



**Mixed
Migration
Centre**



BRIEFING PAPER

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Climate change, environmental stressors, and mixed migration

Insights and key messages drawn from a decade of MMC research and 4Mi data collection

This is the third in a series of state-of-play knowledge papers that address topical mixed migration issues and present key messages drawn from MMC's research, expert analysis, and 4Mi data.

Previous key messages papers are available on our website: [human smuggling](#) and [drivers and decision-making](#).

Since perhaps the dawn of humanity, when our forebears roamed according to the seasons, climate has been linked to migration, and for some communities, this lifestyle continues. Elsewhere we see, in real time, people fleeing flooding, storms, and drought.

Today, the existence of a link between the impact of climate change on people's lives and human mobility appears to be broadly accepted. However, the precise nature of that link, and the kind of migration outcomes that climate change contributes to, are less well known or understood. Climate mobility, meaning the impact of climate change and environmental factors on the movement of individuals, encompasses multiple forms of migration and interrelated drivers of movement. As such, it is useful to apply a mixed migration lens.

Introduction

Although most people who migrate do so for a complex combination of reasons, narratives on the links between climate change and migration have too often been overly simplistic and reductive, resulting in unreliable estimates of the numbers of people fleeing climate change.

However, the effort to disentangle the relationship and understand the phenomenon is important, and a growing number of new research initiatives aim to disentangle these links and to deliver more nuanced insight into climate mobility.

The complexity is not limited to the role climate change plays in prompting people to migrate, but extends to how it affects the journeys of refugees and migrants – who may have left their places of origin for wholly unrelated reasons – as well as their lives and livelihoods once they reach their destination.

The Mixed Migration Centre, with its particular expertise and approach and its specialisation on the drivers of migration, has developed a considerable body of knowledge on climate mobility. This paper presents seven key messages drawn from years of MMC research in an effort to bridge the conversations taking place in different sectors, including climate, migration, policy, practice, humanitarian assistance, and development aid.

Climate mobility requires broad and inclusive thinking across traditional sectors and fields of activity

Key message 1:

Climate mobility takes multiple forms, and it is critical to take an inclusive approach to understand fully how climate change impacts on mobility.

Climate mobility takes many forms. The media pay attention to people who are fleeing for their lives, but this is just one end of a spectrum of forcedness: other people move because they know their livelihoods will soon be at risk, and others still because climate impacts mean that life elsewhere holds more promise for them. At the same time, there are other dimensions of climate mobility, both spatial and temporal. Movement may be local, regional, or trans-continental. It may be seasonal or back-and-forth, temporary or permanent. For communities who are traditionally mobile, such as pastoralists, climate change impacts may mean that their usual mobility is disrupted, or obstructed. It is therefore rash to generalise about climate mobility or to adopt too narrow a view of it. Rather, it is vital to take an inclusive and contextualised approach to understanding the phenomenon.

This mixed and complex nature of climate mobility is reflected in the variety of language and terminology used. There are not yet any norms of language across institutions, or universally accepted definitions and there is no international legal framework defining or governing mobility induced by climate change. Some governmental bodies are moving faster than others to take up this challenge, and researchers continue to work to define concepts and bring together approaches that are rooted in very different disciplines, but progress is slow.

Climate mobility will not wait for us to agree on terminology. People are already trapped, displaced, and on the move and a lack of agreement on concepts and wording should not prevent action. Indeed, perhaps action in the spaces where climate mobility is occurring could contribute to progress on concepts and bring us closer to agreed definitions. MMC has taken steps in this

direction, aiming for practical outcomes. Our [conceptual model](#) (see also below) recognises the complexity of climate change impacts on mobility, and can assist understanding and action across sectors.

Numbers are not always helpful; they need nuance and precision

Key message 2:

The persistent use of headline-grabbing yet unreliable numbers when talking about climate-related migration is unhelpful. Climate mobility is a complex topic, and quantitative data require nuance and precision if they are to further our understanding and inform better responses.

The persistent use of large numbers in conversations around climate mobility attracts attention and stokes fear, but is not helping us to understand the likely realities of the phenomenon. Too often, these large numbers are taken out of context and interpreted or presented to build a picture of future mass migration involving millions of people moving from south to north. Both climate change and migration are, independently, polemical areas of debate and policy. When combined, they risk being instrumentalised and politicised in the service of vested interests and ideologies or agendas as people of various political persuasions distort reality and/or exaggerate the linkages in the climate/migration nexus. Those seeking to highlight the current climate emergency may feel that stronger linkages between climate change and migration (especially intercontinental migration) will prod policymakers to take action to cut emissions. Meanwhile, those aiming to securitise the migration debate in order to limit asylum and control immigration might emphasise the relationship to encourage greater fortification of borders and more restrictive policies. Others, such as journalists and those working in the displacement sector, may not challenge, or may even reinforce, the links between climate and international migration as they help generate powerful headlines and further justify investment and research.

Inflammatory rhetoric can have damaging real-life consequences. Discussion of the combination of climate change and migration therefore only increases the importance of clear, precise, and responsible language that helps us gain clarity, without oversimplifying.

When their context and methodology are well understood, numbers are useful. And they are necessary to build a sound evidence base. The increasing use of modelling and predictive analytics is helpful in preparing for the future, but only if we recognise their limits; a model can only ask “What if?” When using the results of these methods, it is important to be clear on what is being measured, and what the numbers can – and cannot – tell us.

Climate-related mobility often takes place along short distances and internally

Key message 3:

Most people moving due to climate change and other environmental factors tend to move within their country and, if they cross borders, tend to stay within regions. Warnings of mass transcontinental migration are unsubstantiated.

While very large numbers of people are already being displaced due to climate change and environmental factors, and although these numbers are likely to increase in the future, the hyperbolic media predictions of millions of climate migrants crossing continents are very unlikely to be realised. For many affected by climate change, transregional and even cross-border migration demands resources that people – especially those most affected who may have exhausted other coping mechanisms already – cannot put together, and often do not want to. Except for communities living in borderlands, cross-border migration due to the direct consequences of climate change remains the exception.

It is not solely a question of resources. People often choose to stay in places they know, and where there is a larger community with which they are familiar. Our research has found that where climate-related events have a role in mobility, both people who do not have a choice and those who do tend to move nearby, primarily to local urban centres. Climate-induced migration will mainly be internal, and is thus likely to amplify urbanisation, and particularly the growth of secondary cities.

Researching environmental drivers of mixed migration with 4Mi

MMC has been collecting data among refugees and migrants through its 4Mi project since 2014, conducting over 100,000 individual survey interviews. A key focus of the questionnaires has been on what led people to undertake their journey. After repeatedly finding that respondents gave little emphasis to environmental factors as mobility drivers, we chose to dig deeper, first looking at our methodology. In East Africa, which has been heavily impacted by repeated droughts, we added a series of questions relating to experience of environmental events and natural hazards, with the support of the Intergovernmental Authority on Development (IGAD). And after analysing those results, we chose to ask all our respondents not only a more open question about their reasons for migrating, but also an additional question specifically about the role of environmental factors in their decision. It is through responses to this question that the underlying and indirect nature of environmental factors in driving cross-border migration was revealed. See MMC's report [Climate-related events and environmental stressors' roles in driving migration in West and North Africa](#) for analysis.

Climate impacts contribute to other drivers of movement

Key message 4:

Environmental factors are bound up with other drivers and can be very hard to differentiate, even at the individual level.

Where flooding, for example, prompts displacement, we can see a direct relationship between the environmental stressor and mobility, and we can often make reliable estimates of the number of people displaced (see, for example the work of [IDMC](#)). However, climate change impacts can also be indirect drivers of movement, in ways that are much harder to measure and disentangle from other drivers. Climate change impacts can affect almost every aspect of a person's life, including their livelihood, health, social relations, and safety. A storm may destroy a fishing-boat and therefore a livelihood; heat and dryness may aggravating lung conditions; poor harvests may make food prices prohibitively high somewhere hundreds of kilometres away from the farm; and stress

over dwindling resources can result in domestic abuse. All these may contribute to a decision to move.

Few 4Mi respondents spontaneously mention climate change or environmental factors when asked to list the reasons for migration, but when prompted to consider whether environmental factors specifically affected their decision to leave, the proportion of respondents who acknowledge their influence rises (see box). This suggests that even those for whom climate and environmental factors did play a role in their decision to move do not immediately acknowledge this. Environmental factors are usually further to the back of people's minds.

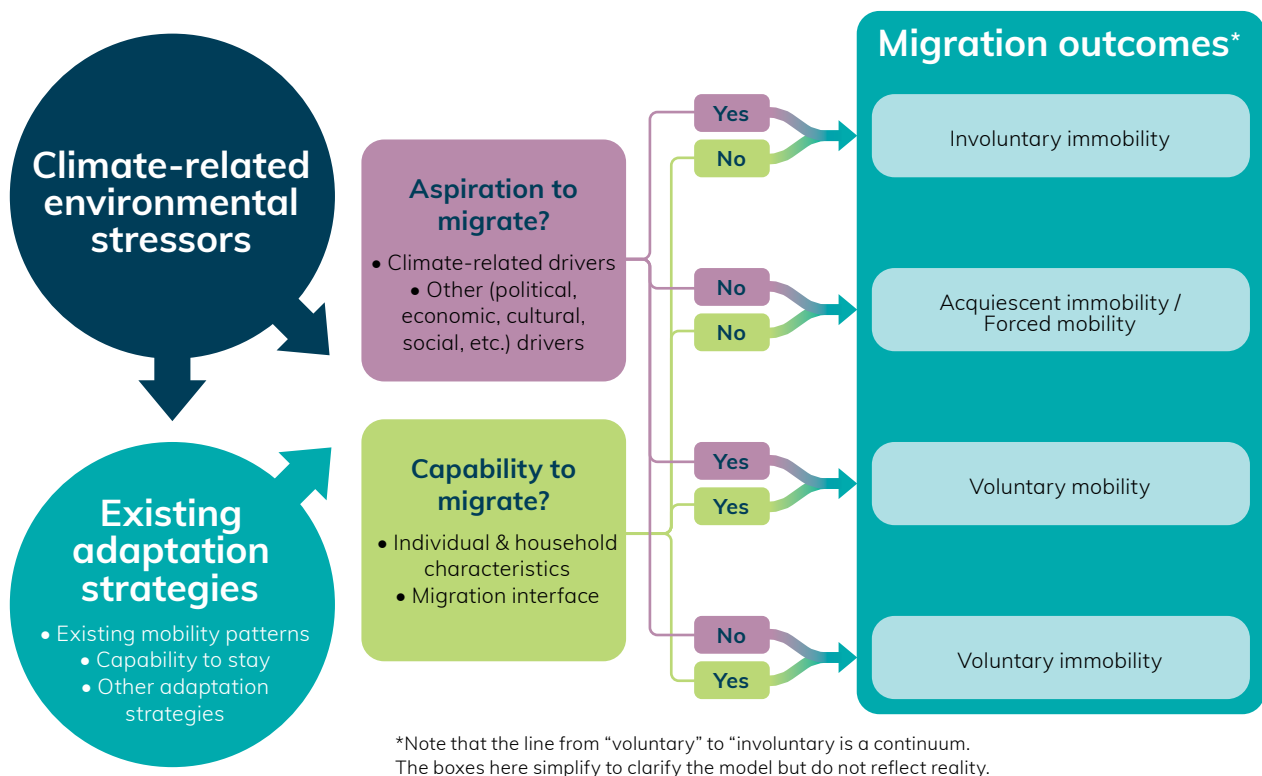
Climate change impacts and environmental stressors are more often an *underlying* driver of cross-border migration than a direct trigger.

Immobility prevails

Key message 5:

While climate mobility is occurring now and is expected to increase, most people will not move, either because they do not want to, or because they can't, or both.

When focusing on climate mobility, migration, and displacement there is a danger of neglecting immobility. Yet immobility will prevail: most people will not be moving. Not moving may be a sign of resilience, that a population is adapting well to a changing environment. However, it may also point to a more negative scenario. Climate impacts will, in some places, bring a reduction in quality of life, and for others, render locations barely habitable. There will be populations who are trapped or stranded, who need or want to move, but are unable to do so and are thus *involuntarily immobile*. Our research has found that in many places impacted by climate change, the majority of the population is not considering moving, despite their hardships and an expected deterioration in conditions. They do not aspire to move at least partly because they know they do not have the resources to do so. Research and action on climate mobility must also include immobility and consider how to facilitate mobility as a sustainable adaptation strategy among populations who otherwise risk becoming trapped in the future.



A new conceptual framework

MMC’s conceptual framework illustrates how climate-related environmental stressors affect mobility outcomes, both directly and indirectly impacting the aspiration and the capability to migrate. For a detailed explanation, see MMC’s report [Climate-related events and environmental stressors’ roles in driving migration in West and North Africa](#) for analysis.

The goal should be sustainable adaptation, regardless of whether people move or stay

Key message 6:

Capacity to adapt must be considered, and the narrative on adaptation must acknowledge that mobility and immobility can be both positive and negative forms of adaptation.

Within climate circles, the dominant narrative is that adaptation and resilience are positive responses to climate change, with the implication that adaptation is a means of avoiding mobility. Mobility, according to this narrative, is understood as forced displacement, and thus a negative outcome. However, both mobility and adaptation in situ can be positive as well as negative. Our research found people adapting in place through unsustainable, and sometimes negative, strategies. There are risks in striving to stay against all odds and exhausting all coping mechanisms.

Equally, mobility can be negative when people are forcibly displaced, undertake dangerous journeys, or find themselves in danger at their destination. But it can also be positive. Mobility can constitute a viable adaptation option if people are able to plan, prepare, and choose to move in a safe way in order to build a new life, or sustain the old one. It is key that we find ways that enable affected populations to make the choice between staying and leaving, that they have the capacity to adapt in the best way for them.

Amid other global and local dynamics, action and research on climate mobility demand a cross-cutting approach

Key message 7:

Climate change is occurring and impacting at the same time as other dynamics, and the impacts are often interrelated. Effective responses demand collaboration across sectors.

While climate change happens, multiple other global and local dynamics are taking place at the same time, and their effects interact. Indeed, just as an extreme weather event only becomes a disaster when it interacts with particular social conditions, the severity of climate change impacts depends on other dynamics and conditions, such as government policies and (in)action, cultural practices, demographic shifts, livelihood and land tenure systems, among others. Hence, impacts vary for different population groups, and while it is important for our understanding and action to try and identify the effects of each dynamic, it does not make sense to respond to any in isolation. Some key global dynamics are highlighted in this section.

Climate mobility within climate change negotiations

The recent COP27 was heralded to as the “African COP”, the “implementation COP”, where the world would finally see action on the impacts of climate change. And climate mobility was far more visible, and more frequently heard than during previous COPs. There were reportedly more than 50 side events touching on climate mobility, and the loss and damage funding decision – the single most welcomed step forward at COP27 – refers in part to the challenges of “displacement, relocation, migration”. Recognition of mobility within climate change action is starting. However, we have yet to fully bridge the gaps between different sectors and ways of thinking or to acknowledge that climate impacts on mobility take many forms, both positive and negative, and that mobility cuts across almost all spheres of climate change action.

According to the UN, [more than half of the world's population now live in urban areas](#) and the urbanisation trend continues. People moving due to climate change impacts are often among those heading to urban centres, amplifying the trend. Informal settlements are growing rapidly, particularly in Africa, and lack of infrastructure and services poses risks to their inhabitants. Many climate-induced migrants face new climate threats in the cities where they come to seek refuge and opportunities, as they often settle in those parts of the city that are most vulnerable to environmental shocks and stresses.

Other demographic shifts also interact with climate change impacts. In many developing countries, youth make up the majority of the population, and in developed countries the population is ageing. In each case, climate change impacts will affect mobility differently, as young people tend to move away from negatively affected areas in search of livelihoods, while older people stay behind.

Technological changes – ranging from pastoralists gaining access to motorised vehicles to transport forage and water, to the use of artificial intelligence in changing the future of work – are also affecting lives and livelihoods. Independently, these technologies affect livelihoods, labour markets, and labour migration, but they will also interact with climate change impacts – posing both challenges and solutions – and affect climate mobility outcomes.

The relationships between climate change impacts, mobility, and armed conflict are very complex. [Some have argued](#) that the war in Syria was at least partly attributable to the scarcity of natural resources. MMC's research finds that refugees and migrants from Darfur often cite environmental drivers that led to conflict. And climate change impacts are likely among the numerous factors that lead to conflict between pastoralists and settled farmers in the Sahel. From a different perspective, places of refuge for those fleeing conflict are frequently territories that are vulnerable to climate change impacts. Camps hosting forcibly displaced populations, for example, are often established in places prone to drought or flooding. Conversely, the journeys of people fleeing climate-related events may be hampered by insecurity and armed conflict.

Under many circumstances, climate change impacts will be stress multipliers, adding to and intensifying other challenges that are also driving decisions to move. The advent and peak of the Covid-19 pandemic offered a vivid illustration, over a compressed time period, of how a global health crisis can have a direct impact on people's lives at the same time as functioning as a stress multiplier that is hard to disentangle from other dynamics. During the peak of the pandemic, the pressure on resources at home – which can both constrain and push mobility – increased. Journeys along mixed migration routes, already dangerous for many, became even riskier. And the costs of journeys, already high, became even higher.

In many ways, the effects of the pandemic can provide valuable insights into how climate change affects mobility through its interaction with other factors.

Conclusion

While the link between climate and migration has long been acknowledged, in some ways the conversation about climate mobility is just beginning. Our research shows that it is important that the conversation goes beyond fear and noise to incorporate nuance and precision. We need to make sure research is both useful and used, that it informs and enables effective action. Climate mobility is happening now, and it makes good sense to simultaneously take action around its various forms, which we are seeing on the ground, and continue to wrestle with some of its conceptual or more politically charged challenges. MMC is committed to continue to seek clarity, help fill information gaps, bridge different approaches, and work inclusively to cover a topic that is affecting so many, and will affect almost all of us in the future.

Annex 1.

MMC resources on climate change and migration

4Mi Interactive portals

[Regularly updated data on mixed migration](#) from ongoing 4Mi interviews, including on why people leave, and the role of environmental factors.

4Mi snapshots

MMC (2022): [Climate-related drivers of mixed migration in East and the Horn of Africa](#)

Articles

MMC (2022):

[Stories of climate mobility: Understanding the impacts, informing effective response](#)

Jane Linekar & Julia Litzkow (2021):

[Forced displacement and \(im\)mobility: what's climate change got to do with it?](#)

Caroline Zickgraf (2021):

[Stifling silos: the need for a more holistic approach to mixed migration in a warming world](#)

Bram Frouws (2021):

[Op-Ed: negative narratives, mistaken metaphors: the need for careful language on migration](#)

Chris Horwood (2020):

[Climate exposure: the complex interplay between cities, climate change and mixed migration](#)

MMC (2020):

["Not whether, but when", an interview with Alex Randall](#)

MMC (2020):

[The 'inconvenient truth' of future mixed migration: climate change, mobility and legal voids](#)

Olivia Akumu & Bram Frouws (2017):

[Drought: a contributing or limiting factor in migration?](#)

Noni Munge (2014):

[The coming deluge? Natural hazards, climate change and mixed migration](#)

Find [here](#) all MMC articles

Research reports and briefing papers

Nicholas P. Simpson, Sarah Rosengaertner, Alexander de Sherbinin et al. (forthcoming):

African Shifts: African Climate Mobility Report (Africa Climate Mobility Initiative).

MMC conducted seven case studies contributing to the ACMI process and final report, to be published by early 2023:

MMC: Climate and mobility: perceptions, attitudes, and decision-making. A synthesis of research findings

MMC: Climate and mobility case study: Cahama, Cunene province, Angola

MMC: Climate and mobility case study: Al Max, Alexandria, Egypt

MMC: Climate and mobility case study: Nchalo, Chikawa, Malawi

MMC: Climate and mobility case study: Praia Nova, Beira, Mozambique

MMC: Climate and mobility case study: Ajegunle, Lagos, Nigeria

MMC: Climate and mobility case study: Tatki, Senegal (western Sahel)

MMC: Climate and mobility case study: Nadunget, Karamoja, Uganda

MMC (2022):

[Climate mobility in Khartoum Process countries: an exploration of interventions](#) (available in French and English)

MMC (2022):

[Climate-related events and environmental stressors' roles in driving migration in West and North Africa](#)

(available in French and English)

MMC (2020):

[Weak links: Challenging the climate and migration paradigm in the Horn of Africa and Yemen](#)

Mixed Migration Platform (2017):

[Migration, displacement and the environment: a perspective from the Middle East](#)

Find [here](#) all briefing papers with a focus on climate change, environmental stressors and mixed migration.

MMC's annual 'Mixed Migration Review', including data, essays and interviews on climate change, environmental stressors and mixed migration

MMC (2022):

[Mixed Migration Review 2022](#)

MMC (2021):

[Mixed Migration Review 2021](#)

MMC (2020):

[Mixed Migration Review 2020](#)

MMC (2019):

[Mixed Migration Review 2019](#)

MMC (2018):

[Mixed Migration Review 2018](#)



MMC is a global network engaged in data collection, research, analysis, and policy and programmatic development on mixed migration, with regional hubs hosted in DRC regional offices in Africa, Asia, Europe and Latin America, and a global team based across Geneva and Brussels.

MMC is a leading source for independent and high-quality data, research, analysis and expertise. MMC aims to increase understanding of mixed migration, to positively impact global and regional migration policies, to inform evidence-based protection responses for people on the move and to stimulate forward thinking in public and policy debates on mixed migration. MMC's overarching focus is on human rights and protection for all people on the move.

MMC is part of and governed by the Danish Refugee Council (DRC). Global and regional MMC teams are based in Brussels, Geneva, Dakar, Nairobi, Tunis, Bogota and Dhaka.

For more information visit:

www.mixedmigration.org and follow us at @Mixed_Migration



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