

Policy Brief 9/2024

Advancing climate resilience among vulnerable populations: the role of human mobility in adaptation and development

Aimée-Noël Mbiyozo

November 2024

About the author

Aimée-Noël Mbiyozo is a Senior Research Consultant with the Institute for Security Studies, Africa (ISS). She joined the ISS in 2017, where she has authored over 50 peer-reviewed publications on the intersection of migration with other prevailing issues such as climate change, gender, asylum law, human smuggling, violent extremism and citizenship. Her work has focused on high-risk and fragile environments in Africa and Asia. Prior to joining the ISS she managed an international migration project across 11 countries in West, Central and South Asia. In this role, she researched and authored regular intelligence reports and designed and implemented grass-roots engagement and communications campaigns that helped governments deepen understanding and develop improved responses to emerging and overlooked issues. Aimée-Noël has a Masters degree in Media Theory and Practice from the University of Cape Town. She has been commissioned directly to write reports for the African Development Bank, United Nations and NATO, has been an expert advisor for international and regional institutions, and participates in multiple forums and networks working to increase awareness and uptake of migration-related issues, including CMARN.

Contact: ambiyozo@issafrica.org

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BACKGROUND

People's capacities to anticipate, cope with and recover from climate hazards play a central role in human mobility patterns in the context of climate change. Climate change amplifies gender, economic and social inequality, and is more likely to trigger displacement or trap people in forced immobility when they are more vulnerable and less able to adapt.¹ Migration is often framed as a failure to adapt to climate impacts. Under the right conditions, however, migration can be an important form of climate adaptation.²

Climate adaptation is also directly linked to development. Whereas Africa has only contributed 3% of historic global carbon emissions, climate change is significantly impacting Africa's development and economic growth. According to the 2022 Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report, Africa has already suffered extensive losses and damages, such as biodiversity loss, water scarcity, reduced food production, loss of life, and reduced economic growth.³ The African Development Bank (AfDB) reports that climate-related disasters cost up to USD \$15 billion annually, and already, the continent has been losing between five and 15 % of GDP per capita growth due to climate change.⁴ Building adaptive capacity against climate change impacts is critical to achieving the Sustainable Development Goals (SDGs).⁵

Climate adaptation and development are interrelated and mutually supportive policy and funding areas. This is particularly true in vulnerable communities, where efforts to increase adaptive capacity are intertwined with development efforts.⁶ Climate change exacerbates existing vulnerabilities and inequalities, undermining development gains and future progress.⁷ Politically, socially and economically marginalised people are more vulnerable to climate impacts because they are less likely to have access to the financial and social assets needed to cope. These include land tenure, access to social and legal services, political participation, income, governance and infrastructure.

Development funders and climate adaptation funders both contribute substantial funding to Africa and have significant potential to improve climate mobility outcomes on the continent.... However, existing approaches do not make explicit references to climate-linked mobility and the extent to which funders are incorporating climate mobility into their plans, funding and programming is still very limited.

¹ A de Sherbinin, *Climate Impacts as Drivers of Migration*, Migration Policy Institute (2020).

² A-N Mbiyozo, *Migration: A Critical Climate Change Resilience Strategy*, Institute for Security Studies (2020).

³ IPCC, *Sixth Assessment Report Working Group II – Impacts, Adaptation and Vulnerability, Fact sheet – Africa* (2022).

⁴ AfDB, 'Africa loses up to 15% of its GDP per capita annually because of climate change – African Development Bank Acting Chief Economist Kevin Urama' (12 September 2022).

⁵ Global Center on Adaptation, *State and Trends in Adaptation Report 2022, Section three- Cross Cutting Themes: Sustainable Development Goals* (2022).

⁶ M Funder et al, *Climate change adaptation and development: Past trends and ways forward for Danish development cooperation*, Danish Institute for International Studies (28 May 2020). While there are also important differences between how the two fields approach and report their work, these considerations fall beyond the scope of this brief.

⁷ AfDB, *Climate and Green Growth Strategic Framework, Projecting Africa's Voice* (2021).

Development funders and climate adaptation funders both contribute substantial funding to Africa and have significant potential to improve climate mobility outcomes on the continent. They are becoming increasingly aware of human mobility in the context of climate change and its multifaceted impacts. However, existing approaches do not make explicit references to climate-linked mobility⁸ and the extent to which funders are incorporating climate mobility into their plans, funding and programming is still very limited. `

ISSUES

CLIMATE MOBILITY IS AN IMPORTANT FACTOR IN ADVANCING ADAPTATION AND DEVELOPMENT

Addressing human mobility in the context of climate change is crucial for sustainable development and economic growth. Climate-related human mobility presents development opportunities and challenges. When migration is safe, voluntary, and orderly, it can enhance development by promoting agglomeration, skill exchanges, and remittances. If unmanaged, forced, and unsafe, migration poses a considerable threat to sustainable development.⁹

This policy brief discusses four types of climate-related human mobility:

- Displacement – predominantly forced movement that is often short-term and internal in the context of disasters, but can be long-term and international too
- Migration – voluntary movement that can be internal or across borders, short-term, temporary or permanent
- Planned relocation – assisted movements, usually by a state to protect people from risks or adverse impacts
- Involuntary immobility – people who wish to migrate but are unable to do so

The distinction between these types of mobility is not always clear. Mobility is a particularly complex topic that encompasses a wide range of interrelated factors and climate change permeates all aspects of society.

The International Organization for Migration (IOM) defines a climate mobility solution as that which seeks to avert, minimise and address (forced) displacement.¹⁰ Climate mobility solutions involve interventions that help people:

- To stay: Enabling people to stay in place by helping to build resilience to climate impacts. These solutions include climate-resilient livelihoods, skills, infrastructure, water management or early warning systems.

⁸ AfDB and IOM, *Diaspora, Climate-Induced Migration and Skills Mobility: A focus on Africa* (2023).

⁹ A-N Mbiyozo and M Monyani, 'Climate-linked mobility: A key to development' ISS Africa (March 2023).

¹⁰ IOM, *Mapping human mobility (migration, displacement and planned relocation) and climate change in international processes, Policies and Legal Frameworks* UNFCCC (2018).

- To move: Creating an enabling environment to govern and manage migration. These solutions include legal pathways, new skills and alternative livelihoods, or conducting planned relocations.
- On the move: Assisting and protecting people moving voluntarily or removed forcibly, and supporting durable solutions. These solutions include investing in physical and social projects in host communities such as climate-resilient infrastructure, green livelihoods, microfinancing, housing, healthcare, transport and social benefits that include migrants and hosts.

While development and climate adaptation funders increasingly recognise that human mobility in the context of climate change is an important issue, interventions and funding to avert, minimise and address climate displacement remain severely insufficient.¹¹ Only a small number of projects explicitly address climate mobility in Africa.¹²

This policy brief addresses the significant impacts of climate mobility on development in Africa, and in particular, on some of Africa's most vulnerable people and communities. It describes how climate change amplifies existing fragility, with a particular focus on gender inequality, and argues that climate and development funders should incorporate mobility and gender considerations into funding and programming on the continent.

CLIMATE CHANGE AMPLIFIES GENDER, ECONOMIC AND SOCIAL INEQUALITY

Climate change is a 'fragility amplifier': the most marginalised people in the most fragile countries suffer the worst impacts. The adverse effects of climate change intersect with socioeconomic and other stressors and exacerbate existing vulnerabilities and inequalities.¹³ In the context of sustainable development, climate change impacts are exacerbating disparities in health, income, gender, employment and security, and undermining development gains and future progress.

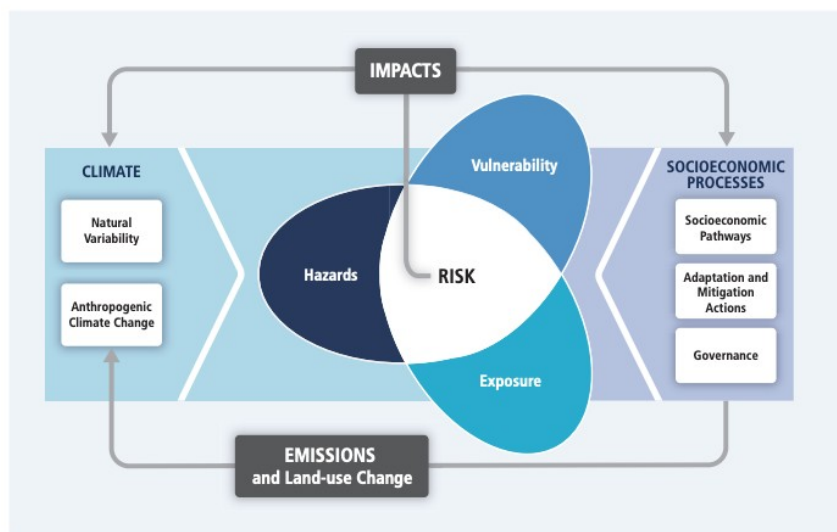
Environmental changes stress social, economic, and political systems, exacerbating vulnerabilities and inequalities and hindering future progress. The extent to which climate change impacts human mobility patterns depends on a community's and individual's exposure and vulnerability.

¹¹ IOM, *Climate Change and Migration in Vulnerable Countries: A snapshot of least developed countries, landlocked developing countries and small island developing States* (2019).

¹² D Tänzler and T Bernstein, *The landscape of financing options to address human mobility in the context of climate change: Instruments and approaches to finance measures on climate change related migration, displacement and relocation*, GIZ (2022).

¹³ AfDB (n 7).

Figure 1: Risk of climate-related impacts results from the interaction of climate-related hazards with the vulnerability and exposure of human and natural systems. Source: IPCC, 2014



Vulnerability to climate change is partly determined by individual factors, such as age, gender, sexual orientation, ethnicity, citizenship and disability. However, social structures also play an important role. Individuals who are politically, socially, and economically marginalised are more vulnerable, and to bear the brunt of climate impacts, because they lack the financial and social assets required for coping.

Gender inequality provides a salient example of the interaction between individual and social factors in producing vulnerability. As a result of gender inequality, women and other marginalised groups, including LGBTQ+ people, tend to be poorer, have less education and experience more health risks.¹⁴ In low-income countries, labour markets are heavily gender-segregated and women are employed primarily in low-paying and insecure occupations.¹⁵ Women carry a disproportionate unpaid work burden in households and communities and rely more on natural resources and climate-sensitive sectors for their livelihoods.

In Sub-Saharan Africa, women are responsible for 80% of food production and more than 50% of all employed women work in agriculture, yet they rarely own the land.¹⁶ Despite playing essential roles in agriculture, aquaculture and other livelihood activities, women and girls often have less access to resilience measures such as land tenure, ownership of productive assets, social protections and technology.¹⁷

¹⁴ N Chindarkar, 'Gender and climate change-induced migration: proposing a framework for analysis' (2012) 7(2) *Environmental Research Letters* 025601.

¹⁵ AfDB, *Strategy for Addressing Fragility and Building Resilience in Africa 2022-2026* (2022).

¹⁶ R Meinzen-Dick, *Investing in Africa's female farmers helps their kids, communities and economies*, World Economic Forum (2019).

¹⁷ IOM, *Gender, Migration, Environment and Climate Change* (undated), available at: <https://environmentalmigration.iom.int/gender-migration-environment-and-climate-change>.

CLIMATE CHANGE, INEQUALITY AND HUMAN MOBILITY

Migration can be an effective adaptation measure and can help to address existing gender, economic and social inequalities. However, migration as a means of adaptation may also be less available to those who are marginalised and vulnerable.

For example, in the context of climate change, migration can empower women towards economic and skills development. It can increase autonomy, mastery, remittances and social standing and disrupt gender norms and inequality.¹⁸ Migration enables women and families who rely on climate-vulnerable livelihoods to diversify their income and spread the risk across household members by seeking alternative income sources. Financial and social remittances from family members can help women adapt to climate impacts.

However, gender inequality also reduces women's ability to choose voluntary migration as an empowering adaptation measure that improves their development prospects. Women tend to have less information and fewer resources to prepare and build resilience or plan voluntary migration.

Women, as well as other marginalised and vulnerable groups, face the highest risk of involuntary immobility – that is, of being unable to move away from climate change impacts. Young, able-bodied working-age people are the first to move. Due to financial and social limitations, vulnerable populations, including the elderly, low-skilled women, children, and people with disabilities and trapped, live in communities with fewer people available to help care for them. Poor families and individuals who depend on agriculture, aquaculture or other vulnerable livelihoods face diminishing returns from their crops. This erodes the human, financial and social capital required to migrate, making them less mobile.¹⁹ As the impacts worsen over time, poor families' resources are likely to deplete even further. This dangerous cycle leaves people more exposed to hazards, with fewer adaptation options and eroded migration capabilities. They get left behind in the 'poverty trap'.²⁰

ADAPTATION AND DEVELOPMENT FUNDING IS URGENTLY REQUIRED TO ADDRESS CLIMATE MOBILITY

A cornerstone of the Paris Agreement – adopted by the UN Climate Change Conference in 2015 – was a commitment by developed countries to direct funds to less-developed countries to help them mitigate and adapt to the impacts of climate change. Despite this commitment, Africa has some of the lowest per capita climate finance inflows in the world.²¹ As of 2018, only 3% of total climate finance reached Sub-Saharan Africa annually.²² According to the African Development Bank, Africa is owed almost 10 times the global climate finance it received between 2016 and 2019.²³ Finance

¹⁸ M Foresti, 'Women on the move: migration, gender equality and the 2030 Agenda for Sustainable Development' ODI Briefing (July 2016).

¹⁹ A Mazzai, *The Climate Change Trap*, Foresight (29 June 2020).

²⁰ C Cattaneo and G Peri, 'The migration response to increasing temperatures' (2016) 122(C) *Journal of Development Economics* 127.

²¹ AfDB (n 7).

²² 'Africa must not be short-changed by climate finance, says expert panel at COP24' AfDB website (18 December 2018).

²³ AfDB, *African Economic Outlook 2022, Supporting Climate Resilience and a Just Energy Transition in Africa* (2022).

flows targeting adaptation in Africa are billions of USD less than the lowest adaptation cost estimates.

Despite being the most affected region, Africa received only 20% of global adaptation funding in 2021 – 2022.²⁴ Climate finance in Africa has also been weighted heavily towards mitigation over adaptation. While adaptation funding has increased, it still comprises a small proportion of overall climate funding and falls short of the required investment.²⁵ When international climate funding prioritises mitigation, this has the additional effect of making it more difficult to mobilise domestic funding for adaptation. In 2019 and 2020, Africa received an average of US\$29.5 billion in total climate finance, but only 39 percent – approximately US\$11.4 billion – was allocated to adaptation.²⁶

In addition, of the climate finance provided to Africa, most (74%) has been provided as loans and other debt instruments that must be repaid, including for least-developed countries.²⁷ This, in turn, contributes to already-heavy debt burdens for vulnerable countries. These existing financial tools are not ideal for marginalised groups needing to implement climate adaptation measures. Grants, concessional finance, insurance and forecast-based financing are more appropriate for fast and flexible disbursement and are inaccessible to many vulnerable groups.

Despite overall shortfalls in the necessary funding, adaptation efforts are progressing across Africa. Adaptation finance flows and the number and quality of comprehensive and integrated National Adaptation Plans are increasing.²⁸ As of 2022, 84% of African countries had at least one adaptation planning instrument.²⁹ Many now incorporate quantified and time-bound targets and take specific consideration of marginalised groups, such as women and indigenous communities.

However, only a small number of African countries so far have adaptation instruments that address human mobility in the context of climate change (especially cross-border movement) and most do not measure community and ecosystem resilience.³⁰ This omission makes it extremely difficult to accurately estimate funding and hinders large-scale financial action.³¹

In the development sphere, many development funders and actors invest in climate action and in human mobility programmes; however, these rarely overlap.³² This requires expertise, data, training and frameworks to facilitate them.³³ Effectively addressing climate-related human mobility also requires strong local knowledge of climate change, human mobility, and the nexus between the two. Development institutions should leverage and expand their existing institutional strengths and expertise to include measures that help people to stay, to move, and on the move, including climate-

²⁴ Global Center on Adaptation, *State and Trends in Climate Adaptation Finance 2023* (2024).

²⁵ G Savvidou et al., 'Five ways climate adaptation finance falls short in Africa' Stockholm Environment Institute (October 2021).

²⁶ Global Center on Adaptation (n 24).

²⁷ L Schalatek, 'Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes' Report to the UN Women Expert Group Meeting, Core Steps to Increase Quality and Quantity of Gender-Responsive Climate Finance (October 2021).

²⁸ Funder et al (n 6).

²⁹ UNEP, *Adaptation Gap Report 2022: Too Little, Too Slow - Climate adaptation failure puts world at risk* (2022).

³⁰ L Huang et al, 'Financing Responses to Climate Migration, The Unique Role of Multilateral Development Banks' Migration Policy Institute (2022).

³¹ IOM (n 10).

³² Huang et al (n 30).

³³ Ibid.

resilient infrastructure, early-warning systems, nature-based solutions, water solutions and green livelihoods.

Development funders typically support plans that align with national priorities. It is more challenging for them to fund climate-related human mobility interventions that are not national priorities and do not have relevant laws and policies. Development funds tend to flow to countries where funders already have a presence, strong institutional capacities, a perceived ability to implement projects successfully, and a sufficiently predictable environment to generate a return on investment.³⁴ Proportionately less funding goes to the areas with the highest vulnerabilities and lowest adaptive capabilities.³⁵

CLIMATE MOBILITY FUNDING MUST BE GENDER-RESPONSIVE

Women are powerful change agents at all stages of the migration pathways and are driving mobility solutions that enable communities to stay, to move and on the move... Funding for grassroots gendered projects that address their specific vulnerabilities and empower them to benefit equitably from mobility should be prioritised.

There is growing recognition that gender equality and gender-responsive funding are necessary to ensure effective, efficient and sustainable climate action. However, given the dearth of attention to climate mobility, gender-responsiveness within climate mobility lags even further behind. Not enough legal and policy frameworks or data collection sources recognise gender-differentiated impacts of climate change or mobility.

At present, despite being disproportionately affected by these issues, women remain underrepresented or excluded throughout the decision-making process due largely to a lack of dedicated funding and sufficient gender expertise. Gender dimensions to date have also been limited to a binary focus that considers only men and women and does not account for non-binary gender identities or the many ways that gender intersects with other factors such as race, ability, age or religion.³⁶

Most multilateral climate funds started out as gender-blind but now have gender policies and plans, and gender-responsive climate finance that targets gender inequalities is growing. Despite this increase, more than three-quarters of total climate development finance in Africa throughout the decade failed to consider gender, and the quantity and quality of gender-responsive climate finance directed towards Africa remains insufficient.

There is also a lack of uniform reporting and tracking mechanisms for the gender-responsiveness of climate funds. Climate funds do not have universal accounting and reporting standards, particularly concerning gender. This makes it extremely difficult to track and evaluate gender-responsive financing accurately. The existing markers rely overly on self-reporting instead of uniform criteria, lack transparency, and allow different interpretations and over-reporting of what counts towards addressing gender equality.³⁷

³⁴ IFRC, *World Disasters Report* (2020).

³⁵ D Doschi and M Garschagen, 'Understanding adaptation finance allocation: which factors enable or constrain vulnerable countries to access funding?' (2020) 12 *Sustainability* 4308.

³⁶ *Ibid.*

³⁷ *Ibid.*

The lack of gender-responsive climate funding combined with limited climate mobility projects means that the two aspects combined—gender-responsive climate mobility projects—are even more scant. Women are powerful change agents at all stages of the migration pathways and are driving mobility solutions that enable communities to stay, to move and on the move. Including women in responses has been shown to improve safety and effectiveness.³⁸ Women-led climate mobility solutions tend to occur at the community level driven by individuals or small organisations that are too small to attract financing. Funding for grassroots gendered projects that address their specific vulnerabilities and empower them to benefit equitably from mobility should be prioritised. Women, including migrants, should be included in decision-making processes.

RECOMMENDATIONS

1. Development and climate adaptation funders should increase the amount of funding directed to human mobility in the context of climate change to address the context-specific needs of vulnerable communities and make the funds easier to access. Donors should prioritise areas severely impacted by climate change and displacement, particularly in fragile and low-income countries. They should increase the quantity and quality of gender-responsive financing and integrate gender responsiveness into all project design and implementation stages.
2. Donors should use a wider variety of innovative non-debt instruments to finance climate-related human mobility interventions, particularly in vulnerable contexts. The large portion of adaptation-related financing provided as loans contributes to already-heavy debt burdens and is severely under-spent.³⁹ These instruments should complement one another to maximise impact and form a balanced risk portfolio.
3. Development actors should treat human mobility in the context of climate change as a development issue and mainstream it throughout their institutions and relevant sectors including housing, water, livelihoods, services, and infrastructure. They should work to upskill on the cross-sectoral impacts of human mobility in the context of climate change, develop strategies to address it and increase the necessary human and financial resources. Development actors should further develop partnerships with human mobility actors to share research and data and implement human mobility interventions.
4. National governments should adopt and operationalise legal and policy frameworks that link climate change and human mobility. These are crucial for unlocking funding and programming. Governments should identify and pursue adaptation funding opportunities and translate them into implementable projects and establish a comprehensive and transparent tracking system to monitor climate finance flows, ensuring accurate data on disbursement, and impact.
5. All actors should empower local communities to lead solutions, including by providing access to forecasting, data and information for them to use to achieve their needs. Local communities

³⁸ A Beeker et al, 'Advancing gender equality in environmental migration and disaster displacement in the Caribbean' ECLAC and IOM (2021).

³⁹ G Savvidou et al, 'Quantifying international public finance for climate change adaptation in Africa' (2023) 21(8) *Climate Policy* 1020.

have the most relevant expertise and experience.⁴⁰ Inclusive tools that enable quick and flexible dispersals are imperative.

6. Women and gender-diverse people should be empowered as key stakeholders with diverse and enriching perspectives that will improve interventions' effectiveness, efficiency and sustainability. Women should be engaged in all phases of programming and funding, including design, planning, implementation and evaluation.
7. Effective climate action requires political leadership and coordinated, coherent whole-of-government, whole-of-society responses. Decision-makers should be educated on opportunities and challenges related to human mobility in the context of climate change. Maximising the development potential of climate-related migration requires solutions that enable safe, orderly and free movement, support integration in new locations, returns for those who seek it and support efforts to improve circumstances and maximise development benefits.

⁴⁰ N Krishnan, 'Following the money isn't enough: how civil society organizations provide accountability for climate adaptation finance' World Resources Institute (2020).