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The intersection of mobility, environmental and climate change, and conflict in the East and Horn of Africa

A synthesis of the existing knowledge and remaining research gaps

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Newly arrived refugee women and girls conduct a focus group discussion with a high-level delegation in Dgahaley camp, Dadaab, in the run-up to COP28.

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LAYOUT AND DESIGN: Ren Ovung

ABOUT MMC

MMC is a global network engaged in data collection, research, analysis, and policy and programmatic development on mixed migration, with regional hubs in Africa, Asia and the Pacific, Europe and Latin America, and a global team based across Copenhagen, 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 mixed migration 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 the Danish Refugee Council (DRC).

Contents

Glossary

Human mobility: "An umbrella term referring to various forms of population movement, including displacement, migration, and planned relocation."[1]

Mixed migration: "Refers to cross-border movements of people including refugees fleeing persecution and conflict, victims of trafficking, and people seeking better lives and opportunities. Motivated to move by a multiplicity of factors, people engaged in mixed migration have a range of legal statuses as well as a variety of vulnerabilities. Although entitled to protection under international human rights law, they are exposed to multiple rights violations along their journey. Mixed migration describes migrants travelling along similar routes, using similar means of travel - often travelling irregularly and wholly or partially assisted by migrant smugglers."[2]

Displacement: "The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-induced disasters. This may refer to forced movements within a country (internal displacement) or across international borders (cross-border displacement)."[3]

Protection: "All activities aimed at achieving full respect for the rights of the individual in accordance with the letter and spirit of international human rights, refugee and humanitarian law. Protection involves creating an environment conducive to respect for human beings, preventing and/or alleviating the immediate effects of a specific pattern of abuse, and restoring dignified conditions of life through reparation, restitution, and rehabilitation."[4]

Climate change: "A change in the state of the climate that can be identified (such as by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces such as modulations of the solar cycles, volcanic eruptions, and persistent anthropogenic changes in the composition of the atmosphere or land use."[5] UNFCCC further defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."[6]

Climate hazard: "A climate hazard is a climate condition with the potential to harm natural systems or society. Examples include heatwaves, droughts, heavy snowfall events and sea level rise."[7]

Disaster: "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts."[8]

Sudden-onset events: "A sudden-onset disaster is one triggered by a hazardous event that emerges quickly or unexpectedly. Sudden-onset disasters could be associated with, e.g., earthquake, volcanic eruption, flash flood, chemical explosion, critical infrastructure failure, transport accident."[9]

Slow-onset events: "A slow-onset disaster is defined as one that emerges gradually over time. Slow-onset disasters could be associated with, e.g., drought, desertification, sea-level rise, epidemic disease."[10]

1 UNHCR (2023a) Policy Brief: Protection of persons displaced across borders in the context of disasters and the adverse effects of climate change.
2 MMC (n.d.) MMC's understanding and use of the terms mixed migration and human smuggling
3 UNHCR (1998) Guiding Principles on Internal Displacement, Report of the Representative of the Secretary-General, Mr. Francis M. Deng, submitted pursuant to Commission resolution 1997/39, (E/CN.4/1998/53/)
4 UNHCR, 2023a Op. Cit
5 IPCC (2021) In Climate Change 2021: The Physical Science Basis - Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change
6 UNFCCC (n.d.) United Nations Framework Convention on Climate Change, Article 1: Definitions
7 IPCC (n.d.) Climatic Impact-Driver: Frequently Asked Questions, Chapter 12.3, How Will Climate Change Affect the Regional Characteristics of a Climate Hazard?
8 UNGA (2015) Sendai Framework for Disaster Risk Reduction 2015–2030 (A/RES/69/283)
9 UNISDR (2009) UNISDR Terminology on Disaster Risk Reduction
10 UNISDR 2009 Op. Cit.

Environmental change: "Environmental change refers to significant alterations in the environment, which can be driven by both natural processes and human activities. It encompasses a wide range of phenomena, including climate change, pollution, deforestation, and biodiversity loss. These changes can occur on various scales, from local to global, and can have profound impacts on ecosystems and human societies.[11] Environmental change includes both environmental degradation and climate change."[12]

Environmental degradation: "The reduction of the capacity of the environment to meet social and ecological objectives and needs. Degradation of the environment can alter the frequency and intensity of natural hazards and increase the vulnerability of communities. The types of human-induced degradation are varied and include land misuse, soil erosion and loss, desertification, wild-land fires, loss of biodiversity, deforestation, mangrove destruction, land, water and air pollution, climate change, sea level rise and ozone depletion."[13]

Land degradation: "Land degradation means reduction or loss, in arid, semi-arid and dry sub-humid areas, of the biological or economic productivity and complexity of rain fed cropland, irrigated cropland or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns such as: soil erosion caused by wind and/or water; deterioration of the physical, chemical and biological or economic properties of soil; and long-term loss of natural vegetation."[14]

Desertification: "Desertification refers to land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities."[15]

Drought: "Drought is a prolonged dry period in the natural climate cycle that can occur anywhere in the world. It is typically a slow-onset phenomenon caused by a lack of rainfall. It has a major impact on food security, health and population displacement and migration."[16]

Extreme weather event: "An event that is rare at a particular place and time of year. Definitions of 'rare' vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations."[17]

Adaptation: "In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects. Adaptive capacity refers to the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences."[18]

Resilience: "The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions."[19]

11 Turner, B.L. et al. (1990) Two types of global environmental change: Definitional and spatial issues in their human dimensions
12 Foresight (2011) Foresight - Migration and Global Environmental Change. Final Project Report
13 UNISDR 2009 Op. Cit.
14 UNCCD (1993) Land degradation
15 UNCCD (2017) UNCCD Terminology: Desertification
16 WMO (n.d.) Drought
17 IPCC (2018) Annex I: Glossary, In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty
18 IPCC, 2018 Op. Cit.
19 UNISDR 2009 Op. Cit.

List of Acronyms

ADN	Association Djibouti Nature
AU	African Union
CEWARN	Conflict Early Warning and Response Mechanism
DRC	Danish Refugee Council
FAO	Food and Agriculture Organization
HoA-REC&N	Horn of Africa Regional Environment Centre and Network
ICMPD	International Centre for Migration Policy Development
ICPAC	International Climate Prediction and Applications Centre
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development
IMF	International Monetary Fund
IOM	International Organization for Migration
IUCN	International Union for Conservation of Nature
IPCC	Intergovernmental Panel on Climate Change
IRP	International Resource Panel
MECMEA	Managing the impacts of environmental change and conflict on mobility in Eastern Africa
MMC	Mixed Migration Centre
MMPTF	Migration Multi-Partner Trust Fund
NUPI	Norwegian Institute for International Affairs
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
OECD	Organization for Economic Cooperation and Development
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
SIPRI	Stockholm International Peace Research Institute
SSNCO	South Sudan Nature Conservation Organization
UNCCD	United Nations Convention to Combat Desertification
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNDRR	United Nations Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNHCR	United Nations High Commissioner for Refugees
UNISDR	United Nations Office for Disaster Risk Reduction
WB	World Bank
WFP	World Food Programme
WMO	World Meteorological Organization

Summary and key findings

This report syntheses the current knowledge on the complex interlinkages between environmental degradation, climate change, conflict, and human mobility in the East and Horn of Africa. The region faces severe climate stresses and hazards, including recurrent droughts, erratic rainfall, extreme heat, and environmental degradation, which are drivers of displacement and migration. These challenges are further exacerbated by fragile governance structures and limited adaptive capacity, intensifying the region's vulnerability to climate-induced displacement and socio-political instability.

Climate change is increasing the frequency and intensity of extreme weather events and accelerating land degradation, desertification, and water scarcity, leading to the displacement of millions. Pastoralist and farming communities are particularly affected, as their livelihoods, food and water security depend on natural resources that are increasingly under threat from environmental degradation and climate change. Migration, often considered as a traditional coping strategy, has become a necessity. However, access to mobility is highly unequal. Many are becoming trapped in hazardous environments, heightening their risk of exposure to climate change, fragility, and conflict. As climate pressures intensify, World Bank projections suggest that 6.9 to 10.1 million people in the East and Horn of Africa region could be displaced by 2050.

Human mobility has significant implications for environmental management, particularly in regions marked by ecological fragility and climate stress, such as the East and Horn of Africa region. Migration can inadvertently contribute to environmental harm, particularly when unregulated or poorly planned. Migration flows can strain resources, basic services, and infrastructure, leading to environmental degradation and tensions with host communities. Yet, migration can also be a positive force for adaptation, providing remittances and fostering positive coping mechanisms such as adopting diversified livelihoods and sustainable environmental management practices.

Mobility and conflict dynamics in the East and Horn of Africa region are shaped by a complex interplay of environmental stressors, governance challenges, and socio-political contexts. Climate change acts as a threat multiplier, amplifying underlying socio-political grievances and contributing to conflict and displacement. Yet, the impact of displacement on social cohesion is not uniform. The influx of displaced persons can undermine the social fabric of host communities where integration policies are weak or absent. Disparities in resource allocation, service provision, and livelihood opportunities can also amplify underlying socio-political grievances, heighten perceptions of inequality, and social exclusion, increasing the risk of displacement and conflict. However, under the right conditions, displacement can also present opportunities for strengthening social cohesion and promoting peaceful coexistence. Climate change and environmental degradation rarely cause conflict on their own, but they significantly exacerbate existing vulnerabilities and tensions. Key mechanisms through which environmental degradation and climate change influence conflict are the erosion of livelihoods, changing migratory patterns, tensions over natural resources, climate-related disasters, widespread habitat destruction, loss of biodiversity, and increased environmental crime in fragile and conflict affected areas or in places with weak governance structures.

Adaptation efforts remain insufficient. Few countries include climate-displaced populations in national strategies. Vulnerable groups—including women, children, persons with disabilities, and trapped populations—face the highest protection risks, yet receive the least support. Regional organisations such as the AU and IGAD offer platforms for international cooperation, and regional frameworks like the Kampala Convention and the Khartoum Process offer promising foundations. However, many national adaptation plans and climate strategies fail to adequately include displaced populations, while national policy responses remain fragmented and often under prioritised. A more coordinated, inclusive, and conflict-sensitive approach is urgently needed. This includes integrating migration into climate adaptation plans, improving governance in host areas, investing in social protection systems, and recognising the agency and needs of displaced communities, among others. In order to achieve this, there is a need to bridge the research, capacity, and most importantly, the policy gaps at national and regional levels.

Key findings on research and policy gaps

Despite growing recognition of the complex links between climate change, conflict, and migration, significant research and policy gaps persist in effectively addressing environmental mobility.

1. There is a significant gap in understanding how migration impacts the adaptive capacities and vulnerabilities of both migrants and the communities they leave or integrate into.

2. Robust and consistent data on climate-induced displacement is lacking, limiting the ability to assess trends, anticipate risks, and formulate evidence-based policies.

3. Legal and policy frameworks fail to adequately address the needs of populations displaced by climate-related events, leaving many without the necessary protections and support mechanisms.

4. At the national level, policies concerning mobility and climate action—including National Action Plans (NAPs) and Nationally Determined Contributions (NDCs)—do not sufficiently incorporate considerations of climate-induced migration, leading to policy blind spots in adaptation and resilience-building strategies.

5. On a global scale, migration driven by resource degradation is poorly integrated within broader governance frameworks, limiting coordinated efforts to mitigate the socio-economic and environmental consequences of displacement.

6. One emerging yet underdeveloped area of focus is environmental peacebuilding, which holds the potential to address both environmental degradation and conflict-induced displacement by fostering sustainable resource management and conflict resolution strategies.

7. The role of social protection mechanisms in climate-affected and conflict-prone settings remains under-explored, despite its potential to enhance resilience, reduce vulnerabilities, and provide stability for displaced populations.

8. Inclusive governance remains underutilized in addressing the specific needs of marginalized groups, including women, youth, and persons with disabilities, who often face heightened vulnerabilities in displacement contexts.

9. Environmental displacement in conflict-affected regions demands greater research and policy attention, as these areas experience compounded risks, exacerbating the challenges of migration, adaptation, and stability.

Across all these questions, there is a critical need for data and research that is comparative in its design and standardized across varied geographic and socio-political contexts, and includes the systemic capture of the diverse and hard-to-reach profiles of affected persons.

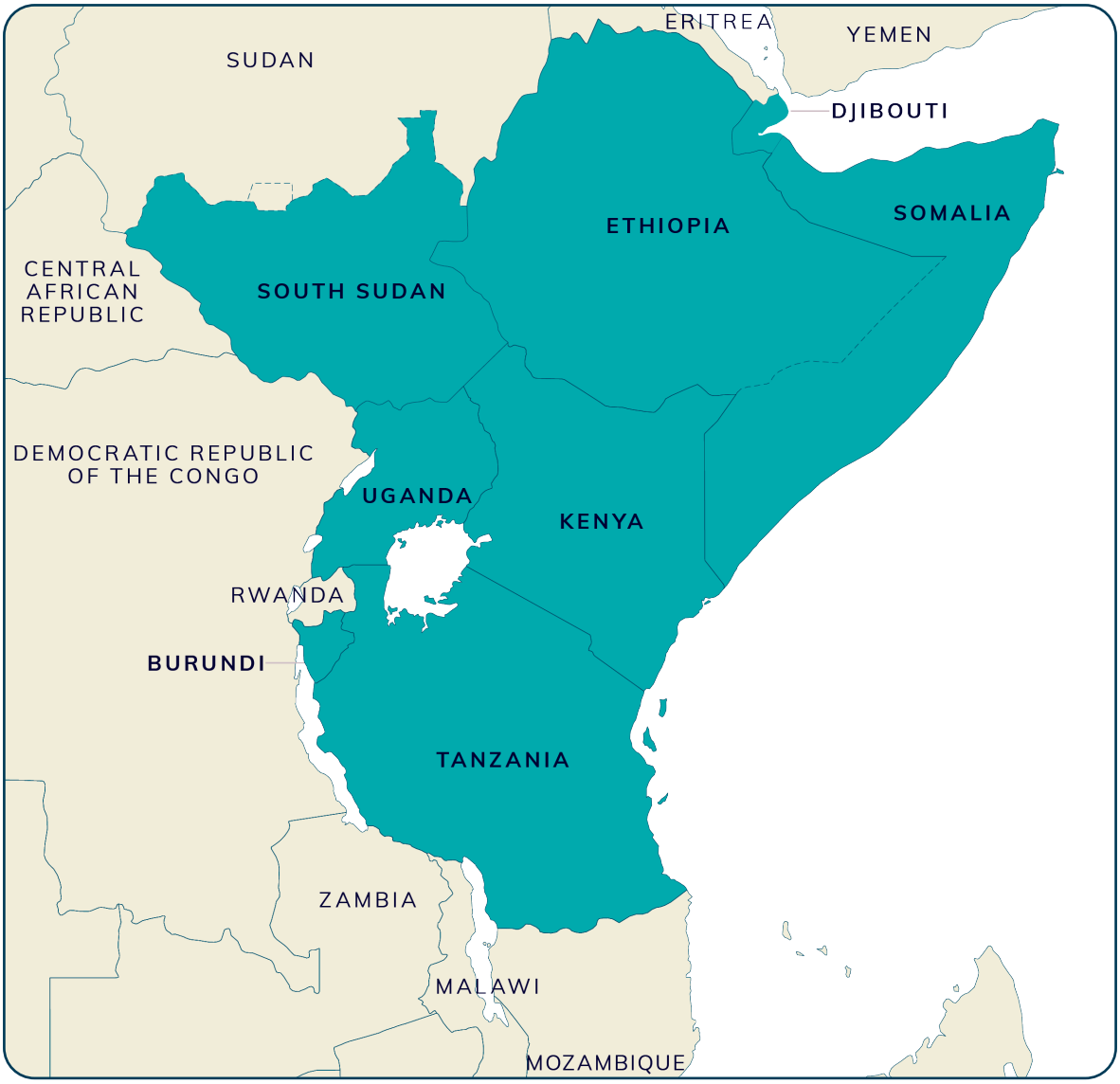
1. Introduction

This report synthesizes the state of knowledge on the links between environmental change, climate change, conflict and mobility in the East and Horn of Africa region, including the countries involved in the project titled *Managing the impacts of environmental change and conflict on mobility in Eastern Africa through evidence-based inclusive policy dialogue and collaborative actions (MECMEA)*: Burundi, Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Tanzania, and Uganda.

The report summarizes our understanding of the effect of environmental degradation and climate change on human mobility, how these factors interact with conflict, and how conflict impacts mobility in the region. It also brings together existing knowledge on how mobility impacts environmental management and conflict dynamics as well as migrants' coping and adaptation strategies and their protection needs amidst the changing environment, climate and conflicts. The report identifies new avenues for research to fill evidence gaps for programming.

This publication was prepared for the MECMEA project, funded by the European Union, and contracted by the International Center for Migration Policy Development (ICMPD). Its overarching aim is to guide the research and learning activities of project partners, including the Horn of Africa Regional Environment Centre and Network (HoA-REC&N), the Mixed Migration Centre (MMC), Association Djibouti Nature, South Sudan Nature Conservation Organization (SSNCO), and PanAfricare Kenya.

Figure 1. East and Horn of Africa: Countries of focus for MECMEA project



Disclaimer: This map is for illustration purposes only. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by MMC.

1.1 Methodology

The report draws on an extensive literature review and a series of expert consultations conducted between March and April 2025. The literature review included over 350 academic papers; grey literature written by multilateral entities and international and nongovernmental organisations, as well as technical reports and policy briefs in English and French. The most relevant findings were compiled in an annotated bibliography, which was synthesized and organized geographically and by the type of source.

The consultations involved 12 experts from the five participating consortium members based in the East and Horn of Africa region, namely in Djibouti, Ethiopia, Kenya, and South Sudan. All interviewees are experts of migration or environmental and climate change-related impacts. The participants shared their views on recent and current environmental and climate change trends; their impacts on conflict and mobility in the region and in their respective countries and areas of work; as well as the existing gaps in research, and regional and national policy and capacities. The analysis of the literature review, findings, and the expert consultations together form the basis of this report.

1.2 Definition of key concepts

Analysing and describing human mobility trends and patterns can be complex and politically sensitive. This report defines human mobility broadly, covering a range of migration types such as voluntary migration, displacement, circular movements, and even commuting practices.[20] However, organisations use these terms in different ways. These terms can include displacement, cross-border displacement, migration, and mixed migration. To describe the profile of a person on the move, commonly used terms include internally displaced people, refugees, and migrants.

When this diverse set of definitions is analysed in the context of environmental degradation and climate change, the narrative becomes complex and sensitive. For the past 20 years, people engaged in movement linked to environmental change or climate hazards (hereafter referred to as "climate mobility"), largely fell through gaps in international refugee and immigration policies, and there has been a resistance to expand refugee definitions to include those displaced by climate change.[21] Since these debates on terminology still exist today, this report will use the terms: mixed migration, mobility, migration, and migrants in the broadest meaning describing all people on the move, including those whose movement is linked, partially or wholly, to environmental degradation or to climate change. Moreover, this report shall employ the original terms used by the authors in each of the papers being examined.

This report adopts these terms because people engaged in mixed migration, irrespective of status, whether refugees or migrants, face similar risks and vulnerabilities. The term also recognises that the drivers of the movement of migrants are various and often intertwined. People feel compelled to move due a variety of factors, including persecution, poverty, discrimination, violence, gender inequality, separation from family, aspiration for a better life, lack of access to education, health and other rights, lack of access to decent work, as well as the wide-ranging consequences of climate change and environmental degradation.[22]

1.3 Report overview

The report begins with an outline of the links between environmental degradation, climate change, conflict, and mobility in the East and Horn of Africa. Then it analyses the regional and national mechanisms, frameworks, and institutions, and their gaps to address mobility amid environmental and climate change and conflict in the East and Horn of Africa region. Finally, the report identifies the research and policy gaps in this field and lays out a roadmap for future research on how to fill these gaps.

20 UNEP, IRP (2023) Human Migration and Natural Resources
21 Brown, O. (2008) Migration and Climate Change, International Organization for Migration
22 MMC n.d. Op. Cit.

2. The links among environmental degradation, climate change, and mobility in the East and Horn of Africa

2.1. Environmental degradation, climate change, and their impacts on mobility

Climate change and environmental degradation are altering the physical environment of the East and Horn of Africa. Climate change is leading to more frequent and intense periods of extreme heat, changing precipitation patterns, extreme weather events and natural disasters such as floods and droughts.[23] The effect of these environmental changes are compounded by socio-economic and political instability, conflict, and fragility to create the conditions that drive human mobility.

The region is highly susceptible to desertification, land degradation, and drought – processes that are accelerated by unsustainable land use. In Sudan, Northern Kenya, Somalia, and parts of Ethiopia, desertification, land degradation, and drought are increasingly threatening vulnerable populations, especially farmers and pastoralists.[24] Pastoralist populations, particularly in South Sudan, Kenya, and Somalia often lack the resources necessary to adapt to the scale and severity of environmental changes or to undertake long-distance or temporary movements in the case of pastoralists, making them particularly vulnerable to displacement.[25]

In this region, drought is the most prominent environmental driver of migration. In Djibouti, pastoralist communities are particularly affected by prolonged droughts, which have severely impacted livestock-dependent livelihoods. Reduced rainfall—75% below average in recent years—has led to water scarcity, declining pasture availability, and increased migration pressures. Many pastoralists are forced to travel long distances with their herds in search of water and grazing land, exacerbating food insecurity and economic instability.[26] Between 2010 and 2022, Ethiopia, Kenya, and Somalia experienced eight failed rainy seasons. In 2020-2022, the La Niña phenomenon was the most severe in the past 70 years, leading to four consecutive failed rainy seasons.[27] This period was preceded and followed by severe flooding.[28] As a result, in Somalia alone, in 2022, 1.3 million people were displaced due to drought—in addition to the 600,000 people who were displaced by conflict.[29]

The livelihoods and resilience of local communities and rural populations, especially those reliant on farming and pastoralism, are threatened by these climate stressors. For nomadic pastoralists, whose livelihoods are closely linked to natural resources and environmental stability, these disruptions can be devastating. Recurring droughts and floods make it increasingly difficult for them to return to their traditional lands, which are becoming progressively uninhabitable, also causing a shift from temporary and seasonal migration to more permanent migration patterns.[30]

While seasonal and temporary migration is a traditional coping mechanism in response to climate variability, not everyone is able to move. Migration is inherently selective, requiring social and financial resources that vulnerable individuals lack.[31] As a result, immobility itself can be a significant risk, trapping populations in hazardous environments without the means to escape. Low-income countries are disproportionately affected by climate-induced migration due to weaker adaptive capacities and limited institutional support. These countries often lack the infrastructure and resources necessary to support large-scale internal displacement, exacerbating vulnerabilities and deepening humanitarian needs.[32]

Environmental degradation and climate change will continue to shape future migration patterns.[33] In the East and Horn of Africa, climate change could internally displace between 6.9 million and 10.1 million people by 2050.[34] Migration decisions are frequently influenced by

23 MMC (2022a) Climate Mobility in the Khartoum Process Countries: An Exploration of Interventions
24 IOM, UNCCD (2019) Addressing the Land Degradation – Migration Nexus: The Role of the United Nations Convention to Combat Desertification
25 IOM, UNCCD, 2019 Op. Cit.
26 UNDP (2019) Developing Agro-Pastoral Shade Gardens as an Adaptation Strategy for Poor Rural Communities, Adaptation Fund
27 MMC (2022b) Climate-related Drivers of Mixed Migration in East and the Horn of Africa
28 UNDRR (2024) Horn of Africa floods and drought, 2020-2023 - forensic analysis, United Nations Office for Disaster Reduction
29 Tarif, K. (2024) Burning Ground: Tackling climate change and conflict in Southern-central Somalia
30 MMC, 2022a Op. Cit.
31 Brown, 2008 Op. Cit.
32 Millock, K. (2015) Migration and Environment
33 IOM (2017) Extreme Heat and Migration
34 WB (2021) Groundswell: Part II, Acting on Internal Climate Migration

social dimensions, such as the presence of established family or community networks and perceived access to employment opportunities in destination areas.[35] People who migrate in response to environmental factors tend to remain within the area or broader region.[36] This reflects the common preference to stay close to the point of origin to facilitate a possible future return. But while environmental stressors drive migration, they also limit the feasibility of movement for those with limited resources. Droughts and resource stress increase internal mobility in Africa but simultaneously constrain international mobility and can also lead to involuntary immobility due to economic barriers, particularly among poorer populations.[37] These migration patterns reinforce the need for localised and regional response strategies.[38]

Projections concerning future heat stress further underscore the magnitude of the challenge. Globally, fewer than 1 million people are currently exposed to severe heat stress. However, under a 1.5°C temperature increase, between 30 to 60 million individuals could be affected by "very strong heat stress." A 2°C increase could expose more than 100 million people to extreme heat conditions.[39] In a worst-case scenario without adequate mitigation strategies, up to 1 billion people globally could face extreme heat stress by the end of the century.[40] These trends may trigger migration toward more habitable areas, particularly in urban areas where heat impacts are compounded by poor infrastructure and dense populations. Urban informal settlements are vulnerable to extreme heat due to inadequate housing, limited access to basic services, cooling mechanisms, and due to poor urban planning.[41] As rural populations migrate toward urban centres due to climate-induced disasters, the availability of adequate resources, housing, and employment opportunities becomes strained, exacerbating pressure on urban areas, making it more difficult for governments to plan effectively for both climate adaptation and the integration of migrant populations.[42]

2.2. The impact of mobility on climate and environmental management

Human mobility has significant implications for environmental management, particularly in regions marked by ecological fragility and climate stress, such as the East and Horn of Africa region. While migration can serve as a coping mechanism in the face of environmental degradation, it also brings about both positive and negative consequences for ecosystems in areas of origin and destination. As both a response to and a driver of environmental changes, mobility intersects with natural resource management, land use, and ecological sustainability. The environmental consequences of mobility are complex, often marked by simultaneous processes of degradation and adaptation, with significant implications for the resilience of migrant populations and host communities.[43]

Migration can inadvertently contribute to environmental degradation, particularly when unregulated or poorly planned. Under these conditions, the sudden influx of people can place significant stress on local ecosystems, leading to the overexploitation of water sources, forest cover, and arable land.[44] This is especially evident in regions where governance mechanisms are weak and environmental management is underfunded or absent. Without proper oversight and investment in sustainable infrastructure, even well-intentioned resettlement or relocation efforts can lead to unintended ecological consequences.[45] In the East and Horn of Africa region, these dynamics are further complicated by rapid population growth and urban expansion, which often accompany migratory trends and increase pressure on water, sanitation, housing, and energy systems. The region's fast-growing secondary cities often serve as a transit zone or a destination for migrants seeking better services and opportunities. Secondary cities in sub-Saharan Africa doubled in size between 2000 and 2020 as a result of rural-to-urban migration.[46] However, the challenges of secondary cities are often not understood or well-represented.[47]

35 MMC, IOM (2023) "We left after losing everything": The impact of drought on climate-related displacement in Ethiopia and Somalia
36 WB, 2021 Op. Cit.
37 UNEP, IRP, 2023 Op. Cit.
38 MMC (2024a) Climate Change Impacts and Mobility in the Middle East: What do we know?
39 IOM, 2017 Op. Cit.
40 IOM, 2017 Op. Cit.
41 OCHA, IFRC (2022) Extreme Heat, Preparing for the heatwaves of the future
42 WB (2018a) Groundswell: Preparing for Internal Climate Migration, World Bank
43 UNEP, IRP, 2023 Op. Cit.
44 FAO, IFAD, IOM, WFP, 2018 Op. Cit.
45 UNEP, IRP, 2023 Op. Cit.
46 Migration Network (n.d.) The role of secondary cities in promoting the inclusion and integration of migrants
47 Cities Alliance (n.d.) The resilient systems of secondary cities and migration dynamics programme

Large-scale infrastructure projects such as hydropower development, including those promoted as clean energy solutions, involve significant land-use changes and can result in the forced displacement of communities. They can disrupt traditional land-based livelihoods and irreversibly alter local ecosystems. The environmental trade-offs of such projects are rarely distributed equally, with displaced populations often bearing disproportionate social and environmental costs.[48]

Across the region, camps for refugees and internally displaced people have led to land-use changes. As displaced populations settle in temporary or semi-permanent camps, their reliance on local natural resources can intensify environmental degradation. Fuelwood gathering, subsistence farming, and the construction of shelter are essential survival strategies but often occur in already stressed ecosystems, exacerbating deforestation and soil degradation. These environmental consequences are the result of large population influxes compounded by the lack of sustainable infrastructure and environmental governance in and around refugee-hosting areas.[49]

But mobility can also strengthen environmental resilience and adaptation. Migration has the potential to support resilience at both household and community levels through remittances and livelihood diversification. Remittances sent by migrants provide critical financial resources that can be reinvested in sustainable practices, such as improved agricultural practices and water conservation technologies. Migrants can contribute to the transmission of knowledge to help the communities that they leave behind.[50] Migration facilitates livelihood diversification, reducing direct pressure on degraded local environments by decreasing dependence on natural resources.[51] These effects are especially relevant in drought-prone regions of the Horn of Africa, where environmental shocks regularly undermine subsistence farming and pastoralist systems.

2.3. The impact of mobility on conflict

The interaction between conflict and mobility in the East and Horn of Africa region is shaped by a complex interplay of environmental stressors, governance challenges, and socio-political contexts. The intersection of these factors intensifies the pressure on both displaced populations and the communities that host them, especially when displacement occurs in environmentally and economically fragile areas.[52] Irregular and unregulated mobility patterns in contexts marked by weak governance structures can exacerbate tensions and trigger conflicts between communities. People frequently resort to mixed migration and move in response to a combination of drivers – including conflict, environmental degradation, and economic necessities. When governance frameworks are ill-equipped to manage these movements, they can lead to friction between displaced persons and host communities, as well as competition over scarce resources.[53]

In some cases, the arrival of migrants and displaced populations, particularly those fleeing climate-induced stresses or conflict in their places of origin, has contributed to local instability in receiving areas. When such arrivals are not met with adequate planning, they risk deepening social divisions and amplifying existing grievances.[54] When individuals or groups are uprooted and relocated, either temporarily or over longer durations, they often find themselves in settings that lack the capacity to absorb new arrivals. This scarcity of housing, clean water, education, healthcare, and employment opportunities can strain already-limited resources in host communities, leading to increased social tensions, perceptions of competition, cultural misunderstandings, and discriminatory practices.[55]

Environmental stressors compound these challenges, particularly in refugee camps and informal settlements. These locations are often set up in marginal areas that are already vulnerable to climate-related impacts. Projections indicate that refugee camps are expected to face a dramatic increase in extreme heat, with the number of dangerous heat days potentially doubling by 2050.[56]

But the impact of displacement on social cohesion is not uniform. Mobility is a function of people's capabilities and aspirations to migrate.[57] Without policies to encourage integration, displaced populations

48 UNEP, IRP, 2023 Op. Cit.
49 UNEP, IRP, 2023 Op. Cit.
50 Konte, M. & Mously Mbaye, L. (2020) Migration, Remittances, and Sustainable Development in Africa
51 FAO, IFAD, IOM, WFP (2018) The Linkages between Migration, Agriculture, Food Security and Rural Development
52 WB (2022a) Social cohesion and forced displacement: A synthesis of new research
53 UNHCR (2024) No escape: On the frontlines of climate change, conflict and forced displacement
54 MMC, IOM, 2023 Op. Cit.
55 UNHCR, 2024 Op. Cit.
56 UNHCR, 2024 Op. Cit.
57 De Haas, H. (2021) A theory of migration: the aspirations-capabilities framework

can undermine social cohesion in host communities. Disparities in access to resources, service provision, and livelihood opportunities can heighten perceptions of inequality and social exclusion, increasing the risk of conflict.[58] When displaced individuals are forced to move again (secondary displacement) due to new waves of conflict or environmental disasters, it adds another layer of vulnerability to the affected populations.[59] In such scenarios, the ability of institutions to provide protection and ensure the continuity of social ties is further diminished. Repeated displacement also disrupts livelihoods, erodes coping mechanisms, and fragments communities, creating conditions for increased tension and conflict.

Under the right conditions, mobility can foster social cohesion and peaceful coexistence. Seasonal labour migration has long been a coping strategy during hard times across the East and Horn of Africa, enabling workers to sustain their home communities through remittances.[60] Effective policy frameworks and integration strategies, particularly those that include participatory and community-based approaches, can foster mutual understanding, cooperation, and resilience between displaced and host populations.[61] Investment in inclusive governance mechanisms, equitable service delivery, and joint community initiatives can help address the root causes of tension. Meanwhile, participatory approaches that involve both displaced persons and host communities in decision-making processes related to resource management, infrastructure development, and service delivery can enhance transparency, fairness, and contribute significantly to social stability. Such initiatives can address immediate needs, help to build trust, and reduce perceptions of marginalisation.[62]

2.4. The threat multiplier effect of environmental degradation and climate change on conflict dynamics, and its impact on mobility and mixed migration

Climate change and environmental degradation rarely cause conflict on their own, but they can intensity existing tensions.[63] As a "threat multiplier," climate change can increase the risk of armed conflict in certain contexts—through the loss of livelihoods, shifting migration patterns, resource degradation, and social and economic marginalisation.[64] Armed groups may also exploit environmental conditions tactically.[65] These stressors, closely linked to long-standing political, social, and economic grievances, interact with underdevelopment, inequality, and weak governance, heightening the risk of conflict.[66] Ultimately, climate-induced pressures contribute to fragility, displacement, and violence—particularly for marginalised populations, including migrants and host communities.[67]

At least 40% of all intrastate conflicts (civil wars) since the Second World War, have had a link to natural resources, particularly land.[68] In fragile societies characterized by inequality, ethnic divisions, or ideological fragmentation, environmental change amplifies existing fault lines, increasing the risk of conflict.[69] Conflict over resources such as water is often linked to climate variability, land degradation, and food insecurity.[70] For example, in the East and Horn of Africa region, the division of transboundary water resources such as in the Nile and the Juba-Shabelle river basins has been a significant source of regional tension.[71]

Resource scarcity – such as the loss of arable land, pasture and water resources – exacerbates inter-communal and socio-political tensions, contributes to tensions and conflict, and can induce displacement. Similarly, loss of livestock, agricultural productivity and crop failure as a results of extreme climatic conditions can trigger substantial internal movements in search of alternative livelihoods[72] as they

58 UNDESA (2016) Leaving no one behind: The imperative of inclusive development - Report on the World Social Situation 2016
59 UNHCR, IOM (2021) Bridging the Divide in Approaches to Conflict and Disaster Displacement/ Norms, Institutions and Coordination in Afghanistan, Colombia, the Niger, the Philippines and Somalia
60 Brown (2007) Eating the Dry Season: Labour mobility as a coping strategy for climate change
61 WB, 2022a Op. Cit.
62 WB, 2022a Op. Cit.
63 Devlen, L & Destrijcker, L. (2022) Weathering Risk: Seven Questions for the G7
64 Abshir, S. (2020) Climate Change and Security in the Horn of Africa: Can Europe help to reduce the risk?
65 Mobjörk, M. Krampe, F & Tarif, K. (2020) Pathways of climate insecurity
66 IOM (2021) Exploring the climate change - conflict - mobility nexus, F & Sebuya, K. (2022) The social side of climate change adaptation: Reducing conflict risk
67 Hegazi and Sebuya, 2022 Op. Cit.
68 UNCCD, 2024 Op. Cit.
69 Brown, O & Nicolucci-Altman, G. (2022) A white paper and Compendium on the future of environmental peacebuilding
70 Scheffran, J. Schilling, J & Link, P.M. (2019) Climate and Conflict in Africa
71 Krampe, F. Van de Goor, L. Barnhoorn, A. Smith, E & Smith D. (2020) Water Security and Governance in the Horn of Africa
72 MMC, IOM, 2023 Op. Cit.

could have been observed in Kenya and in Somalia in recent years. In Ethiopia, environmental degradation coincided with political and resource disputes over water ownership and dams which led to conflict and to displacement.[73]

A key mechanism through which environmental degradation influences conflict is the erosion of livelihoods.[74] In agrarian and pastoralist societies that dominate the East and Horn of Africa region, land degradation results in significant loss of livelihoods, leading to increased food insecurity and social unrest.[75] For instance, South Sudan is facing one of the world's worst food crises, with 70% of the population severely food insecure as of 2023.[76] Such insecurity can push people to seek alternative livelihoods among extremist groups.[77] These pressures are typically experienced most acutely by smallholder farmers and rural populations that lack the adaptive capacity and institutional support to cope with environmental shocks.[78] Droughts, as a form of climate shock, represent a particularly acute conflict risk. Their occurrence in regions dependent on farming and pastoralism frequently precipitates famine, conflict, and migration.[79]

Environmental degradation and climate change can also alter established patterns of mobility, especially among pastoralist groups. As rainfall patterns become more erratic and the frequency of extreme weather events increases, affected communities become more vulnerable to displacement. The mobility triggered by such events can act as a stressor on host communities, where competition over already-scarce resources can intensify. Shifts in traditional migration and transhumance routes and changes in the availability of grazing land due to climate change have led to increased tensions and, in some cases, violent clashes between communities over access to resources.[80] This phenomena has been widely observed in South Sudan and in Darfur during the farming season, when shifting migration routes of herders, driven by droughts, can intensify farmer-herder conflicts.[81]

Climate-related disasters such as floods, droughts, and cyclones can elevate the risk of conflict, particularly in states characterised by political exclusion, large populations, and low levels of human development.[82] In high-emission scenarios, the incidence of conflict-related deaths is projected to rise, further illustrating the lethal synergy between environmental stress and socio-political fragility.[83] A meta study of 55 articles argued that each 1°C increase in temperature results in a 2.4% increase in interpersonal conflict and a 11.3% increase in intergroup conflict.[84]

Armed conflicts often lead to widespread habitat destruction, loss of biodiversity, and increased environmental crime.[85] This can degrade ecosystems and undermine resource-dependent communities, thus feeding back into the cycle of scarcity, competition and conflict.[86] The interplay between conflict and environmental degradation is further demonstrated in post-conflict settings, where economic recovery efforts can lead to increased pressures on natural resources. In many cases, the rush to rebuild economies without adequate environmental safeguards results in intensified exploitation of land, forests, and water bodies, thereby perpetuating a cycle of degradation and renewed conflict risk.[87] This dynamic is particularly evident in conflict-prone countries that are heavily reliant on agriculture, where the compounding effects of climate vulnerability and environmental degradation are most pronounced.[88]

The complex nexus between climate change and conflict, as well as its impact on mobility, necessitate conflict-sensitive and climate-responsive solutions, particularly in the design and implementation of protection systems. Programmes aimed at addressing vulnerabilities such as food insecurity and poverty must be tailored to the specific needs of conflict-affected communities and implemented in ways that do not inadvertently exacerbate existing tensions.[89] This calls for integrated approaches that link humanitarian, development, and peacebuilding efforts while taking environmental factors into account.

73 MMC, IOM, 2023 Op. Cit.
74 SIPRI, NUPI (2023) Insights on Climate, Peace and Security
75 UNCCD 2024 Op. Cit.
76 Tschunkert, K. Delgado, Murugani, V & Riquier, M. (2023) Financing Food Security: Promises and pitfalls of the humanitarian-development-peace nexus in South Sudan
77 Abshir, 2020 Op. Cit.
78 FAO (2024) Social protection as a pathway to sustaining peace
79 UNCCD (2023) The cascading and compounding impacts of drought
80 IOM 2021 Op. Cit.
81 Scheffran, J. Schilling, J & Link, P.M. 2019 Op. Cit.
82 Ide, T. Brzoska, M. Donges, J.F & Schleussner, C. (2020) Multi-method evidence for when and how climate-related disasters contribute to armed conflict risk
83 IMF (2023) Climate Challenges in Fragile and Conflict-Affected States, IMF Staff Climate Note 2023/001
84 Burke, M. Hsiang, S.M & Miguel, E. (2015) Climate and Conflict
85 WB (2022b) Defueling Conflict: Environmental and Natural Resource Management as a Pathway to Peace
86 IUCN, 2021 Op. Cit.
87 UNDP (2020) Policy Brief - Climate Security: Typology and Analysis of Climate-Related Security Risks First Round of NDC
88 IOM, 2021 Op. Cit.
89 FAO, 2024 Op. Cit.

2.5. Coping with, and adapting to, environmental degradation, climate change, and conflict

The East and Horn of Africa region faces recurrent climate-related disasters, environmental degradation and persistent conflicts, all of which contribute to increased vulnerabilities. Migration can be seen as a strategy for adapting to climate change impacts and to enhance resilience; however, it can also be a sign of failure to adapt and lead to maladaptive outcomes.[90] The strategies employed by individuals and households to navigate these overlapping crises vary, but they are often constrained by structural limitations, social inequalities, and insufficient institutional support.

For many individuals, migration has emerged as a primary coping mechanism in response to disasters and conflict. However, even after migrating, many struggle to adapt to their new homes, especially when they lack skills beyond pastoralism and farming.[91] This skill mismatch limits access to sustainable livelihoods in host communities and can trap migrants in cycles of poverty and marginalisation. Although some migrants express hope that conditions may improve, particularly if climatic conditions in their new locations stabilise or become more favourable, the effectiveness of migration as an adaptation strategy remains uneven.[92]

Despite the challenges, local populations and displaced people continue to pursue various forms of adaptation. Local community and indigenous adaptation and resilience building methods are key to this. In the Turkana region in Kenya, communities are digging traditional water pans and using drought-tolerant livestock breeds like Galla goats and Red Maasai sheep to cope with prolonged drought. In Borana, Ethiopia, the "dheda" grazing system involves rotational grazing and communal decision-making to preserve rangelands. In Somalia, agro-pastoralists are planting indigenous trees like acacia senegal to reduce soil erosion and support gum arabic production as a livelihood. Examples of indigenous knowledge systems in the East and Horn of Africa region include weather forecasting by observing animal behavior, wind direction, and cloud patterns, traditional water harvesting techniques like hafir dams in Sudan and South Sudan and earth bunds in Kenya, as well as conflict mitigation mechanisms rooted in clan elders' negotiations over access to land and water. **However, these efforts are further hindered when displaced populations are relocated to hazard-prone areas with limited assets and are excluded from formal adaptation planning processes**.[93] The physical location of refugee camps and informal settlements often exacerbates the exposure of already-vulnerable communities to environmental hazards such as floods and extreme heat. As climate risks intensify, especially in areas with poor infrastructure and weak governance, displaced populations find themselves facing escalating threats with minimal support.[94]

The risks associated with climate change and displacement are not evenly distributed across populations. Certain groups face disproportionately high protection needs due to pre-existing social, economic, and political vulnerabilities. Women and children, who constitute the majority of displaced people, face particularly heightened risks.[95] During displacement, children especially can face severe hardships, including family separation, restricted access to education, and basic services – and they can be stripped of their basic human rights.[96] Climate change amplifies these risks through increased exposure to gender-based violence, economic insecurity, and limited access to essential services.[97] Gender-based discrimination often restricts women's access to land, education, and financial services, thereby reducing their capacity to cope with climate shocks and participate in decision-making processes. Despite these challenges, women frequently form communal networks to provide mutual aid, strengthen social cohesion, and enhance political participation. These networks serve as a critical form of grassroots resilience that supports both individual and collective adaptation.[98]

People with disabilities in the context of climate change and displacement face additional layers of marginalisation and heightened protection risks during disasters and displacement. These include barriers to mobility, access to information, and participation in community planning.[99] Eighty percent of persons with disabilities live in low- and middle-income countries, many of which are among the most vulnerable to climate impacts.[100] In such settings, limited infrastructure and social stigma often prevent inclusive adaptation planning, exacerbating the exclusion and

90 Gemenne, F & Brücker, P. (2015) From the Guiding Principles on Internal Displacement to the Nansen Initiative: What the Governance of Environmental Migration Can Learn from the Governance of Internal Displacement
91 MMC, IOM, 2023 Op. Cit.
92 MMC, IOM, 2023 Op. Cit.
93 UNHCR (2022a) Climate Change, Displacement and Human Rights
94 UNHCR, 2024 Op. Cit.
95 UNHCR (2022b) Gender, Displacement and Climate Change
96 WB (2018) Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict, World Bank
97 UNHCR, 2023a Op. Cit.
98 MMC (2024b) Weathering Change: The gendered impacts of climate and environmental changes on pastoralist migration in Northern Senegal
99 UNHCR (2021) Disability, Displacement and Climate Change
100 UNHCR, 2021 Op. Cit.

vulnerability of people with disabilities. Addressing this requires deliberate policy action that ensures the accessibility and inclusiveness of adaptation strategies and protection mechanisms.[101]

Another group of particular concern are trapped populations who may remain in environmentally vulnerable regions with limited adaptive capacity. Their continued presence in degraded landscapes can worsen both environmental degradation and humanitarian crises, creating spiralling vulnerability. These communities may lack the means to adopt sustainable practices or relocate to areas with more viable ecosystems, underscoring the uneven capacity for mobility as a form of adaptation.[102] As climate-related hazards increase in frequency and intensity, trapped populations are likely to experience more severe and protracted crises unless targeted interventions are implemented to address their unique needs and challenges.[103]

Institutional responses to climate adaptation remain inadequate across many parts of the East and Horn of Africa. In several countries, climate adaptation is a low priority on the political agenda, and the lack of coordinated action risks deepening existing vulnerabilities. While adaptation planning is gaining prominence in some policy circles, its implementation often falls short of addressing the structural drivers of risk and inequality.[104] Furthermore, displaced populations and marginalised groups are frequently excluded from national and local adaptation frameworks, undermining the effectiveness and equity of these initiatives. Recognizing the value of traditional coping mechanisms and ensuring participatory planning processes can help bridge the gap between top-down policies and grassroots realities.[105]

Social protection interventions can enhance adaptive capacity and reduce vulnerability. Mechanisms such as cash transfers, insurance schemes, and public employment programmes can play a critical role in addressing food insecurity, poverty, and social inequality – factors that are often exacerbated by climate change and conflict.[106] In regions where formal employment opportunities are limited and markets are volatile, social protection systems can provide a lifeline for vulnerable households. These interventions are particularly important in displacement settings, where access to work and basic services is often severely restricted. Displaced individuals living in camps or informal settlements face significant barriers to economic inclusion and are frequently cut off from state support mechanisms, further limiting their ability to adapt.[107] As climate extremes become more frequent and severe, the gap between humanitarian needs and available resources is likely to widen, placing additional pressure on aid systems that are already over stretched.[108]

101 UNHCR, 2021 Op. Cit.
102 UNEP, IRP, 2023 Op. Cit.
103 Adger, 2015 Op. Cit.
104 MMC 2024a Op. Cit.
105 UNHCR (2020) Indigenous Peoples' Knowledge and Climate Adaptation
106 FAO, 2024 Op. Cit.
107 Ober, K. Huckstep, S & Miller, S. (2023) It's time for us to be included - An assessment of refugee and displaced people's participation in national adaptation planning
108 UNHCR, 2024 Op. Cit.

3. Regional and national mechanisms, frameworks and institutions to address mobility amid environmental degradation, climate change, and conflict in the East and Horn of Africa

3.1. Overview of regional mechanisms, frameworks, organisations, and cooperation addressing mobility in the context of environmental degradation, climate change, and conflict

In the East and Horn of Africa region, a range of regional mechanisms, policy frameworks, and cooperative initiatives have emerged to address the nexus of climate change, conflict, and mobility in a more integrated and strategic manner. The Khartoum Process, launched in 2014, is a regional dialogue between the European Union and countries along the migration route between the Horn of Africa and Europe, accompanied by capacity building to support improved border controls, legal frameworks and asylum systems. It is a platform that brings together European and African partners to manage migration flows and tackle the root causes of irregular migration and forced displacement. The Khartoum Process was initially meant to focus on addressing trafficking and smuggling but it also recognizes the influence of environmental degradation and climate change on mobility trends. The new action plan accepted at the Second Ministerial Meeting in Cairo, Egypt in April 2025, further recognizes this linkage.[109] Recent reports stress the need for regional collaboration to effectively address environmental migration and underscore the importance of aligning responses with broader development and climate adaptation strategies.[110] While the process does create a platform for inter-regional cooperation, it has been criticised for prioritising European interests – especially in reducing illegal and irregular migration – over human rights and development.

The Intergovernmental Authority on Development (IGAD) and its affiliated institutions, the IGAD Climate Prediction and Applications Centre (ICPAC) and the Conflict Early Warning and Response Mechanism (CEWARN), have helped to catalyse regional responses to climate-related displacement. IGAD promotes regional cooperation through policy harmonisation, information sharing, and capacity building aimed at enhancing resilience and managing mobility in the context of climate change.[111] ICPAC provides climate information services that support early warning systems, disaster risk reduction, and climate-smart planning across national borders.[112]

At the continental level, the African Union (AU) has addressed the intricate links between climate change, peace, security, and displacement. The Kampala Convention, adopted in 2009, serves as a legally binding framework for the protection and assistance of internally displaced persons in Africa, including those displaced by environmental and climate factors. The AU has emphasised the need for integrated approaches that consider both the root causes and the consequences of displacement, especially in contexts where environmental stress intersects with violent conflict.[113] The Convention's broad definition of displacement allows for a more holistic response that encompasses both sudden-onset and slow-onset climate events.[114]

International mechanisms also complement regional and continental initiatives. The Task Force on Displacement, established under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, has developed policy recommendations that guide states and regional organisations in addressing climate-induced displacement. These recommendations focus on integrated approaches that aim to avert, minimise, and address displacement through adaptation planning, disaster risk reduction, and support for safe and dignified migration pathways.[115]

109 Infomigrants (2025) Migrants the focus of 'Khartoum Process' meeting in Cairo
110 MMC, 2022a Op. Cit.
111 MMPTF (n.d.) Addressing drivers and facilitating safe, orderly and regular migration in the context of disasters and climate change in the IGAD region
112 MMPTF, n.d. Op. Cit.
113 MiRAC (2022) Climate and Security and the Security Council
114 MiRAC, 2022 Op. Cit.
115 UNHCR (2018) Mapping of existing international and regional guidance and tools on averting, minimizing, addressing and facilitating durable solutions to displacement related to the adverse impacts of climate change

Moreover, climate mobility and migration are increasingly seen as regional challenges that cannot be fully tackled through national policies. Regional cooperation is vital for addressing shared risks, including migration pressures, cross-border conflicts, and environmental degradation.[116] One of the emerging themes in regional cooperation is the role of transboundary land restoration and resource management in mitigating both environmental degradation and conflict.[117] Land restoration initiatives that incorporate peacebuilding elements, particularly in post-conflict or contested areas, can serve as entry points for reconciliation, community engagement, and sustainable development.[118]

3.2. Overview of national mechanisms, frameworks and strategies addressing mobility in the context of environmental degradation, climate change, and conflict

National mechanisms to address human mobility remain inconsistent and fragmented in the East and Horn of Africa region. States in the region are facing multiple and competing priorities, with very limited resources in some cases, which makes having comprehensive national mechanisms very challenging. While regional frameworks set norms and provide guidance, their translation into coherent national policies and actions remains limited. One challenge in the region is the systemic exclusion of displaced populations, refugees and internally displaced people from national development and climate strategies. Only 28% of national development plans in displacement-affected low- and middle-income countries explicitly include these groups.[119] Excluding displaced people weakens the fairness and effectiveness of national climate responses. When displaced populations are not considered in planning processes, their access to resources, protection, and sustainable livelihood opportunities becomes severely limited, further compounding their vulnerability.[120]

Most National Adaptation Plans (NAPs) fail to include displaced people or include them in the formulation process.[121] Only four of the countries in the region have NAPs (Burundi, Ethiopia, Kenya, and South Sudan) and of those, only Kenya and South Sudan have concrete provisions for climate displacement.[122] This undermines the potential resilience of these populations and weakens national adaptation outcomes. Involving displaced communities in the planning and implementation stages ensures that their specific needs are addressed and their adaptive capacities strengthened.[123]

Nationally Determined Contributions (NDCs), which outline a country's climate goals under the Paris Agreement, largely fail to consider displacement and mobility. The inclusion of displaced persons in these climate policy tools remains insufficient.[124] Out of the observed eight countries from the region (Burundi, Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Tanzania, Uganda), only Somalia makes concrete provisions for displacement that occurs in the context of climate change; Burundi, Kenya, and South Sudan make only contextual references without concrete provisions.[125] It is important to incorporate migrants, including refugees and IDPs into development planning and policy dialogue at the national level. When properly included, displaced populations can contribute economically and socially to host communities, thereby turning displacement into an opportunity for inclusive growth and resilience building.[126]

National policies must be well-coordinated across different government sectors and levels to be effective. However, in many East and Horn of Africa countries, there is a lack of alignment and harmonisation between ministries responsible for climate change, migration, disaster risk reduction, and social protection. There is a need for coordination and harmonisation of policies across ministries and sectors to ensure the effective implementation of climate and mobility frameworks.[127]

The unique needs of climate-affected populations, including migrants, can vary significantly based on geography, socio-economic status, and the nature of the hazard or conflict involved, thus requiring tailored responses. Localized responses must include investments in data systems to track mobility trends, migration experiences, legal protection mechanisms tailored to climate migrants, and resource planning frameworks that allocate adequate support for adaptation and basic services.[128]

116 UNDP, 2020 Op. Cit.
117 UNCCD, 2024 Op. Cit.
118 UNCCD, 2024 Op. Cit.
119 OECD (2023a) Refugees and internally displaced persons in development planning. No-one left behind?
120 UNHCR, 2024 Op. Cit.
121 Ober, K. Huckstep, S & Miller, S. 2023 Op. Cit.
122 Authors' own research and calculations, 2024
123 Ober, K. Huckstep, S & Miller, S. 2023 Op. Cit.
124 (OECD, 2023b)
125 Authors' own research and calculations, 2024
126 OECD (2023b) Addressing forced displacement in climate change adaptation. No longer a blind spot
127 IOM, 2021 Op. Cit.
128 UNHCR, 2018 Op. Cit.

4. Identifying research and policy gaps

Despite growing recognition of the complex links between climate change, conflict, and migration, significant research and policy gaps persist in effectively addressing environmental mobility. Environmental factors are rarely acknowledged as primary drivers of migration, with the exception of migration resulting from sudden-onset events, as they are often mediated by more proximate economic and conflict motivations, especially in highly vulnerable regions.[129] Where it does appear in academic research there is often a preoccupation with trying to calculate the exact responsibility of climate change as a cause of mobility – even if such a conclusion is arguably unattainable – rather that acknowledging that it is one of many factors.

Despite its increasing relevance, climate-induced mobility remains under-researched in the East and Horn of Africa. Policy frameworks often fail to adequately recognise or address the complexities of mobility as both a consequence of climate change and environmental degradation and a contributor to it. It is often the case due to a lack of political will and resources to do so. This limits the ability of states and humanitarian actors to respond effectively to the intertwined challenges of climate, migration, and environmental management.[130]

One of the gaps lies in understanding how migration influences the adaptive capacities and vulnerabilities of both migrants and the communities they leave or join. These impacts remain poorly explored, particularly in situations where mobility serves as an adaptation strategy to climate risks.[131] The concept of "migration as adaptation" has become central in climate-migration research, but it is often narrowly focused on migration as an adaptive response, neglecting resilience-building processes.[132] While migration can indeed act as a form of adaptation, it also exposes populations to new social, economic, and environmental risks in destination areas.[133]

Another challenge is the lack of robust and consistent data on climate-induced displacement. The current landscape is marked by insufficient data (at the micro, meso, and macro-levels, including traditional primary data and newer 'big data') and empirical research, fragmented methodologies, and limited data-sharing between institutions and countries.[134] This undermines efforts to model and predict climate mobility, particularly in fragile and conflict-affected areas where early warning systems are already compromised by poor coordination, governance challenges, and limited data infrastructure.[135] Methodological innovation and greater disaggregation of data by demographic and geographic factors are essential to improve the reliability of mobility forecasts and to inform targeted interventions.[136] Moreover, there is a need for disaggregated data specific to the intersections of conflict and environment rather than general mobility statistics. To help close this gap, researchers could develop real-time data platforms that track displacement patterns that also overlap with information on climate and environmental change and conflicts.

Legal and policy frameworks failing to address the needs of climate-displaced populations. Existing international refugee and immigration laws do not adequately cover those displaced by environmental factors, often leaving them without legal recognition or protection.[137] While there is growing discourse around the need to expand legal definitions to accommodate climate-induced displacement, political resistance remains strong, impeding progress on international consensus.[138] Moreover, current refugee law struggles to apply coherently to complex displacement scenarios involving overlapping causes such as conflict, disasters, and climate change.[139] These legal ambiguities further complicate efforts to provide effective protection and assistance to affected populations.[140]

National policies insufficiently integrate climate mobility considerations. Forced displacement due to climate change is insufficiently addressed in many NAPs and NDCs under the Paris Agreement.[141] This is a significant policy gap, particularly given projections that up to 216 million people could be internally displaced

129 MMC, 2022b Op. Cit.
130 MMC (2017) Migration, displacement, and the environment: A perspective from the Middle East
131 Gemenne, F & Blocher, J. (2017) How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal
132 Sakdapolrak, P. Naruchaikusol, S. Ober, K. Peth, S. Porst, L. Rockenbauch, T & Tolo, V. (2016) Migration in a changing climate: Towards a translocal social resilience approach
133 Adger, 2015 Op. Cit.
134 OSCDS & UNHCR, 2022; Beyer, R.M. Schewe, J & Abel, G.J. (2023) Modelling climate migration/dead ends and new avenues
135 WB (2024) Early warning systems in fragile, conflict and violence-affected settings: Shielding communities from natural hazards amid compounded crisis
136 Beyer, R.M. Schewe, J & Abel, G.J. 2023 Op. Cit.
137 Brown, 2008 Op. Cit.
138 Brown, 2008 Op. Cit.
139 UNHCR, 2018 Op. Cit.
140 Peters, K. Gray-Meral, A. Opitz-Stapleton, S & Measures, H. (2021) Climate change, conflict and displacement: implications for protection agencies. ODI Advisory report
141 OECD, 2023a Op. Cit.

by 2050 as a result of climate stressors.[142] Yet, the role of internal migration as a response to climate change remains under-examined and under-prioritised in national planning and international dialogues. Human mobility is becoming increasingly relevant in the context of climate change, and NAPs should incorporate mobility. They should also adopt inclusive, participatory, and gender-responsive approaches to manage human mobility as a potential adaptation strategy and to avoid maladaptation.[143]

At the global level, migration driven by resource degradation is poorly integrated into broader governance frameworks. It is often treated as a secondary issue, despite its clear connections to pressing global challenges such as poverty, political instability, and violent conflict.[144] More coherent and rights-based approaches are needed to bridge the disconnect between environmental mobility and global governance institutions.[145]

An emerging but still underdeveloped area is environmental peacebuilding, which offers the potential to address the root causes of both environmental degradation and conflict-driven displacement. While there is increasing recognition of its importance, policy and practice in this domain remain fragmented and underfunded.[146] Integrating environmental peacebuilding approaches into climate adaptation and migration strategies could help build resilience and stability in vulnerable regions.

Another under-explored area is the role of social protection in conflict-prone and climate-affected settings. Research on how social safety nets can contribute to peace outcomes and help manage displacement is limited.[147] Yet, social protection mechanisms can play a vital role in mitigating the impacts of environmental stress and reducing the likelihood of forced migration.

Inclusive governance is also critical to addressing the specific vulnerabilities of marginalised groups, including women, youth, and persons with disabilities. However, current climate mobility policies often lack participatory frameworks that reflect these diverse needs.[148] More inclusive governance models are essential to ensure equitable and effective responses to climate-induced mobility.

Environmental displacement in conflict-affected regions requires research and policy attention. These contexts often involve overlapping and compounding risks that are not adequately captured in existing migration and adaptation frameworks.[149] Developing integrated approaches that account for the interplay between climate, conflict, and displacement is essential for humanitarian, development and peacebuilding planning.

142 WB, 2021 Op. Cit.
143 Slycan Trust (2023) Briefing note - Human mobility in National Adaptation Plans
144 UNEP, IRP, 2023 Op. Cit.
145 Gemenne and Brücker, 2015 Op. Cit.
146 Brown and Nicolucci-Altman, 2022 Op. Cit.
147 FAO, 2024 Op. Cit.
148 UNHCR, 2021 Op. Cit.
149 UNHCR, 2024 Op. Cit.

Research questions for further investigation and analysis

The below research questions were identified through interviews with regional experts as well as the literature covered in this synthesis report.

1. **What demographic, social, and economic factors influence vulnerability to climate- related migration and displacement, specifically in the four focus countries (Burundi, Kenya, Somalia, and South Sudan)?**

2. **How do climate/environmental drivers interact with other drivers (economic, conflict, rights, and freedoms) to drive migration decisions in the East and Horn of Africa?**

3. **What are the impacts of environmental disasters on communities in the East and Horn of Africa and what are the triggers for migration in these contexts?**

4. **Which coping and adaptation mechanisms are people from communities affected by environmental disasters employing and how effective are they?**

5. **What protection risks are faced by individuals and households displaced by environmental disasters and what are their needs?**

6. **How are local policies and initiatives, including at the city-level, working to address these risks?**

7. **What resilience strategies are communities themselves enacting in the face of weak national and regional responses?**

8. **How effective are regional cooperation and international support measures?**

9. **What can be done to support better management of conflict- and environmentally driven migration in the East and Horn of Africa?**

Furthermore, there is a need to pose these questions for different climate hazards and types of environmental degradation, as well as different mobility patterns by country. For this reason, there is a critical need for data and research that is comparative in its design and standardized across varied geographic and socio-political contexts, and that includes the systemic capture of diverse and hard-to-reach profiles of affected persons. There is also a need to monitor the uptake of related research by decision-makers and policymakers, as well as the subsequent actions and interventions.

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Migration Policy Development

ABOUT MECMEA

MECMEA (Managing the Impacts of Environmental Change and Conflict on Mobility in Eastern Africa) is an 18-month regional initiative that addresses the intersection of climate change, environmental disasters, and conflict as key drivers of migration. The project strengthens multi-level policy coordination and inclusive governance through evidence-based policymaking, capacity-building, and policy dialogue.

Led by the Horn of Africa Regional Environment Centre and Network (HoA-REC&N) at Addis Ababa University, MECMEA brings together a consortium of partners from Kenya, Djibouti, and South Sudan to support vulnerable communities across Eastern Africa.

Key Objectives:

- Generate knowledge & tools: research, dashboards, and policy recommendations
- Build capacity: trainings for CSOs, youth, women, and policymakers
- Promote dialogue: stakeholder engagement and policy events

Expected Outcomes:

- Strengthened governance frameworks for climate and conflict-induced mobility
- Improved capacity among regional actors
- Enhanced collaboration between governments, civil society, and researchers

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