

## (IM)MOBILITY AND INJUSTICE: THE CONSEQUENCES OF SLOW-ONSET CLIMATE CHANGE ON INVOLUNTARY NON-MIGRANTS IN AFRICA

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**Abstract:** *The impact of climate change, including slow-onset effects, on migration has received due attention in recent years. In this context, the mobilities framework focuses exclusively on migration, displacement, and relocation as the only legitimate migratory response. Yet so exist those individuals who have the desire or necessity to move but lack financial or social resources to do so. In the context of Africa, these issues are compounded not just because individuals who stay in hostile environmental areas are more likely to be vulnerable, but because they are also less visible than substantial groups of people moving across the continent and beyond. Here we argue for a revised version of the mobilities framework to include the concept of involuntary non-migrants. In Africa, the inability of individuals to migrate as a result of slow-onset climate change presents significant threats to physical and mental health, negative socio-political outcomes, and costs to culture and place such as identity and ways of life.*

**Keywords:** *Climate change, immobility, Africa, adaption, migration, slow-onset*

### INTRODUCTION

Anthropogenic climate change is an unequal process with global impacts (Harlan et al., 2015). Climate change is often related to sudden-onset events such as flooding, storms and fires, however, it also transpires incrementally through slow-onset effects, such as land and forest degradation, and ocean acidification (Matias 2017). Changes are not felt homogeneously (Harlan et al., 2015), and Africa is extremely vulnerable to the effects of slow-onset climate change due to its low adaptive capacity and high exposure (Niang 2014). Moreover, much of its population is doubly marginalised due to high levels of poverty (Shackleton et al., 2015). Research points to slow-onset climate change as a threat multiplier that interacts with other factors, such as conflict, to push people into permanent migration (McAdam 2012; Serdeczny et al., 2017).

Less attention has been paid to those individuals who have the desire or necessity to move but lack financial or social resources to do so. These *involuntary non-migrants* face a dual threat: they are more vulnerable to environmental impacts of slow-onset climate change, but less able to move away from them (Black et al., 2011a).<sup>1</sup> Migration, displacement, and relocation are almost exclusively referred to as falling within the mobilities

framework, however, this paper integrates immobility within such a structure as a legitimate outcome in the face of slow-onset changes (Adams 2016; Farbotko 2018; Zickgraf 2019). In the context of Africa, issues are compounded not just because individuals who stay in areas hostile environmental area are more likely to be vulnerable, but because they are also less visible than substantial groups of people moving across the continent and beyond (Webber & Barnett 2010). Involuntary non-migrants in Africa experience threats to physical and mental health, negative socio-political outcomes, and costs to culture and place such as identity and ways of life (Tschakert et al., 2019). Consequently, this paper argues that the inability of individuals with low socio-economic status in Africa to migrate as a result of slow-onset climate change presents a significant cost to their human rights and humanitarian needs. Moreover, these outcomes are exacerbated since a consistent focus on the movement of people renders involuntary non-migrants effectively 'invisible', and thus diminishes their ability to be political subjects (Lubkemann 2008).

<sup>1</sup> First termed as 'trapped' populations by Black et al., (2011a).

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## SLOW-ONSET CLIMATE CHANGE IN AFRICA

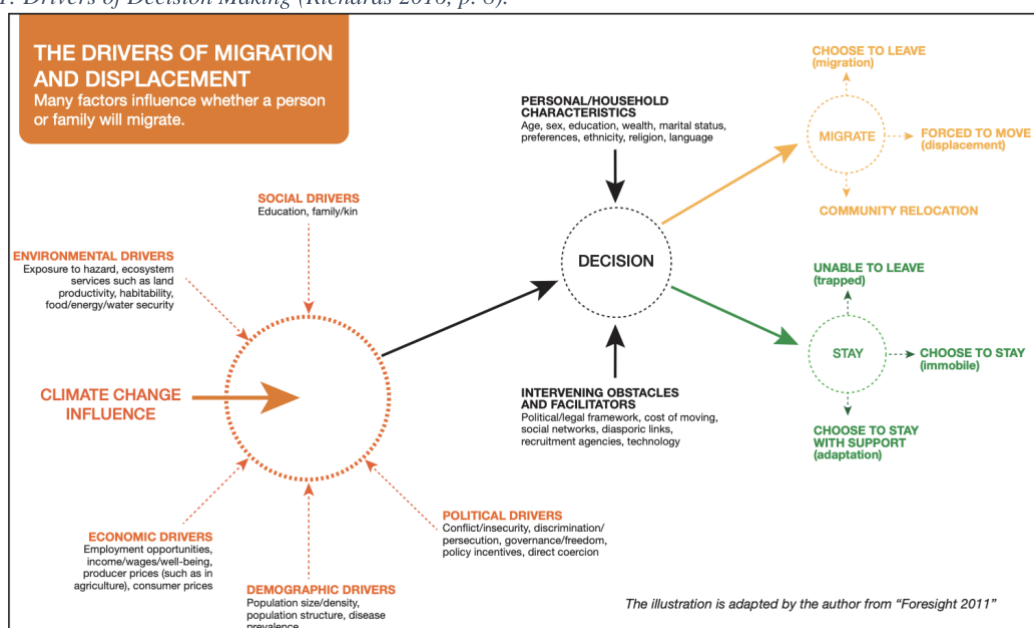
The impacts of climate change occur at different rates. Some effects are immediate, discrete, and have obvious outcomes, such as floods, storms, and landslides (IDMC 2017, p. 106). These sudden onset events are perceptible and urgent, and thus have been given significant government and media attention globally (Dinar et al., 2012; Ting 2019). In contrast, impacts can also occur via gradual environmental transformation over a protracted period (UNFCCC 2012). These slow-onset effects include increasing temperatures, desertification, sea level rise, glacial retreat, ocean acidification, land and forest degradation, loss of biodiversity, and salinisation (UNFCCC COP 2010). Drought is linked to, although not directly categorised as, slow-onset climatic change (IPCC 2007). For the purpose of this paper, it is categorised as a slow-onset event. Less global attention has been placed on these slow impacts, despite that within Africa these changes are particularly material and erosive (IDMC 2018). Whilst global average temperatures have risen by nearly 1°C over the last century, in southern Africa temperatures have risen by twice the global average (Niang 2014, p. 1206). Sea levels have also risen, causing saltwater intrusion in the Egyptian Nile Delta and impacting food production for 80 million people (Abd-Elhamid et al., 2016). A further 220 million people in Africa are exposed to drought each year (UNFCCC 2007, p. 18). Moreover, many factors compound these environmental costs including weak governmental institutions and infrastructure, poverty, low levels of health care, illiteracy, lack of skills, reliance on the environment,

poor access to resources, and armed conflicts (UNFCCC 2007; Welborn 2018). Without adequate mitigation strategies, the effects of slow-onset climate change in Africa will gradually become catastrophic (Roy 2018).

## MIGRATION AS AN ADAPTION STRATEGY

When individuals face the effects of slow-onset climate change on their livelihoods, migration can be an efficient adaption strategy to reduce their vulnerability and exposure (Bardsley & Hugo 2010; Gemenne & Blocher 2017). Nonetheless, the relationship between climate change, particularly slow-onset effects, and human mobility is problematic. Human mobility is multi-causal: climate change interacts with a wide range of underlying cultural, socioeconomic, environmental, and political processes to influence a decision (or non-decision) to move (McAdam 2012; Parsons 2019). Climate change does not impact everyone equally and certain groups experience more severe impacts, resulting in fewer migration choices (Black et al., 2011b; Dulal, Shah & Ahmad 2009; Hugo et al., 2009). Those who move may not do so voluntarily or may instead face a negative cost to livelihoods (IOM 2017). Furthermore, there are those who do not leave the affected areas at all. Those left behind can be categorised into those who: choose to stay (immobile); choose to stay with support (adaption); or are unable to leave (trapped) (see Figure 1) (Black et al., 2011a; Suliman et al., 2019; Richards 2016, p. 8). In this framework, migration or non-migration can be a forced outcome or an adaptation strategy (Suliman et al., 2019).

Figure 1: Drivers of Decision Making (Richards 2016, p. 8).



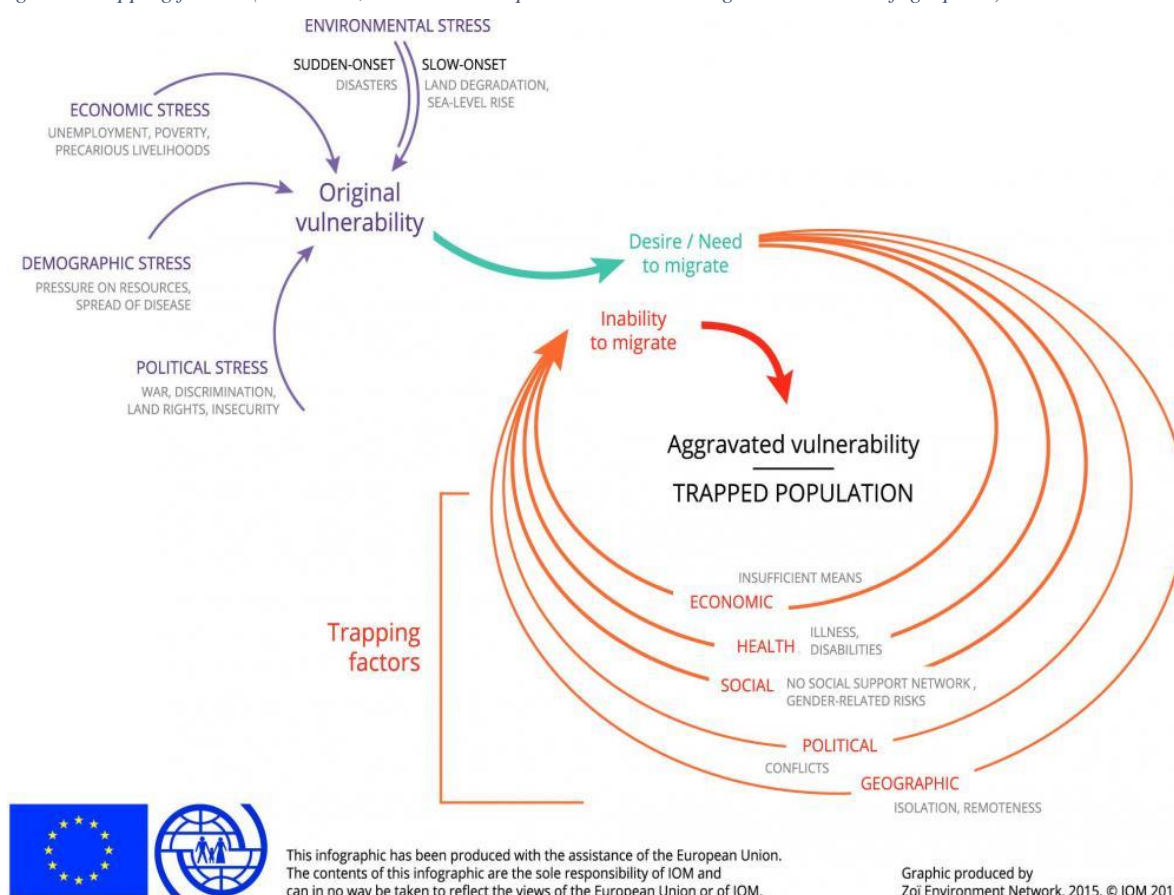
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## (IM)MOBILITY

First conceptualised as ‘trapped populations,’ involuntary non-migrants are those who stay in areas experiencing the effects of slow-onset climate change because they do not possess the assets necessary to migrate (Black et al., 2011a).<sup>2</sup> These individuals are typically already vulnerable due to existing economic, political, or demographic factors, and their migration strategies are limited due to an intersection of poverty, absent support networks, geographical and social exclusion, conflict, or limited political rights (see Figure 2) (Black et al., 2011a; IOM 2015). Thus, involuntary non-migrants are often indigenous populations or

nomadic pastoralists who have few or no diversification options and experience entrenched and persistent poverty (Richards & Bradshaw 2017; Warner et al., 2009). These individuals are vulnerable to climatic effects through exposure, but cannot move away from these effects (Black & Collyer 2014). In the absence of appropriate adaptation strategies, involuntary non-migrants become increasingly vulnerable, as the adverse impacts of slow-onset environmental change continues to undermine their livelihoods (Richards 2016).

Figure 2 Trapping factors (IOM 2015, available at <https://environmentalmigration.iom.int/infographics>)



## HUMANITARIAN AND HUMAN RIGHTS COST

Involuntary non-migrants in Africa who remain in areas of increasing environmental stress due to slow-onset climate change face a range of humanitarian challenges and threats to internationally guaranteed human rights (Cubie

2017). These consequences can broadly be separated into direct and indirect health impacts, socio-political aspects, and ‘symbolic and affective dimensions of culture and place’ (Tschakert et al., 2019, p. 59). Furthermore, these impacts are compounded by the invisibility of the population from scholarly and political discourse (Lubkemann 2008; Webber & Barnett 2010). Due to this gross

<sup>2</sup> The term *involuntary non-migrants* first appeared in the PhD thesis of Xuchun Liu, as supervised by Professor Graeme Hugo (2015) p.170.

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omission, this paper recognises there are limited studies solely related to involuntary non-migrants, and thus extrapolates research applicable to the population where necessary. In doing so, the paper underemphasises, rather than overestimates, the impact of slow-onset climate change on involuntary non-migrants, as some of the research relied upon refers to homogenous populations with adequate coping mechanisms, rather than already marginalised peoples.

### *Direct and Indirect Health Impact*

Increasing land-surface temperatures have directly caused ill-health outcomes for involuntary non-migrants in Africa. A South African study found temperature-related mortality accounts for 3.4% of deaths in the nation (Scovronick et al., 2018). This was mirrored by Amegah et al (2016) who established that high temperatures lead to an increase in all-cause mortality in sub-Saharan Africa. Correlations were also found in Ghana (Azongo et al., 2012) and Kenya (Egondi et al., 2012). These effects are intensified as involuntary non-migrants in Africa may often live in housing made of sheets of corrugated iron and wood. During hot weather these structures may be 4–5°C warmer than outdoor temperatures, exposing them to associated ill-effects of warm weather (Naicker et al., 2017).

Further, slow-onset effects have sizable implications for the transmission of vector-borne diseases. Rises in temperature are linked with malaria spikes, exposing individuals in environmentally stressed areas to greater susceptibility (Adeola et al., 2017). In addition, elevated temperatures are associated with increased transmission of meningitis, particularly in the Sahel region (Koutangni, Maïnassara & Mueller 2015). *Listeria monocytogenes* are also particularly sensitive to temperature increase, resulting in a recent outbreak across South Africa (Chersich et al., 2018). Equally as impacted as physical health is the mental well-being of individuals. Those exposed to effects of slow-onset climate change may experience negative emotions such as sadness and distress, and negative psychological outcomes including suicidal ideation and depression (Tschakert et al., 2019). Thus, the right to life, liberty and personal security (Article 2) is threatened by such outcomes (United Nations General Assembly 1948).

The health of involuntary non-migrants is further adversely impacted by climate-related food insecurity. Between 2004 and 2017 in western and southern Africa, evidence presented by the FAO and WHO (2018) indicates the growing season length has significantly reduced, lessening crop yields and increasing food insecurity for those individuals who cannot move away to more successful agricultural

regions. A study by Codjoe and Owusu (2011) found that farmers in the Afram Plains region of Ghana have experienced seasonal shifts, resulting in agricultural loss and decreasing availability of food. Similar seasonal changes have also been recorded in the Nigerian savannah and Tanzania (Tambo & Abdoulaye 2013; Trærup & Mertz 2011). This food insecurity can lead to a myriad of adverse health outcomes including anaemia and hypertension, as well as infant malnutrition in-utero, resulting in respiratory distress, infections, and developmental delays (Grace et al., 2015).

### *Socio-Political Aspects*

Restricted access to health care compounds the consequences of slow-onset effects. Entrenched poverty of involuntary non-migrants limits their ability to access and pay for what services are available (Tschakert et al., 2019; Keshavarz, Karami & Vanclay 2013). Moreover, many of these individuals are geographically isolated in communities where much of the population have already migrated elsewhere (Tschakert et al., 2017). These areas are often viewed by African states as marginal places, and thus are allocated less resources to deal with climate-related health matters in an already inefficient and bureaucratic public health sector (Lubkemann 2008; Tschakert et al., 2017). Instead, limited resources are channelled towards visible areas of high density and this further reduces the ability of involuntary non-migrants to participate meaningfully in society (Tschakert et al., 2019).

### *Symbolic and Affective Dimensions of Culture and Place*

In addition, these individuals are unable to move away from environmental threats, and through this, they experience a loss of agency, leading to disempowerment and erosion of decision-making power and identity (Tschakert et al., 2019). Their capacity to exert control over their lives is threatened (Werkheiser 2017). On a collective scale, indigenous communities – who are often overrepresented in areas affected by slow-onset events – hold knowledge about local traditional practices that may be essential for successful climate change adaptation (Tschakert et al., 2019). Nonetheless, African governments often lack the ability, structures, or willpower to deal with a such a population (Ibid.). For example, for the Indigenous peoples living in the Niger Delta region of Nigeria, disruptions in ecosystems, soil erosion, encroaching desertification, and increasing land infertility have become commonplace (Ani 2013). Nigeria's *Vision 20:2020* – the country's strategic program for sustainable development – does not include reference to Indigenous knowledge on mitigation nor adaption strategies, rendering them

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discursively invisible and contributes to their ongoing climactic injustice (Ani 2013, p. 30).

Moreover, involuntary non-migrants often experience anxiety over a now unrecognisable landscape or existence (Tschakert et al., 2019). This leads to feelings of shame and alienation. In Ghana, for example, individuals reported no longer feeling human when sharing water with animals during droughts (Tschakert, Tutu & Alcaro 2013). Income-generating activities are also greatly hindered as many receive a livelihood from the environment (Tschakert et al., 2019). Land and forest degradation, and loss of biodiversity severely impacts their ability to continue such practices. For example, many changes in Mozambique have reduced income of individuals who make a living from fishing as "...the fish sanctuaries and homes have all been broken so we only get second grade fish (quality/size) these days" (Bunce, Rosendo & Brown 2010, p. 420). Thus, it is clear that the inability of individuals in Africa to migrate as a result of slow-onset climate change presents a significant cost to everyday humanitarian needs.

Further, those who are left behind in communities experience a loss of distinct ways of life as the social and physical landscape continues to change. People's relationships and attachments to a meaningful place also change. Individuals experience solastalgia (distress caused by environmental change) and grief (Hess, Malilay & Parkinson 2008; Tschakert & Tutu 2010). Increasing desertification and outmigration in Ghana has led some to describe the feeling as 'hollow homes' (Tschakert, Tutu & Alcaro 2013). Traditional and local knowledge is also threatened by immobility in the face of slow-onset events (Werkheiser 2017). This effect was highlighted in Cameroon: "we do not longer know when and what to plant" (Bele et al., 2013, p. 881), and thus, violates the human right of participation in the cultural life of community (Article 27) (United Nations General Assembly 1948).

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### CONCLUSION

Climate change does not manifest in equal ways, and it instead greatly impacts those who are most vulnerable. Consequently, in the face of slow-onset effects of climate change, those individuals in Africa who are already marginalised through existing economic, political, or demographic factors are often not afforded the adaptation strategy of migration (Black et al., 2011a). These individuals lack resources and assets necessary to move and remain in place involuntarily as climactic events continue to erode their livelihoods (Black & Collyer 2014). These individuals face unique threats to their physical health through direct means such as temperature increase and morbidity (Scovronick et al., 2018), and indirectly through food insecurity and disease risk (Grace et al., 2015). These factors are further compounded by the population's relative invisibility in Government discourse, which means few resources are allocated towards the issue (Tschakert et al., 2019). Moreover, involuntary non-migrants face constant disempowerment due to an inability to make choices about their own lives at both an individual and societal level (Tschakert et al., 2019). Equally as important are threats to a sense of place, feelings of solastalgia, and violations of the right to practice culture (Tschakert & Tutu 2010). It is clear that the inability of individuals with low socio-economic status in Africa to migrate as a result of slow-onset climate change presents a significant cost to their human rights and humanitarian needs. This population has been largely excluded from scholarly literature and government responses which marginalises them further (Lubkemann 2008). Accordingly, it is evident that more should be done to highlight the unjust impacts of slow-onset climate change on involuntary non-migrants, or else they will remain in the periphery of global discourse.

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