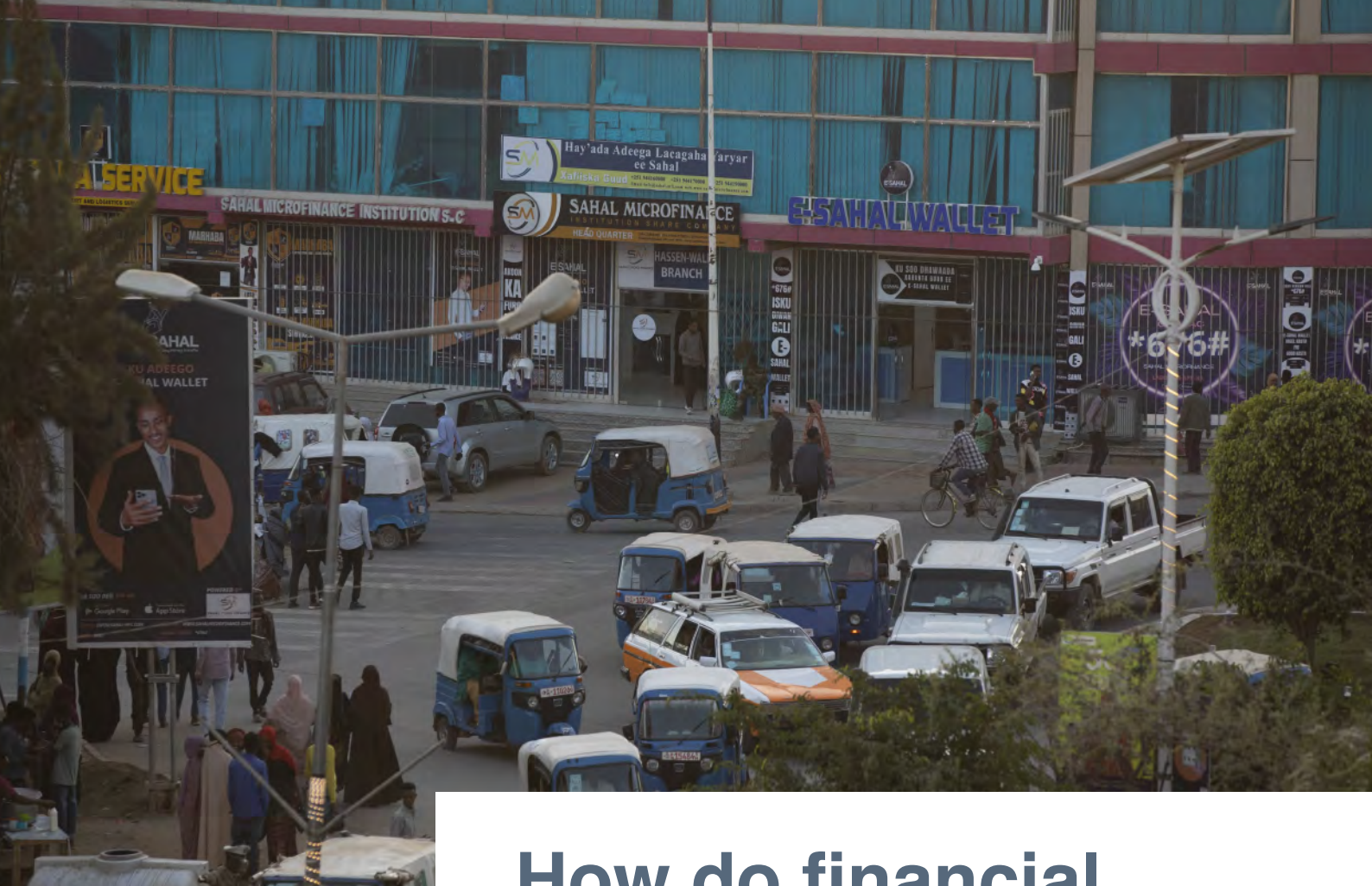




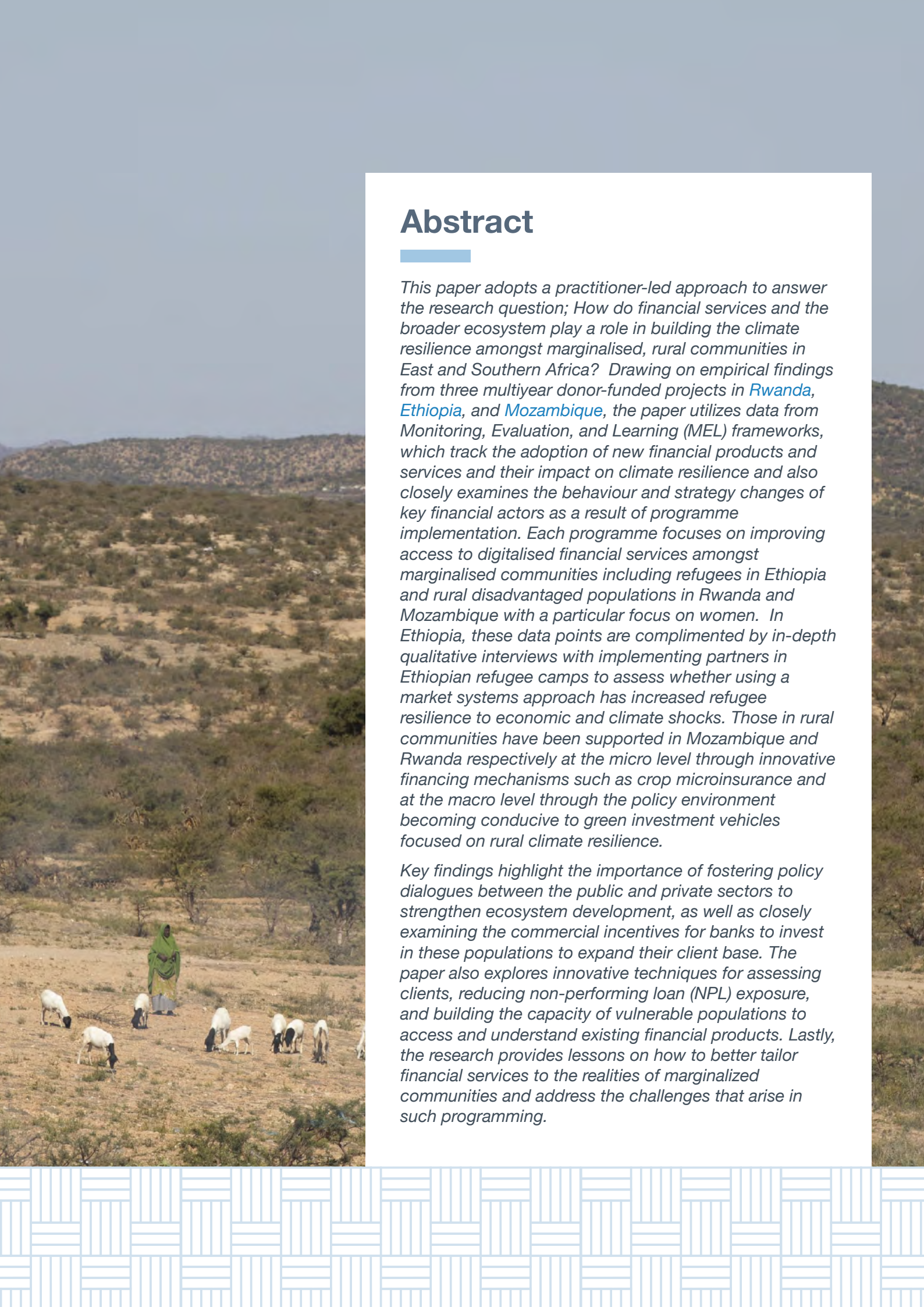
Authors

Anne Brady,
Naomi Somerville-Large
and James Naughton

How do financial services and the broader ecosystem play a role in building the climate resilience amongst marginalised, rural communities in East and Southern Africa?

Case Studies from DAI's portfolio in Rwanda, Ethiopia and Mozambique.

August 2025



Abstract

This paper adopts a practitioner-led approach to answer the research question; How do financial services and the broader ecosystem play a role in building the climate resilience amongst marginalised, rural communities in East and Southern Africa? Drawing on empirical findings from three multiyear donor-funded projects in [Rwanda](#), [Ethiopia](#), and [Mozambique](#), the paper utilizes data from Monitoring, Evaluation, and Learning (MEL) frameworks, which track the adoption of new financial products and services and their impact on climate resilience and also closely examines the behaviour and strategy changes of key financial actors as a result of programme implementation. Each programme focuses on improving access to digitalised financial services amongst marginalised communities including refugees in Ethiopia and rural disadvantaged populations in Rwanda and Mozambique with a particular focus on women. In Ethiopia, these data points are complimented by in-depth qualitative interviews with implementing partners in Ethiopian refugee camps to assess whether using a market systems approach has increased refugee resilience to economic and climate shocks. Those in rural communities have been supported in Mozambique and Rwanda respectively at the micro level through innovative financing mechanisms such as crop microinsurance and at the macro level through the policy environment becoming conducive to green investment vehicles focused on rural climate resilience.

Key findings highlight the importance of fostering policy dialogues between the public and private sectors to strengthen ecosystem development, as well as closely examining the commercial incentives for banks to invest in these populations to expand their client base. The paper also explores innovative techniques for assessing clients, reducing non-performing loan (NPL) exposure, and building the capacity of vulnerable populations to access and understand existing financial products. Lastly, the research provides lessons on how to better tailor financial services to the realities of marginalized communities and address the challenges that arise in such programming.



Introduction

In Eastern and Southern Africa, rural populations dependent on agriculture face acute vulnerability to climate risks, with the costs of climate-proofing livelihoods often prohibitive. Targeted financial services—delivered at critical points in the supply chain—can mitigate this vulnerability by enabling adaptive measures, safeguarding incomes, and sustaining trade during shocks. Drawing on case studies from Ethiopia, Mozambique, and Rwanda, this paper explores how innovative financing models, digital ecosystems, and institutional collaboration are building resilience among marginalised communities. Each of the case studies detailed below considers this from a different context.

The Strengthening Host and Refugee Populations in Ethiopia (SHARPE) programme found that marginalised refugees and host communities require more than microcredit to transition from aid dependency and increase resilience to climate shocks. While small loans (averaging \$700) can offer limited relief, establishing sustainable semi-commercial enterprises able to operate within a market system requires a larger investment (up to \$5,000) and access to financial services. SHARPE's partnership with a financial institution was critical in expanding mobile money services and agent networks, demonstrating the role that digital financial services can play in strengthening markets and resilience. At the same time, this case study identifies gaps in the financial ecosystem and makes recommendations for future interventions.

Mozambique's FSDMoç programme addressed identified gaps in the financial ecosystem by piloting a

range of financial products designed to reach rural marginalised communities. This included pioneering GIS-indexed microinsurance, which automated payouts for farmers facing cyclones and droughts. Hollard's low-cost model, combined with mobile technology and village agents, reached 35,000 smallholders—half of them women—while digitised platforms like WELELA kept supply chains operational during disruptions. However, scaling such solutions hinged on financial literacy campaigns, delivered through culturally resonant methods like folklore storytelling, to bridge low trust in formal systems.

Finally, Rwanda's Nguriza Nshore initiative demonstrates how financial markets can be made inclusive through adopting a different approach and engaging with a wide range of stakeholders. The programme focused on de-risking lender exposure through guarantees and satellite-driven risk assessments. By aligning loan terms with agribusiness cycles (e.g., seasonal harvests), financial institutions like Réseau Interdiocésain de Microfinance (RIM) reduced non-performing loans from 11% to 3% and expanded lending to women-led enterprises. Similar to SHARPE and FSDMoç, Nguriza Nshore also highlighted the importance of mobile/agent banking infrastructure to serve last-mile populations, as traditional branches were inaccessible.

From the three case studies, key lessons emerge:

1. Climate-proofing economic activities requires different levels of financing: Microinsurance, mobile money agent networks, and larger loans are critical for businesses to withstand climate shocks, reduce aid dependency for marginalised groups and build longer term resilience.
2. Digital ecosystems enable continuity: Mobile money and e-commerce platforms are critical systemic components of enabling financial inclusion and can ensure sustained operations during shocks but require initial investments in financial literacy and infrastructure.
3. Institutions need incentives: De-risking tools (e.g., guarantees) and data-driven risk profiling lower barriers to underserved markets, while corporate social responsibility (CSR) benefits attract development finance institution (DFI) capital.
4. Localised design is non-negotiable: Products must align with rural realities and the profiles of those it needs to reach—from reduced collateral requirements for refugees, payout timings to community-led awareness campaigns.

Together, the three case studies illustrate how financial systems, when designed for climate volatility and inclusivity, can transform vulnerability into resilience. Policymakers and practitioners must prioritise scalable models that merge technology, tailored financing, and cross-sector collaboration to protect Africa's most at-risk communities. Below we move into each case study in turn:



Ethiopia Case Study

The [Strengthening Host and Refugee Populations, Ethiopia](#) (SHARPE) programme, implemented by DAI and funded by the UK Foreign Commonwealth and Development Office (FCDO), applied a market systems development (MSD) approach between 2019 - 2025 to develop markets and businesses in three refugee hosting areas in Ethiopia - Jijiga and Dollo Ado in the Somali Region, and Gambella. Ethiopia is one of most vulnerable countries in the world to climate change and both regions are highly vulnerable to climate events which have a significant impact on displaced populations. Refugee settlements are regularly experiencing climate risks ranging from rising temperature, drought and flooding. This case study first explains the work SHARPE did to expand financial services and then draws on the research conducted for two separate research studies to assess the role financial services has in building climate resilience for these marginalised groups. Overall, SHARPE found climate resilience was strengthened by increasing income and assets through building a system for marginalised communities to run semi-commercial businesses. This is explored below.

SHARPE Overview: Programme approach to building resilience

SHARPE set out to develop markets in ways that were inclusive of refugees and marginalised host communities to ensure they could benefit and be linked to wider market systems and value chains. The programme focused on three main sectors; agri-businesses, solar energy and financial inclusion. Across these sectors SHARPE piloted and scaled interventions to create the conditions for the economic inclusion of refugees. SHARPE partnered with businesses which varied from large 'lead' firms with head offices based in large towns and cities, to regional SMEs, often based in the main regional town, to micro businesses, many of which are refugee-owned. In protracted refugee settings markets are very thin and often there is a shortage of or absence of market actors and commercial business activities, including financial services. As a result, SHARPE needed to provide hands-on support (more so than a typical MSD programme) to individual market actors to develop viable business models and build linkages to enable the market system to function. This approach was based on understanding the economic barriers refugee and host communities face, and working with key stakeholders – including businesses, financial institutions, government and service providers - to make markets work better for people in these regions. SHARPE conducted market analysis and offered support to market actors through technical assistance, capacity building and financing.

SHARPE was designed as a learning project to test whether an MSD approach would strengthen refugee resilience. This was one of the first times that MSD had been applied in a displacement setting, working in fragile and thin markets. The programme aimed to identify the most effective ways to increase the resilience of refugee and host community households, as well as the resilience of target market systems. This was measured through the following impact level indicators:

- The number of refugees and host populations experiencing income change from business income, greater or improved jobs/employment, increased savings on expenditure and/or an increase in the market value of individual liquid assets.
- The number of market systems which are more resilient.
- Additional aggregate net income change from all sources (i.e. income change, savings, employment, assets)

At the end of the programme SHARPE achieved its impact level target with 134,546 host and refugees having experienced an increase in income, savings and/or improved jobs (against a target of 125,000). Against the ICF criteria for adaptation, all 134,546 people reached at impact level can be considered to have stronger ability to adapt to climate change as a result of SHARPE, putting the SHARPE contribution to UK ICF KPI 1 as 132,030 people (as per June 2024 data).

SHARPE met its
goal, benefiting
134,546
hosts and refugees
with higher income,
savings, or better
jobs

SHARPE contribution to UK KPI 1

NUMBER OF PEOPLE SUPPORTED TO BETTER ADAPT	134,229
Male	90,957 (68%)
Female	43,272 (32%)

SHARPE also documented seven market systems as being resilient including digital financial services in the Somali region. The assumption was that by increasing income, savings and being able to participate in resilience markets would mean that marginalised groups of people would be able to better withstand climate and economic shocks.v

Building financial markets in Ethiopia

From the outset, SHARPE recognised the importance of financial inclusion for marginalised host and refugee communities. This was a critical service required to build markets across all sectors that SHARPE worked on. However, there were a significant number of barriers to achieving this. Refugees often face exclusion from traditional financial services due to factors such as limited documentation, lack of credit history, and unfamiliarity with local banking systems which hinders their economic integration. Host communities also encounter challenges accessing loans due to limited collateral options, uncertain repayment status, and perceived higher lending risk, resulting in a lack of financial support for business investments and livelihood improvement.

Women, particularly refugee women, face even more specific barriers that limit their participation in economic activities. These include limited freedom of movement, lower levels of formal education, unpaid domestic responsibilities, and exclusion from financial systems due to lack of collateral or business registration. With digital financial services, refugee households often own only one phone and SIM card, usually registered by a man, meaning that mobile money accounts are also usually registered in the name of a man, even though the account is often shared and used by women.

To address these challenges and increase financial inclusion, SHARPE worked to accelerate the expansion of Shabelle Bank's HelloCash mobile money platform into remote refugee settlements and enable people to take the first steps towards formal financial inclusion. To support the expansion SHARPE subsidised 100% of the salary costs and purchased mobile devices for the Shabelle Bank KYC (Know Your Customer) field team. The KYC team was responsible for promoting HelloCash; identifying, recruiting and training at least 300 new HelloCash agents (with a minimum target of 30% women); and onboarding local merchants and Bajaj drivers to allow them to receive payment digitally through HelloCash for their goods and services. To increase the physical presence, SHARPE also funded the opening of four sub-bank branches within refugee camps to increase access and improve liquidity for agents.

SHARPE support was intended to derisk expansion by covering the high cost of establishing an expanded agent network and providing cover against uncertain returns due to the low financial and technological literacy of the target groups. In exchange, Shabelle Bank covered the costs of promotional materials, agent toolkits and performance incentives. It also invested £200,000 to upgrade its infrastructure to manage up to 60 transactions per second, from 10 transactions per second, to meet its capacity needs. Together, SHARPE and Sh

To address low number of women using HelloCash accounts, SHARPE conducted research to better understand the challenge. The findings showed a combination of factors – lower literacy levels, a suspicion of mobile money, a perception that mobile money was 'just for rich people', and a fear that registering with an Ethiopian financial service provider would impact negatively upon their refugee status and entitlements. As a result of this research, Shabelle Bank adapted their marketing and promotional messages as a result, increasing enrolment among both women and refugees.

SHARPE also worked with Shabelle Bank to co-finance interest free business loans for 41 HelloCash mobile money agents. As refugees do not typically have fixed collateral such as a house or land, Shabelle Bank agreed to waive this requirement and accept the use of personal guarantors instead. This was a first for the bank. Within 6 months all 41 loan recipients had repaid, demonstrating the viability of the refugee market for micro-lending. However, while the appetite was there, it was not possible during the duration of SHARPE to fully introduce refugee business loans to the market. This was largely due to lengthy internal processes and the Ethiopian regulatory environment.

The results generated through the partnership with Shabelle Bank included:

- 68,075 active HelloCash refugee and host customers with increased cost saving
- 328 Active HelloCash Agents (refugee and host) with increased income change
- Total value of digital financial transactions conducted, £33,383,409.

Prior to SHARPE there were very few digital financial services available across the remote areas where refugees live. Due to the SHARPE investment in Shabelle Bank, mobile money services are now firmly embedded in refugee hosting areas across the Somali region. Since the first partnership with Shabelle in 2020, SHARPE observed the crowding in of other digital financial services providers in the refugee hosting areas of the Somali region. This included Sahay and E-birr. Shabelle Bank ultimately lost their market advantage, but the crowding in of other DFS providers meant that the refugee and rural host communities continue to have access to DFS.

The next section reflects on the broader impact of this intervention in building the financial ecosystem to support refugees and host populations respond to shocks.

The role of financial markets in achieving resilience

SHARPE conducted two separate in-depth pieces of research to determine whether the programme had achieved its vision in strengthening the resilience of marginalised host and refugee communities. Both studies explored whether the SHARPE interventions (including digital financial services) had in fact enabled refugees to be more resilient to shocks – climate and economic. The studies were:

1. **Building Resilience and Enabling Adaptation to Climate Change for Host and Refugee Communities: An Assessment of SHARPE (Warner 2024).**¹ SHARPE used a climate lens to review SHARPE's interventions and consider the climate risk of each intervention (e.g. the interventions may currently be economically sustainable, but would they be sustainable in a hotter, drier, and flooding environment), what could be done to strengthen adaptive capacity, and how these adaptation measures could be integrated into its interventions. This included the role of financial services in strengthening resilience.

Methodology: The study was conducted in May-June 2024 and included an in-depth climate risk assessment for Ethiopia (focusing on the climate risks to livelihoods in the Somali and Gambella regions) and a field visit to Dollo Ado in the Somali region. During the research interviews were conducted with the staff of SHARPE, UNHCR (Addis and in Dollo Ado), FCDO, and with programme partners from the private sector.

2. **Understanding Resilience within the context of SHARPE (Bekkers, Brady and Bekkers, 2025).**² This research assessed whether SHARPE's work in building market systems strengthened individual refugee households' resilience and their ability to cope with shocks. The study was designed to understand the ways in which different refugees, some supported by SHARPE and some not, managed their livelihoods and how they had responded to a specific shock. The country-wide suspension of food rations in mid-2023 was taken as the shock as it impacted all refugee households, allowing some consistency in researching different responses.

Methodology: The research used a case-study approach with the primary data source being 20 in-depth, semi-structured interviews with refugees who run businesses in two refugee camps, Awbare in Jijiga and Jewi camp in Gambella. The research examined which factors had influenced individual response, and whether SHARPE had played a role in strengthening these factors. The research was conducted between May – June 2024.



¹Climate Adaptation Resilience: An Assessment of SHARPE, Dr Katherine Warner (2024) – Available here: <https://dai-assets.s3.amazonaws.com/our-work/climate-adaptation-resilience.pdf>

²Understanding Resilience within the context of SHARPE, Nabanita Sens Bekkers, Anne Brady and Harald Bekkers (2025) –published in May 25.



Key Findings

Access to financial services was a cross-cutting theme in both study results. The key findings of these pieces of research have been combined to focus on the role of financial services and the broader eco system in building climate resilience in refugee and host communities.

Key finding 1: Climate adaptations are required for the businesses run by refugee and host communities, but this has financial implications and requires access to financial services

Agri-businesses are the main source of income across the SHARPE supported regions, particularly for marginalised rural communities. The trading of sheep and goats, and the keeping of poultry, plays an important role in household livelihoods in Ethiopia's Somali and Gambella regions. The practice is deeply rooted in local pastoralist culture and many households keep a small number of ruminants and fatten them for onward sale. It is a livelihood that is largely pursued by women across both regions. The climate assessment showed agri-businesses are at greatest risk from climate change, particularly poultry and goat businesses as the climate becomes drier, hotter, wetter and more unpredictable. Changing temperatures, rainfall patterns and the availability of food and water make keeping an animal more difficult and uncertain. To respond to climate poultry and livestock farmers will need to reduce their risk by making practical adaptations to farm infrastructure (e.g. climate resilient poultry and goat sheds). This is needed to reduce their vulnerability and increase their resilience to current and future climate scenarios.

However, climate adaptation measures will increase the costs of starting and running a business. For marginalised communities, this will create a barrier to refugee and host business owners who intend to start or expand their businesses. If individual businesses are unable to afford climate proofing measures, businesses will be less able to withstand climate shocks. This is particularly challenging when refugee business owners are not able to access finance products such as loans or insurance and are therefore especially vulnerable to shocks. This demonstrates the necessity of building a digital financial service eco-system alongside market-based interventions, critical in climate vulnerable regions. The absence of loan and insurance products for refugee populations is a key issue in helping them move out of poverty.

At the same time, the climate assessment argued that the approach used by SHARPE has strengthened climate adaptation by increasing income, assets, and diversifying livelihoods for refugee and host populations. The approach of building resilient market systems has improved the refugee and host communities abilities to adapt to climate change stresses, shocks and variability and/or helps reduce exposure to them (Warner, 2025). The work of SHARPE in increasing access to mobile money services was also vital to building resilience as it enables vulnerable populations to prepare for severe climate-related events and recover from them. The research found digital financial services contribute to adaptation by increasing accessibility, enhancing efficiency and the speed of transaction, and enabling the financial inclusion of refugees (Warner, 2025). Refugee and host business owners were able to save and send money efficiently. The use of mobile money platforms is also an important first step in generating a financial history, criteria used by financial institutions to determine whether or not to offer a loan to customers.

Key Finding 2: Resilience for marginalised communities is highly dependent on financial capital and this can provide the mechanism to respond to shocks. Very few refugee and host businesses have the capacity to self-finance semi commercial businesses without external support.

SHARPE found resilience for refugees, and the ability to respond to shocks, emerges from the interaction between the characteristics that refugees hold and the opportunities offered to them by the system in which they live. Research conducted by Bekkers et al. (2025) found resilience was built through an interplay among different



attributes and capacities that refugees possess (cultural capital, social capital and financial capital) but is highly dependent on whether the market in which they operate offers opportunities and the means to use those for income generation activities. Simply put, what matters is whether the environment in which the refugees operate is conducive to their growth. It is important to consider the following: whether refugees have access to inputs (including financial services) required for different businesses; whether refugees have entry-into markets to sell their products and services and whether refugees have access to work opportunities.

SHARPE learnt to build markets that refugees can participate in requires building both the system and providing a package of support to refugee/host business owners. This package of support needs to include ongoing technical assistance, linkages to local services and financing. Ultimately transitioning people into running the semi-commercial businesses that are needed to build resilience cannot be done through providing micro-credit in its usual forms; it requires active support.

The research showed refugees themselves generally do not have enough working capital and assets to invest in business models that can generate enough returns to reduce their dependence on humanitarian aid. The average value of such business investments (including time, capital, and inputs) typically amounts to USD 5,000 to start a profitable business. The findings determined that in best-case scenarios, refugees can contribute approximately 20% of the total investment required, setting aside the time that they need to invest. In worst case scenarios, they can contribute less than 5% of the investment required, mainly in the form of time and locally available materials. The more common form of lower-value microcredit is usually not sufficient to meet the capital requirements, but, if available, could help refugees save for a working capital buffer (Bekkers et al, 2025).

In summary, climate resilience emerges through building income for refugees to invest in semi-commercial opportunities. However, it is a challenge for refugees to generate the working capital to invest in running their own business. This is where SHARPE played a crucial role in providing the opportunities and support that people need to build their resilience while strengthening the system in which they can operate in a commercial manner. To scale the work of SHARPE and provide more commercial opportunities for refugee and host micro businesses, financial services need to be active in these communities to offer products to this market. SHARPE was able to demonstrate that there is a market for financial institutions in refugee hosting regions and create a crowding-in effect to further the impact of the investment in Shabelle Bank.



Policy Implications

The work of SHARPE has demonstrated the importance and necessity in financial inclusion for marginalised refugee and host communities. Access to financial services is a critical component of growing commercial businesses to increase the ability of marginalised communities to adapt to a changing climate. Donors and implementers should actively support financial institutions to better understanding refugee businesses and their barriers to growth.

In addition, donors and implementers can play a key role in de-risking the expansion of financial institutions to offer a wider range of products (including loans) to marginalised communities. As shown with SHARPE's experience in working with Shabelle Bank, by demonstrating the viability of the market there is a high likelihood of other financial institutions crowding in and therefore generating greater value for money for the funder.

While SHARPE has made a contributing to strengthening the financial eco system, there is still more work to be done in this space – in particular working with financial institutions to provide loans to refugee businesses.



Mozambique Case Study

Context and Programme Overview

In the face of accelerating climate change, the resilience of rural and marginalised communities in East and Southern Africa has been of growing concern. Mozambique, highly exposed to climatic risks such as tropical cyclones, droughts, and flooding, has also faced economic fragility due to past natural disasters and conflict. Mozambique's economy contracted significantly in 2020, with growth impacted by both the COVID-19 pandemic and the lingering effects of cyclones Idai and Kenneth in 2019. Rural livelihoods, particularly in agriculture, bore the brunt of these shocks. The country remains highly vulnerable to climate-related disasters, with estimates showing over 60% of its population at risk of being affected by weather events annually, and women faced with time poverty, shouldering the majority of the care burden, lack of documentation and agency over productive assets. Low-income earners are concentrated in subsistence agriculture, and cyclones have destroyed not just crops but significant rural infrastructure. Strengthening adaptive capacity in such contexts demands integrated solutions, including financial tools that help individuals manage risk and recover from shocks.

The Financial Sector Deepening Mozambique (FSDMoç, implemented by DAI between 2014 and 2021) programme represented a coordinated effort to enhance financial inclusion and stimulate market-based solutions for resilience, and implemented interventions across seven strategic areas: research and data analytics; digitalisation and innovation; inclusive insurance; financial education and digital literacy; alternative SME finance; green finance; and ecosystem-level policy support. Supported by the Foreign Commonwealth and Development Office (FCDO) and later IFAD and KfW, the primary objective of FSDMoç was to enhance financial inclusion and the accessibility of formal financial services, with a particular emphasis on women, youth, and rural low-income populations, as well as small enterprises that face challenges in obtaining appropriate and accessible financial services. The overarching aim was to provide a comprehensive array of quality financial services within a stable and competitive financial system.

Fundamental to the market system approach deployed by the programme was the focus on achieving systemic change. Grounded in the foundational philosophies of market systems, FSDMoç conducted an evaluation of the financial sector to identify instances of market failure, subsequently implementing sustainable and scalable interventions designed to address these deficiencies. In alignment with the market systems approach, the design of interventions was informed by selective criteria, notably including a gender lens. This process evaluated the potential of interventions to yield favorable gender outcomes, which encompassed the enhancement of equitable access to economic resources and the empowerment of women through technological means.

The approaches employed were shaped through an extensive assessment of the financial sector in Mozambique. Instances of market failure were carefully evaluated, and interventions were crafted with specific attention to the context of Mozambique in order to effectively resolve the market failures. The strategic intention behind the designed interventions was to establish causal pathways conducive to achieving the project outcomes while simultaneously fostering sustainable innovations. In pursuit of this objective, the ideation process synthesized best practices, successes, and lessons learned from both DAI and broader market systems in the realm of financial sector development. Moreover, pilot phases were incorporated into all interventions as a component of the market systems approach, enabling the adaptation of initiatives in response to evolving contextual dynamics.

This case study examines the programme learnings through the lens of resilience-building in vulnerable rural populations.

Fintech innovation, when paired with inclusive policies, digital infrastructure, and tailored products, can greatly boost financial inclusion and climate resilience in underserved communities. Mozambique's experience offers lessons for other climate-vulnerable African nations.

Methodology

This case study draws on the FSDMoç Final Report (2021), programme logframe achievements, and documented outcomes in programmatic publications such as Naughton and Brady (2022). Quantitative indicators are used to assess the reach and impact of key interventions, while qualitative data provides insights into policy and ecosystem-level developments. Analysis is framed around the three capacities of climate resilience: absorptive (coping with shocks), adaptive (adjusting practices), and transformative (shifting systems to reduce future risks).

Findings: Financial Services for Climate Resilience

This section highlights relevant learnings from three of the most impactful interventions identified from the programme: inclusive agricultural insurance using GIS technology, digital platform supporting MSME continuity, digital microinsurance for low-income households and finally the work done on addressing the wider policy ecosystem.

Inclusive Insurance products

The 2019 Mozambique Finscope Study (FSDMoç, 2019) conducted a comprehensive survey examining the financial behaviors of Mozambican adults aged 16 and above, focusing on their approaches to money management. The findings indicate that approximately fifty percent of the adult population in Mozambique encountered an unforeseen event that adversely affected their financial situation.

In response to this finding FSDMoç partnered with Hollard Insurance and Agritask to pilot a GIS-enabled (Geographic Information Systems) index crop insurance product for smallholder farmers with a deliberate gender-intentional product design. In the absence of a postal code system and a well-defined framework for rural and urban planning, GIS was employed to effectively geo-reference the study area with precision. By leveraging GPS coordinates, researchers are afforded the capability to independently access relevant data, such as precipitation levels or vegetation indices, thereby ensuring that the information pertains accurately to the designated geographical location. The data obtained was instrumental in enhancing the methodologies utilised by the insurance company for processing claims related to climate-induced risks, particularly within the agricultural sector. Although the integration of GIS data did not directly stimulate an increase in the adoption of crop microinsurance among farmers, it enabled Hollard Mozambique to offer more precise, customized, and notably more affordable insurance products, underpinned by the accurate data collected. The crop insurance product was therefore both digitally accessible and affordable, with coverage starting from USD 22 annually, and was explicitly adapted to the realities faced by women and other vulnerable members of the population: simplified terms, tiered premiums, and targeted rural outreach were used to engage female smallholder farmers and informal workers, many of whom lacked prior experience with insurance products.

This intervention represented a major contribution to climate risk financing and far surpassed the original targets of the project, covering 35,574 farmers who were registered via GIS, compared to the original goal of reaching 11,000. Importantly 50% of the 35,574 smallholder farmers mapped via GIS for index insurance were women, reflecting the success of deliberate targeting. The project, through commercial businesses, trained 101 individuals (aggregators and field agents) to support this insurance rollout. FSDMoç supported a public education campaign using folklore-based storybooks, increasing insurance literacy in rural communities - a key enabler of uptake.

This intervention was critical to enhance absorptive capacity by offering financial protection against climatic shocks and adaptive capacity by equipping insurers and farmers with climate-relevant data. The use of GIS was important as it enabled remote assessment and therefore timely claims processing after climate events, which ensured farmers were able to recover faster than through standard microinsurance products. The intervention implemented by Hollard facilitated a more expedient and efficient engagement with farmers by enabling remote monitoring from Maputo via satellite technology. This advancement effectively obviated the necessity for travel to isolated and rural regions, thereby mitigating the risk of COVID-19 transmission for both Hollard's supervisory personnel and the field officers, as well as the farmers themselves. Additionally, the deployment of a digital application streamlined the data collection process by eliminating the requirement for physical completion of forms by smallholder farmers. The incorporation of a GIS platform for data collection has not only decreased the operational costs associated with the system but also enhanced its scalability. This stands in contrast to traditional insurance methodologies, which necessitate physical presence—specifically farm visits—to evaluate premiums and claims. Furthermore, these products provided not just financial protection, but also a foothold into broader digital financial ecosystems as smallholder farmers now have a credit history — laying the groundwork for future access to credit and asset finance.

Digital platforms to support entrepreneurs and the MSME continuity

DAI's programmatic experience has shown entrepreneurship depends on the support of business support services. Again, digital financial services (DFS) have a role in ensuring inclusive access to services. FSDMoç worked on introducing digital platforms to support MSME (micro, small and medium enterprises) continuity through climate



shocks. To address the compounded impact of climate vulnerability and COVID-19 on informal and micro-enterprises, FSDMoç supported the development of the WELELA digital marketplace and partnered with SOMA, a digital savings group platform. The platform facilitates both formal and informal MSME's in subscribing to e-commerce packages that effectively display their companies, products, and services to a diverse clientele throughout Mozambique. Furthermore, it enhances access to potential business opportunities. This initiative specifically aims to promote the engagement of women and youth, thereby enabling MSMEs to navigate and surmount prevalent obstacles to their growth.

573 MSMEs adopted the WELELA platform across five provinces (Maputo, Sofala, Zambezia and Nampula) primarily women and youth led businesses due to deliberate targeting, and 356 savings groups were registered on SOMA with 43% of new members being women. These groups served a dual role: strengthening community-level shock buffers and offering women a gateway to formal financial services.

The WELELA digital marketplace supported MSMEs — 88 of 122 trained participants were women — to transition their businesses online during the COVID-19 pandemic. By removing geographic and social barriers to trade, the platform helped reduce the risk of business closure during shocks and introduced women entrepreneurs to e-commerce and digital payments, which are critical to resilience in an increasingly volatile climate. By enabling business continuity, WELELA increased adaptive capacity and market access for vulnerable entrepreneurs - a critical need in rural and peri-urban economies affected by climate variability. WELELA also noted that the pilot helped businesses become more confident in using digital services in their daily operations. This increased familiarity with DFS should be seen as a key factor in enabling further support and expansion for businesses throughout Mozambique. Critical to being able to increase impact was that businesses were able to digitise operations, maintain sales and access mobile payments during lockdowns and climate disruptions.

Across both WELELA and SOMA, the FSDMoc programme approach recognised that digital inclusion was not automatic, and therefore each product rollout included targeted financial literacy campaigns tailored to women and youth. The partnerships delivered financial education alongside product rollout, targeting low-income women in rural Mozambique with accessible messaging and local promoter networks. This dual strategy — product and pedagogy — was critical in driving adoption and building trust.

Delivering mobile money solutions: Vodafone M-Pesa and Paycode

FSDMoç also established a partnership with Vodafone's M-Pesa mobile solution to enhance the adoption and utilization of DFS within rural communities. A crucial element of this initiative was the implementation of a financial literacy campaign specifically aimed at women and youth. Adopting a gender lens approach, the project emphasised the importance of comprehensively understanding the requirements associated with effectively targeting these demographics and devising promotional activities that maximise outreach potential. The provision of financial training was deemed essential to facilitate the uptake of these services among individuals with limited financial literacy. Furthermore, capacity building and employment training initiatives were undertaken for field staff (promoters) to ensure the effective deployment of the program in hard-to-reach regions. This collaboration seeks to promote the utilisation of mobile money services among microenterprises, primarily informal traders, as well as low-income households in both rural and urban settings.

A significant area of focus for the project was in Cabo Delgado, which had an ongoing Islamic insurgency since 2017. The advancement of mobile technology enabled the government to enhance its capabilities in channeling payments to internally displaced persons (IDPs). In the face of escalating uncertainties and mounting challenges faced by vulnerable populations, the increased adoption of mobile money solutions was essential.

An illustrative case of the potential for fintech to enhance responses to displaced populations was the collaboration between FSDMoç and Paycode. Paycode is a fintech entity that integrates biometrics, payment systems, and data analytics within a singular financial product. However, the use of biometric data often raises concerns in the context of developing economies; consequently, Paycode devoted significant effort to establishing robust data protection protocols. Additionally, the company developed comprehensive communications strategies to reassure clients regarding the security of their biometric information and to articulate the benefits of its approach, thereby

fostering trust.

Critically, the system operates offline in real-time, an essential feature for areas with sporadic connectivity and where vulnerable groups may lack financial resources to access data. By utilizing its Electronic Data and Payment Technology (EDAPT) system, Paycode aided the National Institute of Social Action in disbursing social payments to beneficiaries across three districts in Gaza province. In conjunction with facilitating the introduction of the EDAPT system, FSDMoç conducted financial literacy training aimed at beneficiaries to enhance their understanding of personal and banking finances.

Such interventions hold promise for promoting inclusion among low-income and displaced communities. Moreover, the employed technology is particularly relevant in humanitarian crises, as it encompasses digital onboarding processes, allowing for the categorisation of beneficiaries based on their distinct needs. This capability can facilitate more efficient allocation of resources by governments and donors. Nonetheless, the sensitivities associated with the collection of digital ID necessitate effective communication strategies, meticulous management, and robust legislative frameworks to uphold public confidence.

One critical insight derived from the development of these products is that the expansion of mobile penetration in rural and unstable regions enhances the precision of humanitarian responses. The initial investments made these technologies better position governments to react effectively to climate shocks and other emergencies. While DFS does enhance access for vulnerable populations, findings from FSDMoç underscore the necessity of integrating financial literacy training to maximise the impact of these initiatives.

Discussion: From Project to Policy

Despite positive progress in Mozambique, firms continue to face a range of challenges in implementing DFS —many of which are relevant across other contexts. Virtual client experiences offer clear advantages for emerging DFS providers, such as lower overheads and broader outreach. However, building a client base requires overcoming barriers related to trust, safety, and perceived risk. Without a physical presence, online customer service demands increase, and users expect digital interactions to match the quality of in-person support, which direct financial literacy training and bespoke productisation can help reach these vulnerable markets. Insurance, traditionally inaccessible to those experiencing extreme poverty or unstable incomes, is becoming more inclusive through microinsurance products delivered via digital platforms and provide a critical safety net for farmers. These innovations are also helping to address gender-based access constraints. A gender-intentional approach included targeted rural messaging campaigns with clear, simple content explaining the benefits of microinsurance, alongside pricing strategies designed to ensure affordability for women. This highlights the importance of tailoring financial products to meet the needs of low-income individuals, particularly those with limited financial literacy. The online marketplace provided a critical digitalisation of businesses and supply chains which promotes resilience through climate disasters and disruptions and allows for the continuous flow of trade. Furthermore, mobile money solutions require tailored financial literacy and mobile money agents to reach rural communities.

While FSDMoç has not tracked direct impacts on income or food security among vulnerable groups, end line project figures show promising reach: over 1 million previously excluded individuals are now using financial services, and more than 1.7 million people (36% women) have been reached through financial literacy and awareness campaigns (FCDO, 2020).



The FSDMoç experience provides evidence for several key policy implications:

Ensure Climate Risk Financing is a Core Pillar of Financial Inclusion Policy: Agricultural insurance using GIS mapping, as piloted by FSDMoç and Hollard, shows that climate risk can be underwritten at scale when digital tools are embedded, as well as the capacity for education and tailored products to reach underserved and vulnerable populations. Policymakers could i) integrate climate-smart financial products (e.g., weather-index insurance) into national agricultural development and resilience strategies ii) Subsidise premiums or offer smart incentives for uptake, especially in climate-exposed districts and/or iii) Build insurance literacy through product curriculum inclusion and extension services.

Prioritise Digital Ecosystem Development as a Resilience Enabler: Digital infrastructure (e.g., WELELA, SOMA and MóvelCare platforms) was central to maintaining economic activity, expanding financial access, and delivering social protections during shocks, and ensures business continuity through climate disasters. The expansion of DFS and mobile penetration into rural areas and regions opened up opportunities for other messaging synergies to be explored. To build resilience through DFS, policies should support affordable, high-quality digital infrastructure wherever possible (mobile coverage, interoperability) ii) Focus on using mobile operators and use tiered know your customer (KYC) policies to onboard low-income, ID-poor individuals, particularly in rural areas. This not only will benefit the rollout of initial products and digitised businesses, but also provide a foothold into broader digital financial ecosystems — laying the groundwork for future access to credit and asset finance. Digitalisation of physical payments gives the opportunity for increased ability to target unbanked and informal sector recipients in a more timely, secure, and cost effective manner (Agur et al., 2020).

Gender and social inclusion must be central to both digital inclusion and tailoring products. Policies must incentivise the active design products that address systemic exclusions and support women's empowerment in climate adaptation. DFS when designed with a gender lens, are powerful tools for reaching women, particularly in rural areas where exclusion from formal systems is pronounced. Their field analysis from the FSDMoç programme supports this proposition, demonstrating that DFS — including microinsurance, savings platforms, and digital payments — can act as resilience levers for women by overcoming barriers of mobility, documentation, and time poverty. Without this deliberate design, DFS risks replicating structural inequalities. But when deployed with a gender-aware strategy, DFS can shift not only economic outcomes but social norms, offering women greater control over financial decision-making.

Conclusion

Fintech companies possess significant potential to transform traditional financial service paradigms through enhanced efficiencies and the reduction of operational costs. When compared to other African nations, such as Kenya, South Africa, and Ghana, Mozambique's financial ecosystem remains comparatively underdeveloped. This disparity is reflected in the low levels of financial inclusion, particularly in rural regions where access to financial services is markedly limited.

This case study shows that financial services — when inclusive, adaptive, and embedded within supportive ecosystems — can substantially enhance the climate resilience of marginalised communities. FSDMoç's work in Mozambique highlights both the promise of innovation and the importance of systemic support through tailored products, effective partnerships with innovative businesses, and the importance of a digital infrastructure ecosystem. Future policy work should seek to ensure climate risk financing is a core pillar of financial inclusion policies and effectively tailored to reach the most vulnerable communities in rural and informal market segments. Policies should also focus on ensuring the rollout of digital financial infrastructure as this is critical to ensure resilience through climate shocks through effective platforms and digitalisation. Finally, policies should seek to encourage financial service providers to proactively tailor products towards women which can result in significant uptake of products and increased resilience amongst some of the most marginalised populations. Mozambique's journey offers replicable lessons for other climate-vulnerable nations in East and Southern Africa.





Nguriza Nshore shows that achieving financial inclusion in underserved markets requires empathy, collaboration, and context-driven innovation. Its success in Rwanda is a global call to build systems that treat marginalized communities as partners in shared prosperity.

Rwanda Case Study

Unlocking Inclusive Finance: Lessons from Nguriza Nshore's Journey into Rwanda's Underserved Markets

When the USAID funded and DAI implemented Rwanda Nguriza Nshore Activity was launched in 2018, it addressed a persistent and long-standing paradox: despite the vibrancy, resilience, and potential of Rwanda's rural and underserved markets, these areas remained largely excluded from formal financial systems. Through a five-year journey, Nguriza Nshore reshaped how financial institutions engage with these communities and demonstrated that financial inclusion is not only possible — it's critical for sustainable economic growth, equitable development, and long-term prosperity.

At the heart of this success story lies a fundamental truth: understanding the needs of underserved customers requires more than good intentions. It demands intentionality, active investment in engagement, dedicated resources, and a willingness to collaborate across institutions, sectors, and communities. This case study sets out the lessons learned and the importance of designing appropriate financial products to build resilience in marginalised communities.

The Underserved: A Market Hiding in Plain Sight

Across Rwanda, millions of smallholder farmers, rural entrepreneurs, women-led businesses, youth enterprises, and persons with disabilities make up a sizable but overlooked market. Though they are geographically present—operating in towns, villages, and districts where financial institutions also exist—they are often excluded due to being perceived as too risky, too costly to serve, or too complex to integrate into mainstream financial products.

Nguriza Nshore challenged this perception by taking a different approach. It demonstrated that the underserved are not financially illiterate or uninterested—they are simply underserved by design. They lack products tailored to their realities and are often subject to processes that assume urban, salaried, and well-documented borrowers.

Through its work with financial institutions such as RIM (Réseau Interdiocésain de Microfinance) and AMIFA, Nguriza Nshore helped redesign product offerings to reflect the specific needs of agribusinesses and rural entrepreneurs. For example, RIM went through a complete overhaul of its agribusiness strategy, integrating agricultural seasonality, risk assessments, and client feedback loops into its operations. The result? A sharp increase in agricultural lending (from 20% to 37% of their portfolio), a drastic reduction in non-performing loans (from 11% to 3%), and a surge in female borrowers, who eventually made up 61% of the client base for their agribusiness products.

These successes underline the importance of customer-centric design and the need for financial institutions to build internal capacity and dedicate resources to understand and serve underserved markets.

Collaboration Takes Time—but Yields Deep Impact

Engaging underserved markets isn't just a product development challenge —it's a relationship-building one. One of the clearest lessons from Nguriza Nshore's journey was that collaboration—whether with banks, microfinance institutions, government ministries, or donors—takes time, mutual trust, and a shared vision.

Financial institutions, especially those with limited exposure to informal or rural markets, are understandably cautious. Without clear proof of commercial viability, many are reluctant to commit resources to unfamiliar clients. To bridge this gap, Nguriza Nshore emphasised the value proposition of inclusion.

By providing technical assistance, embedded advisors, and market intelligence, Nguriza Nshore helped institutions understand the business case for underserved market engagement. It wasn't just about doing the right thing—it was about doing

smart business. For example, Cogeбанque, one of the programmes early partners, received strategic support and embedded advisory services to help build its SME lending capacity. This led to new policies, improved risk management procedures, and eventually, a \$7 million portfolio guarantee from the U.S. Development Finance Corporation (DFC).

Simultaneously, the programme highlighted the development impact benefits of inclusion—such as job creation, improved household incomes, and food security—as complementary to commercial value. These outcomes enhanced institutions' CSR profiles, improved their standing with donors and development finance institutions (DFIs), and made them more attractive to downstream capital and partnerships. Nguriza Nshore's communications strategy actively amplified these impacts, helping financial institutions market their new initiatives as both profitable and socially impactful.

De-risking: Enabling Smart Risk-Taking

In emerging markets, perceived risk is often a bigger barrier than actual risk. With limited information and few reference points, lenders fall back on collateral-heavy models that automatically exclude informal businesses and rural entrepreneurs. Nguriza Nshore disrupted this cycle by deploying de-risking instruments to lower the initial exposure of financial institutions while helping them build their internal capabilities.

Over the life of the programme, more than \$13 million in guarantees and concessional financing was facilitated. The Business Development Facility (BDF), for example, became a critical conduit for the Economic Recovery Fund during the COVID-19 pandemic, supported by Nguriza Nshore's embedded advisor, capacity building efforts, and communication tools. Savings and Credit Cooperative Organizations or Societies (SACCOs) were trained on using these funds, eventually disbursing over \$8.5 million in agriculture-related loans. Importantly the quality of these loans remained high, with BDF reporting improved portfolio performance and lower non-performing loans.

Crucially, de-risking was not treated as a permanent solution, but as a stepping stone. It allowed financial institutions to learn by doing—building familiarity with new market segments while managing risk. As institutions grew more confident, many began scaling their outreach independently, signaling systemic change.

Risk Profiling and Satellite Data: Innovation at Work

Nguriza Nshore also understood that access alone isn't enough. Finance must be appropriate, and risk must be accurately priced. This is especially true in agribusiness, where risks related to weather, crop failure, and price volatility are high. In many cases, rural borrowers are charged disproportionately high premiums due to broad, generalised risk assessments. To change this, Nguriza Nshore encouraged the use of advanced data tools like satellite imagery and behavioral analytics. These tools allowed institutions to assess climate and crop risk more precisely, improving the viability of micro crop insurance and enabling more affordable financing.

This convergence of risk profiling and innovation enabled the design of more responsive and flexible financial products, which were better matched to borrower realities and more sustainable for lenders.

Infrastructure and Relevance: No One-Size-Fits-All

As impactful as product design and de-risking may be, they are not sufficient without the appropriate delivery channels. Nguriza Nshore discovered that trying to reach underserved markets without bespoke products and supporting infrastructure—such as mobile money, agent banking, or rural distribution models—is a recipe for failure.

Clients in rural areas often lack consistent internet access, smartphones, or even proximity to a bank branch. Traditional banking models are too rigid and expensive to reach them effectively. That's why the programme worked with innovative firms like Jali Finance, which developed asset-financing solutions tailored to the informal sector. By aligning payment terms with income flows—for example, daily moto-taxi revenue—Jali allowed clients to afford motorcycles and repay loans without distress.

Such models weren't only financially viable, they were transformative. Clients went from renting vehicles to owning them, increasing their income and agency. This highlights how understanding behavioral patterns and income cycles can inform better product design and drive inclusion.

Policy Reform and Ecosystem Support

In addition to testing new models, Nguriza Nshore worked at the policy level to ensure financial inclusion was not just a private sector initiative but a national priority. The programme played a central role in the development of Rwanda's Entrepreneurship Development Policy (EDP), a landmark framework to support SMEs. This effort included inclusive consultations, policy drafting support, and eventual cabinet approval.

Nguriza Nshore also advised on the design and deployment of the Economic Recovery Fund during the pandemic, ensuring that relief reached small enterprises quickly and efficiently. These policy interventions not only enhanced the enabling environment for inclusion—they demonstrated how public-private collaboration can create rapid, adaptive responses to crisis.

Moreover, Nguriza Nshore actively worked with associations like the Rwanda Chamber of Women Entrepreneurs (RCWE) and the Rwanda Youth in Agribusiness Forum (RYAF) to train hundreds of SMEs in financial literacy, investor engagement, and business planning. These workshops, delivered both in person and virtually during the pandemic, equipped entrepreneurs with the tools to access finance and grow.

Sustaining the Momentum

While the numerical results—over \$64 million in commercial finance facilitated, \$34.7 million in investment mobilized, and more than 41,000 jobs created—are impressive, Nguriza Nshore’s legacy lies in its structural impact.

It didn’t just help institutions serve underserved clients; it helped them transform. Financial institutions adopted new mindsets, shifted operating models, and began to view underserved markets not as charity cases, but as legitimate business segments with strong growth potential.

This systemic change is perhaps the most important outcome. The market is no longer dependent on project funding or donor subsidies—it is becoming self-reinforcing, with institutions increasingly taking initiative to expand, innovate, and deepen their outreach. The impact of this means underserved and marginalised communities are better able to respond to climate and economic shocks through access to finance.

Conclusion: A Blueprint for the Future

Nguriza Nshore offers a powerful example of how to unlock financial inclusion in complex, underserved markets. It teaches us that:

1. **Understanding clients requires investment**—in data, in empathy, and in engagement.
2. **Collaboration is essential**—but it must be nurtured with patience, value alignment, and shared incentives.
3. **De-risking is not a giveaway**—it’s an accelerator of trust, experimentation, and systemic change.
4. **Innovation must be contextual**—technology and data are tools, but infrastructure and behavior are the foundation.
5. **Inclusion is a national priority**—policy support, ecosystem development, and institutional alignment are crucial for scale.

In conclusion, Nguriza Nshore’s journey isn’t just about what happened in Rwanda—it’s a call to action for development practitioners, governments, and financial institutions across the globe. Financial inclusion is possible even for those in rural and marginalised communities. But this can only happen when we build the right systems, ask the right questions, and commit to seeing underserved markets not as problems to be solved—but as partners in a shared prosperity.





Overall Conclusions and Policy Implications

The three case studies in this paper are effective in drawing three overarching conclusions and policy implications:

Firstly, rural populations that depend on agriculture are extremely vulnerable to climate risk, and it is more expensive to climate proof new businesses.

Additional financing, applied at the right level and right time in the supply chain can help reduce that vulnerability.

Climate-proofing interventions, such as the construction of livestock shelters for pastoralists, are essential in helping rural communities adapt to the growing threats posed by climate variability. These measures protect agricultural assets from extreme weather events and reduce the long-term vulnerability of smallholder farmers.

In parallel, microinsurance and crop insurance serve as vital safety nets, offering financial protection to rural households that risk losing their entire incomes and livelihoods due to climate shocks. Beyond agricultural losses, microinsurance also provides a buffer against unexpected financial pressures, such as medical expenses—often exacerbated by climate-induced health issues, food insecurity, or displacement. Recent advancements in the use of satellite data to map climate risks have significantly reduced the operational costs of insurance provision and enabled timely, automated payouts. For example, providers such as Hollard have demonstrated how technology can increase the efficiency and accessibility of these products.

Equally important is the use of mobile technology and agent networks to expand outreach in rural areas. These channels play a critical role in raising awareness, building trust, and stimulating demand for financial products in underserved markets. This was a key learning across each case study.

Finally, the digitisation of business operations and agricultural supply chains enhances overall resilience by facilitating continuity in trade and transportation. During

periods of disruption—such as lockdowns or climatic events—digital systems allow commerce to persist through online platforms and digital payment mechanisms, helping rural economies remain functional in the face of crisis.

Secondly, mobile/agent banking infrastructure and digital financial services ecosystems around market systems have proved important for rural populations including farmers, refugees and agribusinesses to access microloans or insurance to set up climate resilient measures. They enhance accessibility, speed of transaction and financial inclusion and provide critical low-cost models to reach last mile in populations in climate vulnerable regions. Financial institutions need to be further supported to offer suitable loan products to support the start-up of commercial businesses. As shown in the case of SHARPE, the increase in income and assets then enables vulnerable populations to have the mechanisms to cope with a range of shocks.

And finally, financial institutions need support and resources to help understand this customer base and collaboration takes time. To successfully engage financial institutions in serving rural and underserved markets, it is essential to build a strong business case and clearly articulate the value proposition. While the developmental impact of reaching these markets may be considered a secondary benefit by commercial actors, it contributes positively to their corporate social responsibility (CSR) profile and can enhance their appeal to development finance institutions (DFIs) and international investors seeking social returns alongside financial ones.

However, efforts to expand into underserved areas are unlikely to succeed without tailored product offerings and adequate delivery infrastructure, such as mobile and agent banking networks. Rural and capital-constrained populations have distinct needs that cannot be met through standardised financial products. Product design must be context-specific—culturally appropriate approaches, such as using traditional storytelling methods, have proven effective in communicating the relevance of tools like crop insurance and in raising awareness of climate risks.

Improving market engagement also depends on accurate risk profiling and the use of de-risking mechanisms. Instruments such as portfolio guarantees can reduce the financial exposure of institutions venturing into new markets, allowing them to allocate capital more confidently to previously excluded clients. The integration of satellite data, for example, enables more precise assessments of climate risk in agribusiness, helping to avoid overestimating premiums and deterring potential borrowers.

To conclude, the scale of microcredit currently available is often insufficient to support meaningful livelihood transformation, particularly among refugee populations. Evidence indicates that loans in the range of \$5,000 are necessary to move individuals beyond humanitarian aid dependency. This highlights the need to establish a financial ecosystem that can offer viable economic opportunities for marginalised populations, enabling them to build long-term resilience to climate shocks.

References

- Climate Adaptation Resilience: An Assessment of SHARPE, Dr Katherine Warner (2024), Available here: <https://dai-assets.s3.amazonaws.com/our-work/climate-adaptation-resilience.pdf>
- Understanding Resilience within the context of SHARPE, Nabanita Sens Bekkers, Anne Brady and Harald Bekkers (2025) – published in May 25.
- FSDMoç (2021). Final Report FY June 2020 – December 2021. Financial Sector Deepening Moçambique.
- FinScope Mozambique (2019). Consumer Survey Report.
- EED Advisory & FSDMoç (2021). Green Finance Roadmap for Mozambique (2021–2030).
- FSDMoç (2020). Mozambique Gender Dashboard.
- Naughton, J. and Brady, A. (2022) Building resilience to crisis through digital financial services with a gender lens. Enterprise Development and Microfinance, 33:1, 28–44

www.dai.com

f **🐦** **in** **@** @daiglobal