the values for this variable are grouped into two categories; with those who scored 0–6 (little or no effect of drought experienced or 'not significantly affected') in the first category and those who scored 7–9 (significant effects or 'significantly affected') in the second category. It transpired that the two groups exhibited significant differences in terms of their degree of association with vulnerability to human trafficking. The Mann-Whitney non-parametric test captures the differences between the two groups.

The level of human trafficking among those who were not seriously affected by drought differed significantly from those who were affected significantly by drought at p=.012[1], U=7,160.500[2] (N=220), W_s=13,601.500[3], and SE=443.830.[4] Those who were not affected significantly (N=107) had a mean rank of 100.08, while those who were significantly affected by drought (N=113) had a mean rank of

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[1] p = the attained level of significance
[2] U = the number of times observations in one sample preceded observations in the other sample in ranking
[3] Ws = the sum of the ranks of the first samples
[4] SE = standard error

120.37. It transpires that the biggest difference between the two groups can be found in the respective share of respondents who scored 3 components for each column of the human trafficking table (victims of human trafficking). Those who were strongly affected by the drought had a significantly higher representation in this category than those who were less affected.

These results could be explained by the multifaceted nature of human trafficking, which could have resulted in some types of exploitation increasing due to drought, while others that lacked an association with this type of natural disaster registered no such change. This suggests a complex and contextual relationship between drought and human trafficking. It seems that in some situations, where the socio-cultural milieu is conducive, drought increases some streams of human trafficking, while in other circumstances drought has at best a neutral effect on human trafficking. Inferential statistics were conducted on the reduced sample to identify which aspects of this complex association was the most highly correlated with drought.

Can climate disaster related drought reduce human trafficking?
As odd as it sounds, drought could also have an inverse relationship with human trafficking; that is, the occurrence of drought could reduce vulnerability to human trafficking in some situations. However, this is only possible for some isolated streams of human trafficking and in specific socio-cultural and economic circumstances. Child marriage (which is included as a form of child trafficking in Kenya) is an example of such an inverse relationship.

For instance, participants from Kilifi and Samburu agreed that the economic hardship brought about by famine could make a higher number of parents open to the idea of marrying off their children at a young age, especially their daughters. Marriage was used as a means of gaining access to more livestock as part of the dowry, or at least to reduce the economic burden of the household. On the other hand, dowry can be an obstacle to child marriage as some individuals will be more inclined to retain their livestock during insecure times. In addition to this, respondents in Mandera claimed that they did not

experience a high number of child marriages during the drought as the drought disrupted normal patterns of behaviour, including cultural rites. Thus, early child marriage, being an important cultural rite, cannot be performed properly due to social (i.e., migration) and economic (i.e., poverty) challenges created by drought, and, hence, families are often forced to postpone child marriages till the drought is over.

Results: Respondents affected by drought

The data was then narrowed down to only those respondents affected by drought (317 in total). Respondents were asked to what extent drought had an impact on them on a scale of 0 to 9. Respondents who scored values from 0 to 3 (where 0 meant not affected by drought and 9 meant affected by drought[5]) were removed. The remaining respondents who scored values between 4 and 9 were then subjected to further analysis about their experiences with human trafficking.

Table 6.5. Distribution of respondents affected by drought in each county

	County			
	Mandera County	Kilifi County	Samburu County	Total
Number of respondents (%)	118 (37.2%)	97 (30.6%)	102 (32.2%)	317 (100%)

The following variables were subsequently tested on the reduced sample with the use of non-parametric tests: *location, gender, migration, overt conflict, preparedness for drought, risk-oriented attitude* and *financial instability*.

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[5] From 0 to 3 the effect of drought was low, from 4 to 6 the effect was moderate, and from 7 to 9 the effect was significant.

Location

The first additional variable to be analysed in conjunction with the reduced sample was the respondent's county. Place of residence is critical in evaluating the cultural dimensions of human trafficking in the context of drought, as respondents originating from the same counties are more likely to demonstrate a greater degree of cultural homogeneity because of their similar or same ethnical affiliation.

A Kruskal-Wallis test performed on those who were significantly affected by drought (H (2)=68.526; P=.000; N=317) showed that there is significant difference in the degree to which human trafficking was experienced across the three counties: the mean rank for Mandera county was 163.66, for Kilifi County was 103.74 and for Samburu county was 205.06. The fact that Kilifi scored the lowest while Samburu scored the highest reaffirms that the former was affected to a lesser extent by human trafficking while the latter was more affected.

In order to understand this further, the research team explored the socio-economic environment of each county and found that Kilifi provided several economic opportunities in agriculture, mining, and tourism, as well as in industries located in neighbouring Mombasa. People residing in Kilifi, thus, had a wide array of options for alternative sources of income. In contrast, Samburu and Mandera counties were predominantly reliant on pastoralism, with the majority of the population having little or no alternative to animal husbandry. Drought can have a greater detrimental effect on an undiversified economy that depends on stable climate conditions, which, in turn, makes more persons vulnerable.

Still, persons living in Kilifi were by no means spared from human trafficking. It was reported that many of them were recruited to work abroad in Gulf States such as Dubai, Saudi-Arabia and Qatar, with several of them ending up being trafficked. In comparison to other areas such as Samburu and Mandera, those trafficked abroad from Kilifi generally had a different profile. This could be because people who are trafficked abroad are often required to possess some form of

education and skills (such as teachers, nurses, builders), which are not common among pastoralists and farmers.

For the target group of drought-affected persons, the main danger lies in their lack of access to formal labour market opportunities, which guarantee workers certain things, such as a minimum wage and regular work hours, among other benefits. Consequently, pastoralists and farmers are more likely to be found working in the informal sector. In tourism, for example, this would include occupations such as beach boy (a male who shows tourists around or links them up with drugs or sex workers), cleaning lady (especially in hotels) or vendor (a male or female who sells handcrafted goods). Low returns in this sort of work push many, including children, to supplement their income through prostitution (Tuesday, 2006).

Gender

Conventionally, human trafficking has been considered through the lenses of age and gender. Gender would, therefore, be expected to play an important role when it comes to human trafficking among drought-affected people. The Mann-Whitney non-parametric test was used to measure the prevalence of human trafficking among male (mean rank 148.31) and female (mean rank 166.12) respondents, and failed to find a significant difference (U=13709, p=.067, N=314) at p=.05. The effect of gender (r=.104, z=1.835)[6] on vulnerability to human trafficking is small to medium. The Mann-Whitney test indicates that the human trafficking experience among the drought-affected population was not significantly different gender wise. Men and women were equally exposed to human trafficking during the drought. Although the two genders might have experienced specific types of exploitation at different frequencies, the overall vulnerability and exposure remained similar for both men and women.

Migration

Another factor that has the potential to influence the vulnerability of drought affected populations is migration, both cross border and internal. When the migration variable was tested with the Mann-

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[6] r = effect size; z = z-score

Whitney non-parametric test on the reduced sample, the results indicated that those who did not migrate (mean rank 169.85) experienced more cases of human trafficking than those who did migrate due to drought (148.12). The Mann-Whitney test indicates that there is a significance difference at p level <.05 between respondents who migrated due to drought (mean rank 148.12) and respondents who did not migrate due to drought (mean rank 169.85) in terms of probability of encountering human trafficking (U=14171, p=.026, N=316). The effect of the estimate (r=.125, z=2.230) is small to medium.

The biggest difference between the two groups can be found among those who scored 0 elements of human trafficking. Those who migrated had a higher number of 0 scores compared to those who did not migrate. Migration appears to have been a mitigation strategy adopted by respondents in response to the drought. Therefore, it can be concluded that migration during drought plays a positive role as a coping mechanism and does not increase human trafficking vulnerability among the affected population.

Overt conflict

Prolonged conflict is common in arid and semi-arid areas of Kenya. Displacement, destruction and closure of infrastructure such as schools and hospitals, as well as loss of life and property are some of the effects of overt conflict (for example, between different ethnic groups or along socio-economic lines). Previous research in Kenya (Malinowski, 2016) established a connection between exposure to overt conflict and vulnerability to human trafficking. Respondents affected by drought were grouped into two categories: those who claim to be affected by overt conflict[7] and those who perceive themselves not to be affected by conflict, as shown in Table 6.6.

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[7] 'Subjective belief' was the best indicator of being affected by overt conflict, as overt conflict does not affect every member of the local community equally. In Kenya, there are several areas where conflict between two ethnic groups persists, yet not all members of the affected community have the same level of impact on their lives.

Table 6.6. Conflict experienced by respondents affected by drought[8]

Conflict situation	Yes	No	Total
N	148 (46.7%)	169 (53.3%)	317 (100%)

When the Mann-Whitney test was applied, it revealed that the prevalence of human trafficking significantly differs (U=16849, p=.000, N=316) among the respondent groups. Interviewees who were or had been in a situation of conflict scored considerably higher (mean rank 188.62) than respondents who had not experienced a conflict situation (mean rank 132.30). The effect of the conflict estimate is rated medium (r=.325, z=5.772).

The distribution of ranks together with the effects estimate allows the conclusion to be drawn that conflict plays an important role during drought in causing vulnerability to human trafficking. And, in fact, the interplay between conflict and location emerged as a major factor impacting on vulnerability to human trafficking.
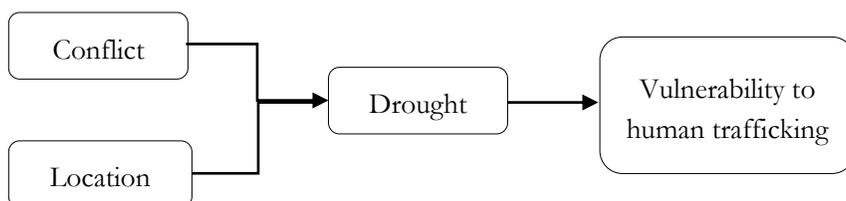

Figure 6.2. The influence of conflict and location, together with drought, on vulnerability to human trafficking

Preparedness for drought, risk-oriented attitude and financial instability

The three variables, preparedness for drought, risk-oriented attitude and financial instability, did not increase the impact of drought on vulnerability to human trafficking as there was no difference across the categories for each variable. With respect to preparedness for

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[8] Respondents were asked whether they have a contemporary direct experience of overt conflict (mainly over limited resources such as access to grazing areas or water points).

drought (p=.352), the two categories of drought-affected respondents experienced human trafficking in equal measure between those who had 0 elements and those who identified 1, 2 and 3 elements of human trafficking. The same applied to risk-oriented attitude (p=.630) and financial instability, which was conceptualised as having to take out a loan due to drought (p=.731).

Limitations

There were several limitations anticipated before the research and encountered during the research process. Firstly, this research focused on one drought during a specific period of time (2016–2017). A longitudinal research design that repeatedly compares data during drought and no-drought periods would be more suitable to assess the effect of climate disaster related drought and vulnerability on human trafficking.

Secondly, there was failure to anticipate in advance that a certain proportion of affected persons would be unavailable for the survey and interview. This concerns the group of affected persons who may have migrated to foreign countries or other places in Kenya. Locating these persons after their migration was difficult, not only from a logistical perspective, but also given the limited resources at hand.

The random selection of participants presented its own challenges. Even though the research team did not strive to gain a representative sample of the overall population in terms of age, the number of participants within the lowest age spectrum (20–29) turned out to be lower than in the higher age brackets. During the data validation it became clear how this composition came to be. Many of the younger persons in the communities were said to be engaging in income-generating activities or taking part in political rallies during the election period, which rendered them unavailable. In addition, it was argued that elders were seen as the most experienced members of their communities and, by extension, were more likely to represent their peers and families in most matters within and outside their communities

Conclusion and recommendations

This study investigated the nexus between climate disaster-related drought and human trafficking in Kenya. Using a quantitative design, we found that drought has an impact on human trafficking (Spearman's Rho coefficient =0.203, p<.005) by making the drought-affected population vulnerable to human trafficking. The association is most significant in conjunction with the existence of conflict (U=16849, p<.001) and in certain locations (H [2] =68.526, p<.001). Among the three locations examined, two, Samburu and Mandera, experienced inter-ethnic conflict, and thus the people in those counties were more vulnerable to human trafficking than that in Kilifi. In the context of drought, gender seems to play a lesser role than in a scenario where there is no drought. The same applies to migration, which is a neutral factor in relation to vulnerability to human trafficking.

The study found that of the three possibilities – drought increases, decreases or neither increases nor decreases vulnerability to human trafficking – the first scenario seems to be the most supported by the evidence. That is, drought increases vulnerability to human trafficking in certain circumstances. However, in some circumstances, vulnerability remains neutral or even decreases. It appears that what determines whether drought increase, decreases or has a neutral effect on vulnerability to human trafficking is location (i.e., the socio-cultural context) and whether there is a situation of conflict in that location.

Based on these findings, certain recommendation can be made:

- In relation to the prioritisation of national, regional and international policies, there should be more focus on climate change migration streams, especially non-regularised migration (this also includes human trafficking). Further research is needed to support this by mapping out areas where populations are particularly vulnerable to different types of human trafficking due to climatic disasters.

- It would be helpful to include counter-trafficking measures in humanitarian assistance programmes for drought-affected communities. This should especially be done in areas affected by inter-ethnic conflict and where populations lack alternatives to the main type of economic activity (for example, animal husbandry).

- Finally, further research should be conducted on: the relationship between other types of climate disaster (besides drought) and human trafficking; the role of climate-related natural disasters on child marriage; the role of climate-related natural disasters on child labour; and the interplay between climate induced inter-ethnic conflict and human trafficking in drought prone areas, among other things.

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