FARMER RESILIENCE AND REBUILDING INITIATIVE - CABO DELGADO, MOZAMBIQUE (FRRI - CD)
IMPACT EVALUATION REPORT

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EXECUTIVE SUMMARY

The Farmer Resilience and Rebuilding Initiative in Cabo Delgado (FRRI CD) aimed to address the pressing challenges faced by smallholder farmers (SHFs) and internally displaced persons (IDPs) in Cabo Delgado, Mozambique. Supported by USAID's Bureau for Humanitarian Assistance (BHA), this initiative employed a market-based approach to tackle food insecurity, enhance agricultural productivity, and mitigate economic vulnerabilities. With a market based approach, the program introduced digital business and financial tools, comprehensive agricultural training, and innovative technologies to strengthen food security, boost agricultural incomes, and foster community.

+/- 1.700 People lifted out of poverty

One of the most significant achievements of the FRRI CD initiative was the measurable reduction in poverty among its participants. At the start of the program, 60.8% of beneficiaries were living below the international poverty line of $1.90 per day. By the conclusion, this number had dropped to 45.9%, reflecting a substantial improvement in economic well-being, lifting out of poverty +/- 1,700 people. This progress was largely driven by increases in agricultural revenues and improved access to markets, as evidenced by statistically significant reductions in poverty risk among participants compared to control groups.

REDUCTION IN **SEVERE** FOOD INSECURITY

66% → **53%**
Baseline — Endline

17% → **37%**
Baseline — Endline

TRANSITION FROM SEVERE FOOD INSECURITY TO **MODERATE** FOOD INSECURITY

Food security also saw remarkable improvements. Severe food insecurity among households decreased significantly, falling from 66.1% at baseline to 53.1% at endline. Concurrently, households experiencing moderate food insecurity increased from 17.3% to 37.0%, signaling a shift away from more severe conditions. Dietary diversity also improved, with a growing number of households consuming six or more food types by the program's end. These achievements were confirmed through the Household Food

Insecurity Access Scale (HFIAS), which recorded a statistically significant reduction in food insecurity levels for program participants.

AVERAGE AGRICULTURAL
REVENUE INCREACE

82%

Per Household

Agricultural productivity and revenues experienced notable gains due to the initiative's targeted interventions. The average agricultural revenue increased by approximately 82% per household, bolstered by widespread adoption of improved farming practices, which reached 99% at the endline compared to 75% at baseline. High-value crops, such as sesame and cassava, played a pivotal role in driving revenue growth, with sesame revenues alone increasing by over 200% during the project period. Furthermore, enhanced market access—a cornerstone of the program—saw 63% of farmers reporting easy access to markets at the endline, a significant increase from 35% at baseline. Input trade fairs and strengthened local markets contributed to these outcomes, creating sustainable pathways for economic growth.

In conclusion, in only two years the FRRI CD initiative has demonstrated its effectiveness in building resilience and promoting economic stability in Cabo Delgado. By addressing critical vulnerabilities and empowering communities with the tools and knowledge needed for long-term success, the program has set a strong foundation for continued progress. Sustained efforts and strategic investments in these approaches will be essential to ensuring lasting impacts for the region's most vulnerable populations.

INTRODUCTION

CONTEXT

Cabo Delgado, a northern province of Mozambique, is experiencing a multi-faceted crisis shaped by natural disasters, socio-political instability, and economic hardship. Over recent years, the region has been severely impacted by climate-related shocks, including Cyclone Kenneth, which disrupted agricultural productivity and destroyed critical infrastructure. Additionally, an ongoing armed insurgency has caused widespread displacement, with nearly 732,000 internally displaced persons (IDPs) seeking refuge in safer southern districts. These displaced populations place further strain on host communities, which already face high poverty rates and limited resources. According to recent assessments, approximately 840,000 people across Cabo Delgado, Niassa, and Nampula provinces face severe food insecurity, with many households unable to access basic needs due to disrupted livelihoods, scarce agricultural inputs, and limited market access.

The socio-economic challenges are compounded by limited infrastructure, poor road networks, and a lack of coordinated support for market access and resilience-building, especially for smallholder farmers (SHFs) who constitute most of the agricultural workforce. These SHFs, particularly women, youth, and marginalized groups, encounter barriers to accessing quality inputs, extension services, and reliable markets for their produce. In this challenging context, there is an urgent need for sustainable interventions that go beyond emergency aid, focusing on building market resilience, empowering local actors, and enhancing the productive capacities of both IDPs and host communities. The Farmer Resilience and Rebuilding Initiative in Cabo Delgado (FRRI CD) addressed these needs by employing a market-based approach that integrates agricultural support, training, and digital financial tools to rebuild and sustain livelihoods.

PROGRAM OVERVIEW

The FRRI CD, led by iDE, was conceived in response to the compounded challenges facing communities in Cabo Delgado (districts of Chiure, Mecúfi, and Namuno), Mozambique. This region has been critically impacted by a combination of climate events, socio-political instability, leading to widespread displacement and a significant strain on local resources. Mozambique is recognized as the third most vulnerable country globally to disaster risks, with Cabo Delgado among the most severely affected provinces. This situation has disrupted agricultural activities, deteriorated livelihoods, and limited access to markets, significantly

increasing food insecurity and economic vulnerability among smallholder farmers (SHFs) and internally displaced persons (IDPs[1]).

The goal of the FRRI CD was to strengthen the resilience of 11,250 farmers and 55 rural entrepreneurs in Cabo Delgado - focusing on women, youth, and marginalized groups - by enhancing their capacity to withstand and recover from socio-economic and environmental shocks. The initiative aimed at enhancing resilience through a market-based approach that addresses both immediate recovery and long-term development needs. Through providing SHFs and IDPs with access to quality agricultural inputs and training, the initiative aimed to restore and bolster agricultural productivity, foster income generation, and improve food security. This project also introduced innovative technologies, including digital payment and NFC-based voucher systems, which facilitate input acquisition at Input Trade and Technology Fairs (ITTFs) and iDE to monitor market dynamics in real-time. Farmer Field Schools (FFS) are also integral to the project, providing training to SHFs on improved and regenerative agricultural practices and promoting the adoption of climate-resilient, high-value crops.

In collaboration with USAID's Bureau for Humanitarian Assistance (BHA), FRRI CD adopted a layered approach to achieve sustainable market linkages and foster resilience across multiple levels, from individual households to broader market ecosystems. This approach not only addressed immediate food security needs but also built a foundation for long-term economic growth, supporting the transition from dependency on aid to self-reliance and stability.

Ultimately, FRRI CD sought to establish a resilient market system that equips communities with the skills, resources, and connections to thrive independently, contributing to a more sustainable and inclusive development trajectory for Cabo Delgado.

This impact evaluation seeks to assess the initiative's effectiveness in meeting its objectives by analyzing quantitative and qualitative data from baseline and endline assessments, along with insights from focus group discussions and key informant interviews. This evaluation not only examines the project's success in improving food security, income, and agricultural outcomes but also identifies areas for further development to ensure long-lasting resilience in Cabo Delgado.

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[1] Internally displaced people, referred to as IDPs, have been forced to flee their homes by conflict, violence, persecution or disasters, however, they remain within the borders of their own country (UNHCR, 2024).

FRRI Indicator Tracking Table (ITT)- Outcome

Subsector	BHA Indicator	Indicator Title	Baseline Value	Endline Value	% Change
Goal: Increase Resilience for smallholder farmers, particularly women and youth, in Cabo Delgado province					
Intermediate Outcome: Rural farmers are better equipped (material & knowledge) & with increased / improved agricultural production					
Improving Agricultural Production	A02	A02: Number of hectares under improved management practices or technologies with BHA assistance	**Total: 642.5;** Maize: 290.4; Groundnuts: 88.9; Cowpeas: 84.9; Cassava: 69.2; Sesame: 78.7;	**Total: 1,031.0;** Maize: 435.9; Groundnuts: 125.2; Cowpeas: 64.7; Cassava: 152.1; Sesame: 205.0	**60.5%** 50.1% 40.7% -23.8% 119.8% 160.4%
Improving Agricultural Production	A03	A03: Number of individuals who have applied improved management practices or technologies with BHA assistance	**Total: 357;** Female: 178; Male: 179	**Total: 519;** Female: 259; Male: 260	**45.4%** 45.5% 45.3%
Pests and Pesticides	A12	A12: Percent of individuals who received training who are practicing appropriate crop protection procedures	**Total: 16;** Female: 7; Male: 9;	**Total: 51;** Female: 23; Male: 28	**35 (% Points)** 16 19
Pests and Pesticides	A10	A10: Number and percent of hectares protected against disease or pest attacks	**# 14.24;** **% 16.3:**	**# 352.7;** **% 44.2;**	**2376.8%** **27.9 (% Points)**

METHODOLOGY

EVALUATION QUESTIONS

Following the Organization for Economic Cooperation and Development's Development Assistance Committee (OECD-DAC) criteria, the impact evaluation assessed to which extent the FRRI Program interventions are relevant, effective, efficient, impactful, and sustainable. These criteria collectively examine how well the project aligns with the needs of the communities in Cabo Delgado, the extent to which it achieved intended outcomes, how effectively resources were allocated and coordinated, the impact on beneficiaries' livelihoods and the long-term sustainability of its interventions.

Criteria	Question
Relevance	● Are the project interventions appropriate solutions to address the root causes of the problem? ● Have project interventions contributed to building resilience in the communities?
Effectiveness	● To what extent has the project contributed to the intended outcomes? ○ If so, why? ○ If not, why not? ● What can be done to make the project more effective?
Efficiency	● How might the different intervention elements be better aligned and coordinated to gain efficiency in the project implementation?
Impact	● What changes in beneficiaries' livelihoods have been generated by project interventions?
Sustainability	● Are the changes, if any, likely to last?

APPROACH

To answer the research questions, this evaluation followed a quasi-experimental, participatory and mixed methods approach. To understand FRRI's impact, a difference-in-difference methodology was employed to compare changes in impact, outcome and output over time (baseline versus endline) between FRRIs beneficiaries (treatment group) and a population (control group) not benefiting from the program interventions.

Quantitative and qualitative data were combined to provide a comprehensive assessment of the project's impact on smallholder farmers' (SHFs) livelihoods. The purpose of this evaluation is to validate the project's theory of change and assess progress on key indicators, including household income, agricultural productivity, food security and resilience. This methodology integrates both a quantitative survey and qualitative discussions to capture the experiences, attitudes, and outcomes of project participants, allowing for an in-depth understanding of how project interventions have affected their livelihoods. Additionally, the participatory aspect allowed for participants to deliberate collectively on what were the most important changes brought by the project to them.

Combining Quantitative and Qualitative Findings

For the quantitative side, data was gathered through household surveys, at baseline and endline. Two types of analysis were made, a comparative, between baseline and endline and a difference in difference analysis comparing the changes experienced by those identified as treatment and comparison groups to tease out the project's contributions.

For the qualitative component, Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) were conducted at the endline. The qualitative approach centered around roundtable discussions, during which participants prioritized the top changes they experienced as a result of the project. The data gathered through these discussions underwent thematic analysis to identify recurring themes and patterns within participants' experiences and perspectives.

By triangulating both quantitative and qualitative findings, the evaluation achieved a more comprehensive understanding of the project's effectiveness and its lasting impact on the target population.

SAMPLING

The baseline sampling approach was replicated at endline, intending to reach to the same SHFs, Lead Farmers (LFs), and Farmer Business Advisors (FBAs), while maintaining the same balance between

genders and IDP status. A sample size of 522 households was interviewed for the treatment group, of which 260 were women, on the endline. On the baseline, we had 555 households interviewed, being 274 females. As for the IDPs, we interviewed 91 baseline and 77 on the endline.

The sample did include more than the 474 beneficiaries envisioned for the impact evaluation, to allow for non-responders in the sample. The sample frame was constructed using target population lists from the project. The sample was then selected using a simple randomization procedure from the sampling framework with focus given to the gender parity of the sample, as well as location and IDP status. For the control group, 235 HH were surveyed at endline.

Table 1. *Respondents disaggregated by gender, district, and status - Treatment group*

	Baseline	Endline	Total		Baseline	Endline	Total
Male	281	262	543	Host	464	445	909
Female	274	260	534	IDP	91	77	168
Total	**555**	**522**	**1077**	**Total**	**555**	**522**	**1077**

As for the FBAs, a total of 44 were interviewed on the baseline and 34 on the endline. The aim was to interview all 45 FBAs enrolled on the project, yet some limitations made it difficult to happen, mostly the logistics issues. This accounts for 98% of the population at baseline and 76% at endline. The gender disaggregation is slightly different between baseline and endline, being 39% of females interviewed on the baseline and 41% on the endline evaluation.

LIMITATIONS

Table 2. Same HH surveyed at baseline and endline, for the treatment. (%)

Panel HH	Treatment	Control
Overall	75%	44%

Finding a control group with similar characteristics to the treatment group was challenging and ensuring the control group did not receive any intervention was not possible, due to the fact that humanitarian assistance is being channeled to the province. Additionally, given the volatile situation in Cabo Delgado, where IDP and host community members are forced by the conflict to relocate, it was not possible to survey all the respondents who were surveyed at baseline. For the treatment group, 75% of the HH surveyed at baseline were surveyed at endline, for the control group 44%. Respondent substitutions were made ensuring baseline gender, type of community, age and district proportions.

COMPARATIVE RESULTS

DEMOGRAPHICS

Breaking the sample in age groups, the majority of the household members are between 35-64 years old, following the 15-34 years old group. This pattern is the same for the three districts analyzed.

Household composition

Table 3. *Respondents by gender of the head of the HH*

| Head of HH	Male	Female
Baseline	69%	31%
Endline	77%	23%

At endline, the average household size was 6, the same as on the baseline. As for the head of the household, more than 70% of the respondents are the heads of their households in all districts. When disaggregated by gender, on average, 77% of the households interviewed had a man as the head of the household, against 69% on the baseline. This difference can partially be attributed to marriages in the population being analyzed.

Household Food Security

The Household Food Insecurity Access Scale (HFIAS)[2] questionnaire was used to assess food access. The scale is constructed by 9 different questions, shown in the figure below.

> Improved seeds kills hunger
>
> IDP Chiure

Access-related Conditions

**Figure 1** *Perception of occurrence of access-related conditions by household*
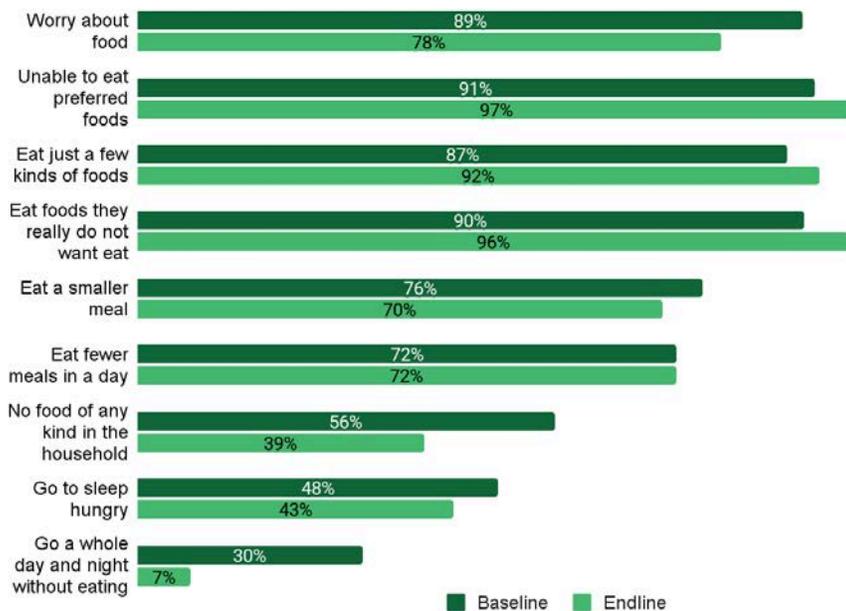
These indicators provide information about the perception of occurrence of access-related conditions of the surveyed households in the past month. For all categories, except for *unable to eat preferred foods, eat just a few kinds of foods and eat food they really do not want to eat*, there was a slight reduction of the proportion of HHs reporting the occurrence of such a condition. The largest change was for the categories *No food of any kind in the household* and *Go a whole day and night without eating*, with significant reduction of 17% and 23% respectively. Evidencing A significant reduction in households experiencing this extreme form of food insecurity.

[2] USAID Household Food Insecurity Access Scale (HFIAS) for Measurement of Food Access: Indicator Guide, 2007.

Scale Score

Figure . *HFIAS score by gender and type of community*
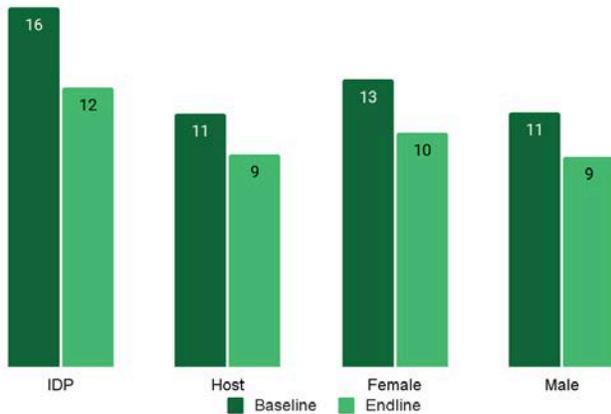
The HFIAS score is a continuous measure of the degree of food insecurity in the household in the past four weeks. The higher the score, the more food insecurity the household experienced. The maximum score for a household is 27[3]. Displaced households and females are the most food insecure scoring groups. All subgroups experienced a decrease in the HFIAS score from baseline to endline, indicating that the frequency of occurrence of access related conditions decreased, evidencing an improvement in food security.

Prevalence

The HFIAS categorises households into four levels of household food insecurity: food secure, moderately, mildly and severely food insecure. Households are categorised as increasingly food insecure as they respond affirmatively to more severe conditions and/or experience those conditions more frequently. On average, there was a reduction from 66.1% at baseline to 53.1% at endline of HH that are severely food insecure, and a significant increase from 17.3% to 37% of HH moderately food insecure, and a decrease of almost 6 % point of people that are food secure. When analyzed by subgroups, all follow a similar pattern. Mecufi district is worth noting as the proportion of HH Severely food insecure dropped from 86% to 52%, as shown below.
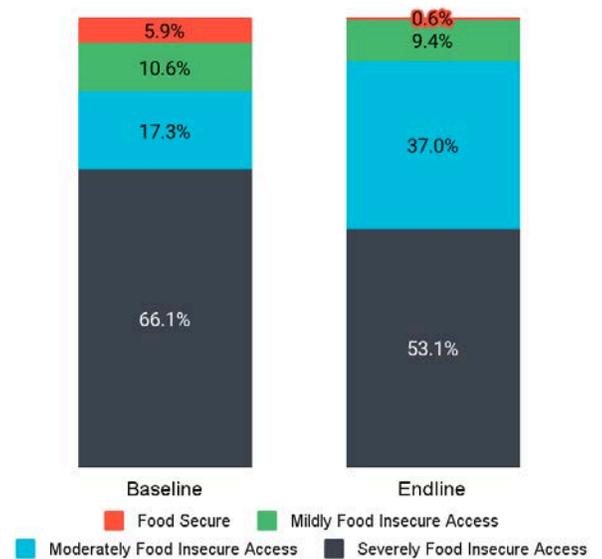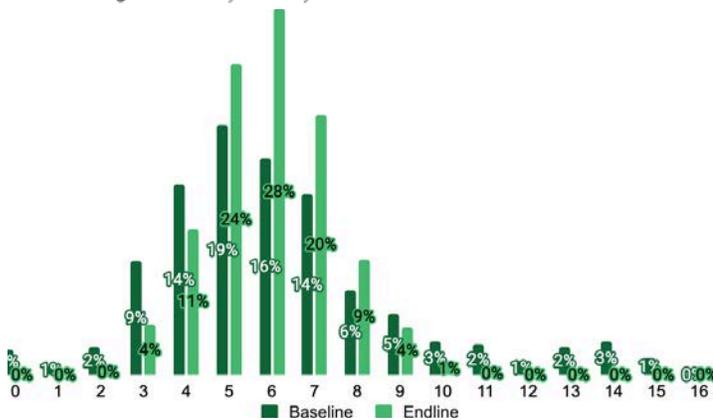

Figure 3. *HFIAS, Prevalence*

Food Secure · Mildly Food Insecure Access
Moderately Food Insecure Access · Severely Food Insecure Access

Household Dietary Diversity Score

Figure 4: *Dietary Diversity Score*

Household Dietary Diversity Score (HHDDS)[4] is a tool designed by FAO to reflect average household dietary diversity. This includes food purchased and consumed outside the household by individual members. An increase in the average number of different food types consumed provides a quantifiable measure of improved household food access. In general, any increase in household

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[3] The maximum score for a household is 27 (the HH response to all nine frequency-of-occurrence questions was "often", coded with response code of 3); the minimum score is 0 (the HH responded "no" to all occurrence questions.)

[4] The household dietary diversity score (HDDS) is meant to reflect, in a snapshot form, the economic ability of a household to access a variety of foods. Studies have shown that an increase in dietary diversity is associated with socio-economic status and household food security (household energy availability) (Hoddinot and Yohannes, 2002; Hatloy et al., 2000)

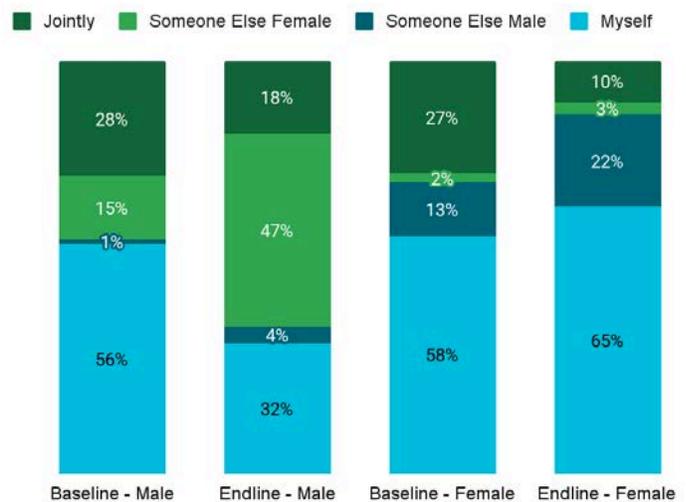dietary diversity reflects an improvement in the household's diet.

At baseline, the larger proportion (19%) of HHs felt under 5 types of foods consumed over the preceding 24 hours, while at endline the larger proportion (28%) consumed 6 types of foods. According to FAO, consuming 6 to 12 groups of food indicates a moderate dietary diversity. The histogram, showing the percentage of HH consuming different numbers of types of food, shows that at endline a larger proportion (61%) of HH consumed more than 6 types of foods, in comparison to baseline (53%).

Decision Making

Meals

Analysis of decision-making patterns around meals highlights shifts toward greater collaboration within households. By the endline, individual decision-making decreased for men from 56% to 32%, while women's individual decision-making increased from 58% to 65%. Men did report a significant increase in the decisions made by 'Someone Else Female' rising from 15% to 47%. Surprisingly, even though women are making more individual decisions regarding meals, the joint decision making reported decreased overall from 28% to 14%. These findings suggest evolving dynamics in household decision-making, balancing collaboration with individual autonomy, especially for women.

Figure 5: *Decision Making related to Meals by Gender*

Legend: Jointly (dark green), Someone Else Female (green), Someone Else Male (dark teal), Myself (cyan)

	Baseline - Male	Endline - Male	Baseline - Female	Endline - Female
Jointly	28%	18%	27%	10%
Someone Else Female	15%	47%	2%	3%
Someone Else Male	1%	4%	13%	22%
Myself	56%	32%	58%	65%

Household Purchases

The data suggests a shift in decision-making dynamics for household purchases within the households, particularly for females. While males at baseline were predominantly involved in decision-making, either jointly or individually, there is a noticeable shift towards more women decision-making at the endline. For instance, the percentage of males reporting 'Someone Else Female' making decisions increased from 6% to 47%. For females, there is a significant increase in their involvement in decision-making, with a notable increase in those who reported making the HH purchase decisions themselves (50% to 65%).
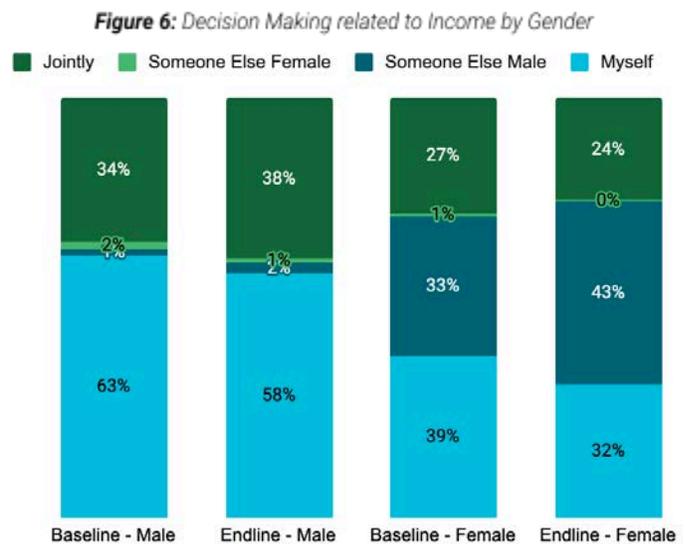
> "Before the project, I did not have ways to get money, I lost everything, but the project arrived and now I do get money
>
> IDP, Chiure

When it comes to the nature of the decision making process, at baseline, both men and women in the sample reported a reduction in the vetoing of decisions by their partner. However, at the endline, there's a notable decrease in men reporting that their partner is only informed after the decision is made. This indicates a slight increase in decision making power of females in household purchases. Additionally, females described a significant decrease in situations where decisions are not made due to disagreement from their partner (from 86% to 45%), which further underscores the potential shift in power dynamics.

Farm Production, Harvest & Income

The analysis regarding decisions related to farm production vary somewhat from the two discussed above. For example, men report no change in individual decision making when it comes to farm production decisions, while women report a slight decrease from 41% to 34%, as well as an increase in 'Someone Else Male' making farm decisions (28% to 42%). The way the decisions are made has changed slightly with both men and women reporting a decrease in vetoing of decisions by the other partner. Additionally both reported an increase in the partner being informed but not having to agree in order for the decisions to be made.

Figure 6: *Decision Making related to Income by Gender*

Legend: Jointly | Someone Else Female | Someone Else Male | Myself

Baseline - Male: 34%, 2%, 1%, 63%
Endline - Male: 38%, 1%, 2%, 58%
Baseline - Female: 27%, 1%, 33%, 39%
Endline - Female: 24%, 0%, 43%, 32%

The pattern for decisions related to the harvest and income resulting from it follow a similar pattern as farm decisions. Men for both harvest and income decisions do show a slight decrease in individual decision making and a slight increase in joint decision making, however these results are not corroborated by the women who also report a decrease in individual and joint decision making. Women also reported an increase in 'Someone Else Male" making decisions for both harvest and income related decisions.
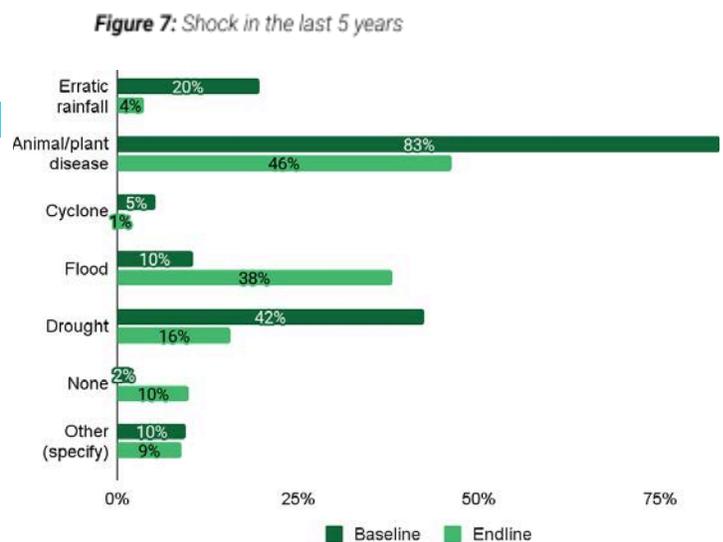
The overall trends in decision making show varied results in terms of women empowerment. When it comes to general household decisions such as meals and purchases, women's participation has shown some gains, while when it comes to primary farming activities, there does not seem to be many changes in women's involvement. In fact the data suggests slight decreases in joint decision making as reported by women, underscoring the need for gender transformative programming to address these limitations.

Agriculture Outcomes

Type of Shocks

More than 80% of respondents claimed to have experienced animal/plant disease in the past 5 years at baseline, dropping to 46% at endline. This decrease may have to do with organic pesticide SHFs learned how to produce at the Farmer Field Schools, which is a low cost product that fosters their indigenous knowledge. The second shock that most affected the farmers was drought for baseline (42%) and flood for endline (38%).

When asked about how long it took them to recover from the last shock, 50% of IDPs and 48% of the host communities took at least until one month to recover,

Figure 7: *Shock in the last 5 years*

Erratic rainfall: Baseline 20%, Endline 4%
Animal/plant disease: Baseline 83%, Endline 46%
Cyclone: Baseline 5%, Endline 1%
Flood: Baseline 10%, Endline 38%
Drought: Baseline 42%, Endline 16%
None: Baseline 2%, Endline 10%
Other (specify): Baseline 10%, Endline 9%

Legend: Baseline | Endline

while 18% of IDPs and 11% of hosts had not recovered until the day they were interviewed. The remaining respondents were distributed between 2-12 months of recovery.

Land

On average, at baseline farmers reported to have 1.72 ha of land for farming, this number increased to 2.40 ha, evidencing the interest farmers found while participating in the project in investing their time and resources in larger production areas.

Improved management

Figure 8: No. of Ha under improved management, by crop, at baseline

The number of hectares under improved management practices increased 60.5%, from 642.5 Ha at baseline to 1,031 Ha. With Sesame, cassava and maize having the greatest increases, 160%, 120% and 50% respectively. This evidences the value SHFs gave to the learned techniques, as they applied them to a larger extent in two of their main staples (maize and cassava) and in one of the most profitable cash crops (sesame).
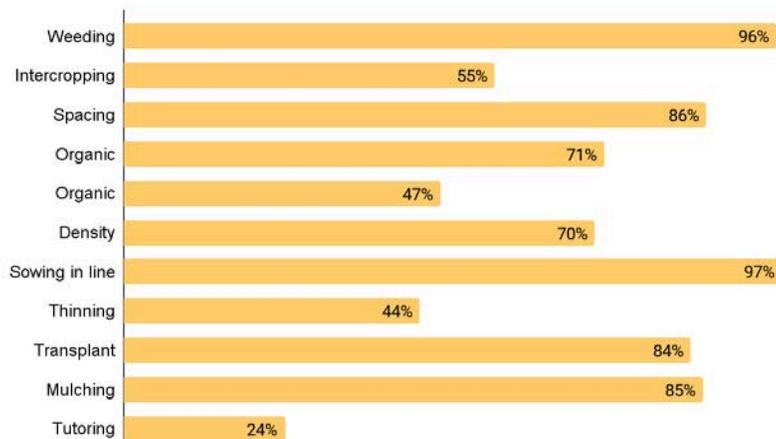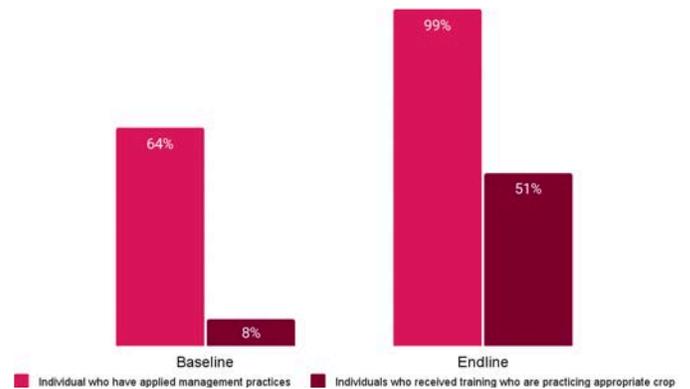
Figure 9: No. of Ha under improved management, by crop, at endline
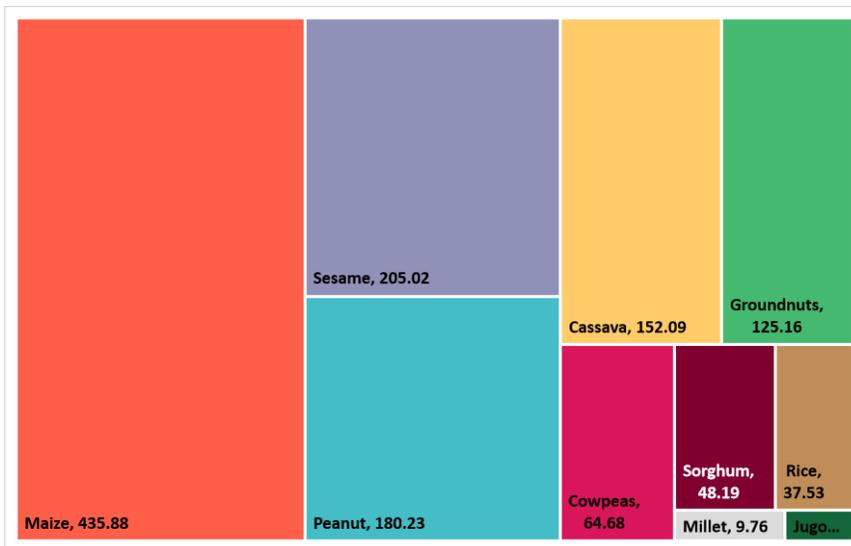
Additionally, the number of hectares effectively protected against disease or pest attacks with organic pesticides grew remarkably by 2,376%, from only 14.3 Ha at baseline to 352.7 ha at endline. This evidence shows that this practice was mainly unknown by farmers before the project and was widely adopted due to its efficacy, low cost and local availability.

Crop Protection

The farmers benefiting from the project received training regarding crop protection procedures. The number of farmers that received training and applied crop protection procedures grew from 16% at baseline to 51% at endline. In addition, the number of farmers who have applied management practices (3 or more techniques taught by iDE), increased from 64% at baseline, to 99% at endline.

Baseline: 64%, 8%
Endline: 99%, 51%

■ Individual who have applied management practices ■ Individuals who received training who are practicing appropriate crop

Technique	%
Weeding	96%
Intercropping	55%
Spacing	86%
Organic	71%
Organic	47%
Density	70%
Sowing in line	97%
Thinning	44%
Transplant	84%
Mulching	85%
Tutoring	24%

A variety of techniques taught by iDE were new for most farmers, such as: spacing, trelling, organic pesticides and organic fertilizers. The graph shows that, not only the farmers learned but also they applied the techniques on their farms. There was an increase for sowing in line technique, from 76% on baseline to 97% on the endline. Spacing was a new learning and it was adopted by 86% of the farmers, as well as organic fertilizers (71%) and organic pesticides (47%).

Production Analysis by crop

From 2022 to 2024, there were variations among the crops produced by the farmers. There were crops with an increase in production area and other crops experiencing a decrease. These situations can have many reasons, such as: i) now the producers know exactly how to measure their lands, rather than just guess based on what they believe it is the measure and ii) at the end of the project the farmers were prioritizing different crops depending on their needs (consuming and selling).

Sesame and cassava are two of the most important crops produced in the north of Mozambique, and both experienced an increase in the area dedicated to their production, of 5.4% and 5.9%, respectively. Peanuts showed a decrease of 9% on the area of production, being the highest decrease among the analyzed crops.

As for the production, there was an increase in production of most of the crops during the project implementation, with an exception for pigeon pea and cowpeas, and this can be associated with the prioritization of crop production by each producer. Peanuts had the largest increase (57%), followed by maize (18%). Yields increased for four of the 5 main crops. Sesame, maize, pigeon pea and peanuts' yield increased by 58, 56, 37 and 15% respectively. While cowpeas yield decreased by 16%. Corroborating

the impact of the adoption of improved management techniques. Revenue increased remarkably for sesame (205%) and for maize (94.4%), while sales from peanuts and cowpeas decreased by 22% and 10% respectively, related either with it decreased in production area or production.

Table 6. *Agricultural production information, by crop*

Crop	Area (ha)			Production (Kg)			Average Yield (Kg/Ha)			Sales (% of production)		Revenue (USD)		
	Baseline	Endline	Δ	Baseline	Endline	Δ	Baseline	Endline	Δ	Baseline	Endline	Baseline	Endline	Δ
Maize	0.92	0.88	-5.1%	372.52	440.03	18%	565.65	884.09	56%	27%	21%	102.27	198.80	94.4%
Sesame	0.78	0.82	5.4%	214.63	224.94	5%	395.07	622.89	58%	75%	89%	185.47	565.58	204.9%
Pigeon Pea	0.73	0.68	-7.5%	274.64	215.52	-22%	517.79	710.06	37%	54%	57%	198.72	265.30	33.5%
Peanut	0.81	0.74	-9.0%	287.62	451.94	57%	564.68	648.66	15%	32%	29%	557.78	437.39	-21.6%
Cowpeas	0.59	0.61	4.8%	143.91	135.70	-6%	273.34	229.34	-16%	27%	30%	185.47	167.26	-9.8%

Production analysis by producer

On average, farmers reported an increase in total production of 17%, from 939.9 Kg to 1,098.9 Kg. Sold production also increased by 18%, from 265 Kg to 312 Kg, yet, in terms of percentage of the production sold, it remained the same (28%). Agricultural revenue almost doubled, moving from $274 to $498.6. This calculated revenue, only considered the 5 main rain-fed season crops and, did not account for horticulture crops commercialization, as data collection happened when farmers were about to harvest. Hence, revenue at the end of the season could have been larger.
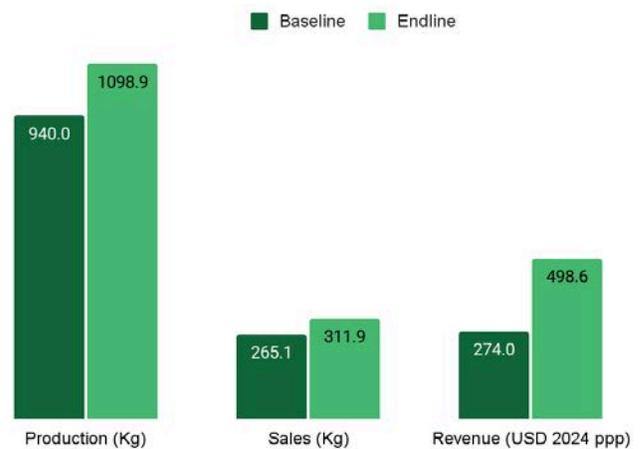
From district nuances, there was an increase on the production for Chiure and Namuno and a decrease for Mecufi. Mecufi is still a challenging terrain for production due to its location, it is a coastal district. Sales followed the same pattern, yet for revenues, all of them experienced an increase.

Table 7. *Agricultural production information, by farmer*

|	Production (Kg)		Sales (Kg)		Sales (% of production)		Revenue (USD 2024 ppp)	
	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Overall	939.98	1098.94	265.12	311.92	28.2%	28.4%	273.98	498.6
Chiure	861.02	1099.28	235.84	355.67	27.4%	32.4%	221.4	522.08
Mecúfi	1082.91	1000.10	263.20	178.59	24.3%	17.9%	235.59	261.65
Namuno	1047.29	1181.00	364.45	447.37	34.8%	37.9%	452.68	649.09

Access to Market

Input

Market access conditions for inputs improved overall in the project areas. Having a larger proportion of farmers at the endline that have enough seeds to produce, that buy certified seeds and have multiple options to buy input from. The latter grew from 23% to 53% and it is linked with FRRIs efforts creating a network of rural entrepreneurs that not only provided technical assistance to SHFs but sold inputs and aggregated their produce.
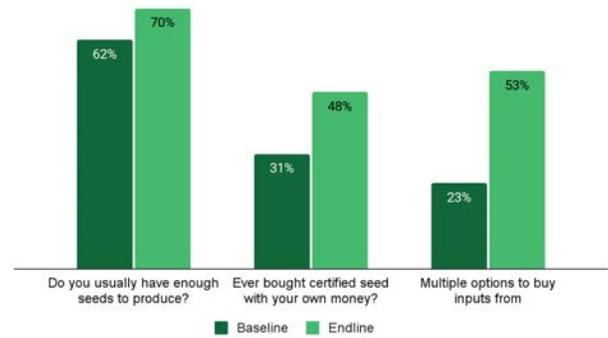
Output

Access to markets to sell production improved as well, with a jump from 36% to 63% of farmers reporting they can easily sell their harvest. There was a decrease in those who can access the market, but not easily, from 49% on the baseline to 30% on the endline.
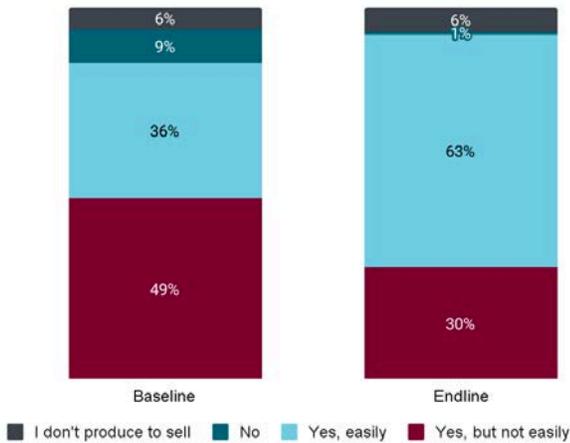

As for those who couldn't access the market, there was also a significant reduction, from 9% on baseline to 1% on endline. For those who couldn't access the market, the most highlighted reason was not producing enough to sell. When asked to whom the farmers sell the products, the first most chosen option was local market (59%) which had an increase of 2% when compared to baseline, followed by traders/aggregator, with 51%, which had an increase of 18%, when compared to baseline.

Resilience and Livelihoods

Poverty Probability Index

The PPI is a poverty measurement to determine the percentage of individuals who live below a specific poverty line. The poverty likelihood of a household can be calculated by adding its respective scores and converting them to a poverty likelihood related to a national poverty line. Using a
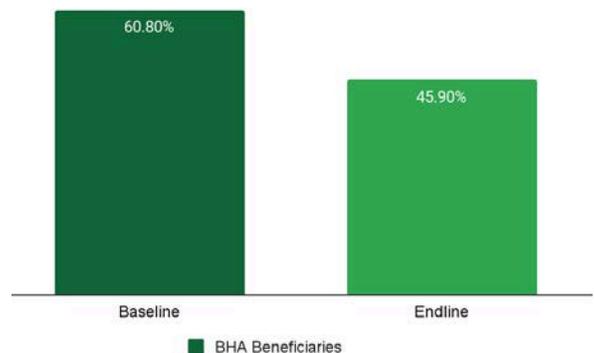
poverty line of $1.90/day (2011 PPP)[5], as a multi dimensional metric, is a good proxy of resilience. Remarkably, the poverty rate among BHA CD sampled beneficiaries was 60.8% on the baseline, which decreased to 45.9% on the endline, evidencing that in a short period of only 2-years resilience on the targeted communities increased.

Income Generating Activities
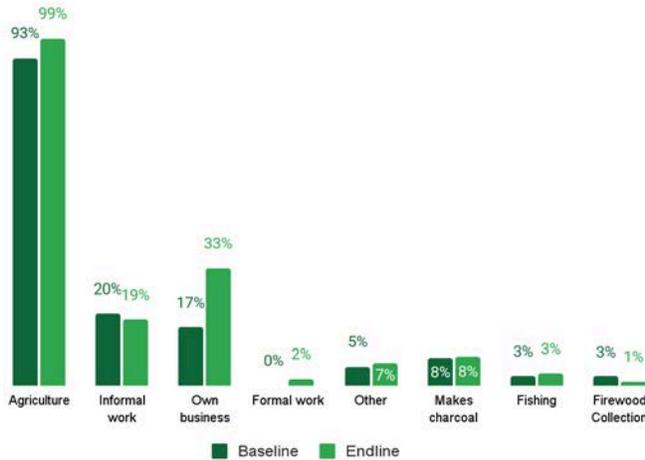
The most prevalent income generating activity is agriculture, being practiced by 99% and 93% of the respondents, at endline and baseline respectively. The following income generating activity is own business, which has grown from 17% at baseline to 33% at endline.
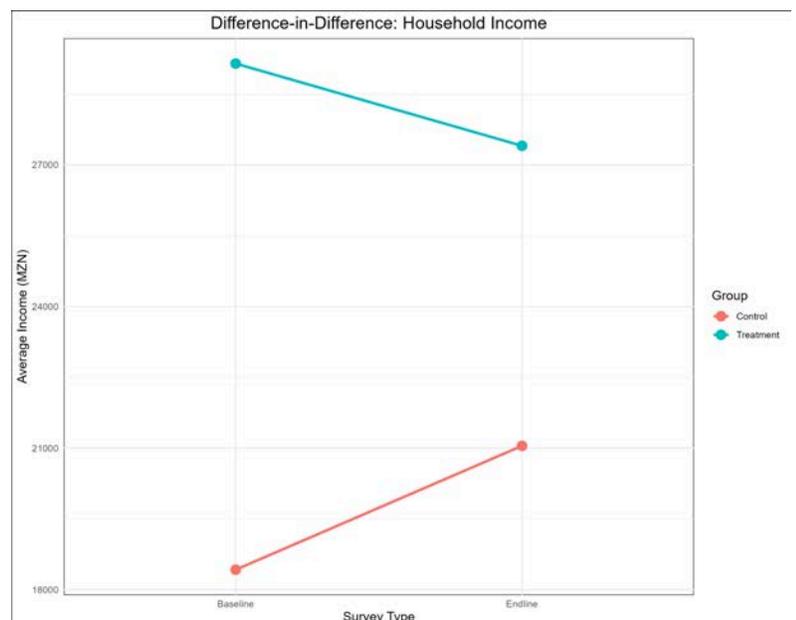
DIFFERENCE IN DIFFERENCE ANALYSIS

The Difference-in-Differences (DiD) method[6] is a quasi-experimental design commonly used in observational studies where randomization is not feasible. By examining changes over time in both treatment and control groups, DiD helps to estimate the causal impact of an intervention, assuming the parallel trends assumption holds—that is, if no intervention had occurred, the treatment and control groups would have followed similar outcome trends.

Income

Household Income Model = β0+ β1(Treatment) + β2(Endline) + β3(PPI Score) + β4(HFIAS Scale) + β5(Treatment×Endline) +ϵ

In the Household Income Model, the **_interaction term_** (treatment x endline) (β5=−4366.45, p=0.085) captures the differential change in income over time for the treatment group

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[5] **International poverty rate defined by World Bank,**
[6] Difference-in-Difference Estimation | Columbia Public Health

relative to the control group. The negative estimate indicates that while the treatment group experienced higher income levels than the control group at baseline, the treatment group's income declined over time, yet it was not statistically significant.

Additionally, the HFIAS score, which measures food insecurity, was found to have a significant negative relationship with income ($\beta=-918.23$, $p<0.001$), implying that households with higher food insecurity had lower income levels.

Agricultural Income

Agricultural Income Model = $\beta0+ \beta1(Treatment)+ \beta2(Endline)+ \beta3(Gender: Male)+ \beta4(IDP/Host)+ \beta5(Age: 35-64)+ \beta6(Age: 65+)+ \beta7(Treatment×Endline)+\epsilon$

Difference-in-Difference: Agricultural Revenue (MZN)
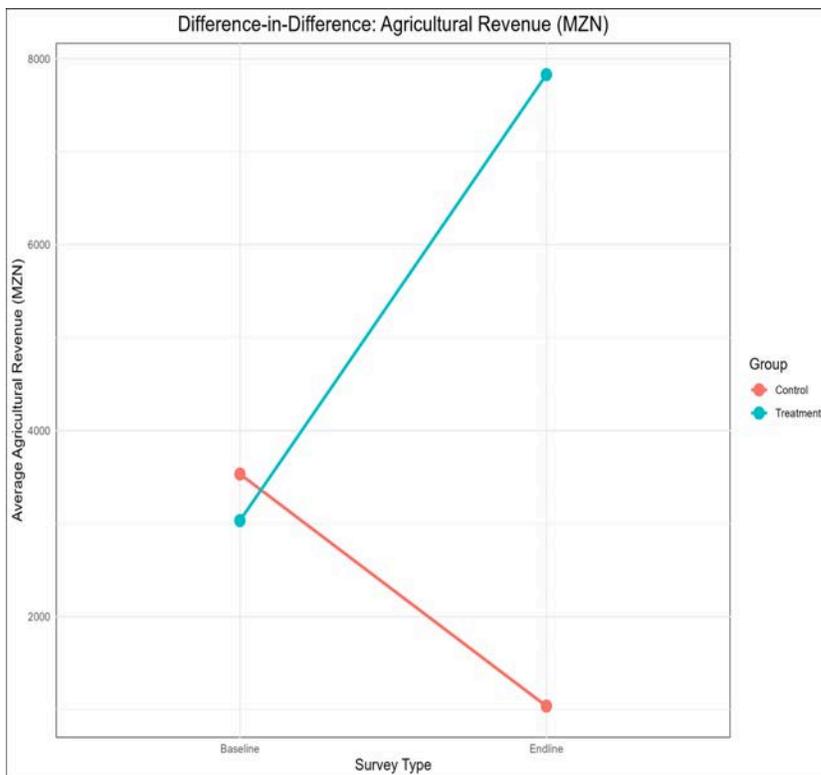
In the agricultural income DiD model, the treatment group exhibited a statistically significant increase in agricultural reported income, estimated at $245.0 2024 ppp over the control group ($p<0.00001$). Additionally, endline income levels rose significantly by $141.7 (2024 ppp) compared to baseline ($p = 0.024$). Gender and IDP/host status were significant predictors, with male participants earning an average of $152.2 (2024 ppp) more than females ($p < 0.00001$), and IDPs earning $204.2 (2024 ppp) less than hosts ($p < 0.00006$).

The **_interaction term_** (Treatment × Endline), representing the additional effect of the treatment at the endline, was not statistically significant ($p = 0.535$). This indicates that, while treatment positively influenced agricultural income, there was no significant difference in its effect from baseline to endline compared to the control.

Resilience and Poverty

Poverty Probability Index Model (PPI Likelihood): Score=β0+ β1(Treatment)+ β2(Endline)+ β3(Gender: Male)+ β4(Age: 35-64)+ β5(Age: 65+)+ β6(IDP/Host)+ β7(Main Decision Maker: Male)+ β8(Income)+ β9(HFIAS Scale)+ β10(Treatment×Endline)+ε

In the Poverty Likelihood model, the intercept value of 0.42 represents the baseline poverty likelihood score for the control group, indicating a moderate level of poverty risk. At baseline, the treatment group was significantly higher in poverty likelihood, with an estimated rise of 0.07 points compared to the control group (p = 0.038). This suggests that the treatment group faced a higher poverty likelihood compared to the control group at baseline.

The **combined effect** of treatment and endline (estimate = -0.12, p = 0.011) is also statistically significant. This indicates a notable reduction in poverty likelihood for the treatment group by endline compared to the control group. Among the control variables, HFIAS (food insecurity) score showed a positive association with poverty likelihood (estimate = 0.0075, p = 0.002), underscoring a link between greater food insecurity and higher poverty risk.
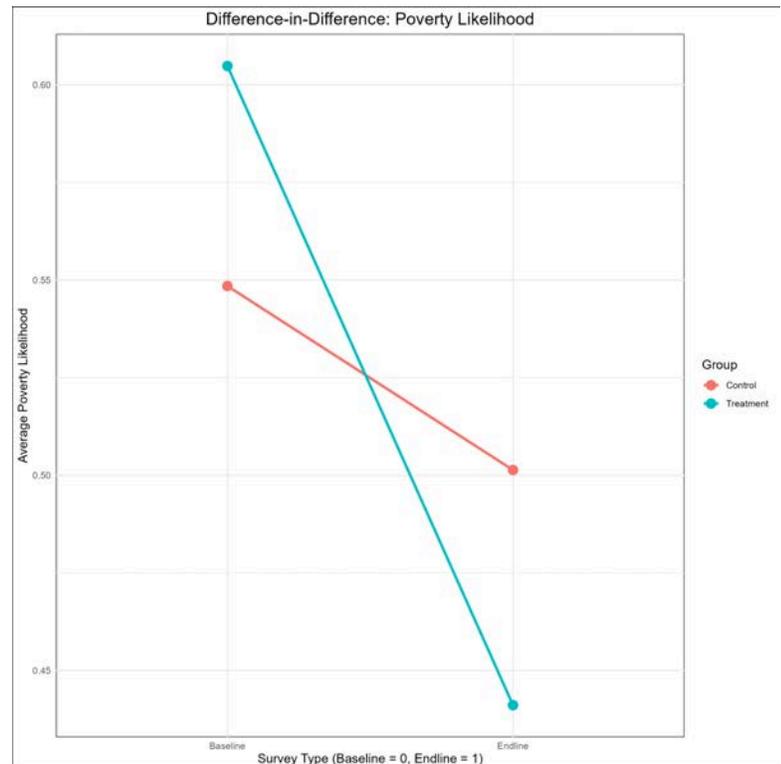
Food Security

Household Food Insecurity Access Scale Model (HFIAS Score)*[7] : β0 + β1(Treatment) + β2(Endline) + β3(Gender: Male) + β4(IDP/Host) + β5(Income) + β6(PPI Score) + β7(Treatment × Endline) + ε

The HFIAS model investigated factors affecting food insecurity scores, with findings indicating significant impacts of treatment, income, gender, and IDP status. The treatment group experienced a statistically significant reduction in HFIAS scores, showing a 4.94-point decrease relative to the control group (p < 0.0001), which suggests that the intervention positively influenced food security.

Now my children don't go to school hungry because I prepare lettuce with cassava as breakfast

SHF, Mecufi

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[7] Household Food Insecurity Access Scale (HFIAS) for Measurement of Food Access: Indicator Guide A higher HFIAS score indicates greater food insecurity (access) experienced by the household, while a lower score reflects less food insecurity (access).

Similarly, endline scores decreased by approximately 4.76 points compared to baseline (p < 0.0001), emphasizing the improvement in food security over time. Income had an inverse relationship with food insecurity; as income levels increased, HFIAS scores decreased slightly (-0.000047 per unit, p < 0.0001), highlighting the importance of economic stability for food security.

IDP respondents emerged as a highly vulnerable group, with HFIAS scores 3.22 points higher than those of host community members (p < 0.0001), indicating significant disparities in food security access. The **combined effect** (2.64, p = 0.0002) of treatment and endline highlights the intervention's positive impact on food security for the treatment group was not only maintained but also amplified over time.
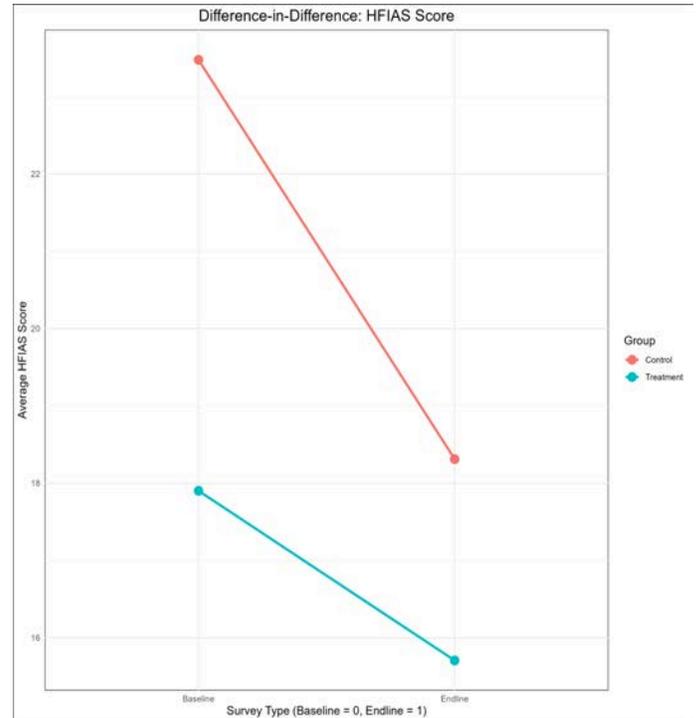
Agriculture Revenue

Agricultural Revenue = $\beta_0 + \beta_1(Treatment) + \beta_2(Endline) + \beta_3(Income) + \beta_4(HFIAS Scale) + \beta_5(PPI Score) + \beta_6(Treatment \times Endline) + \varepsilon$
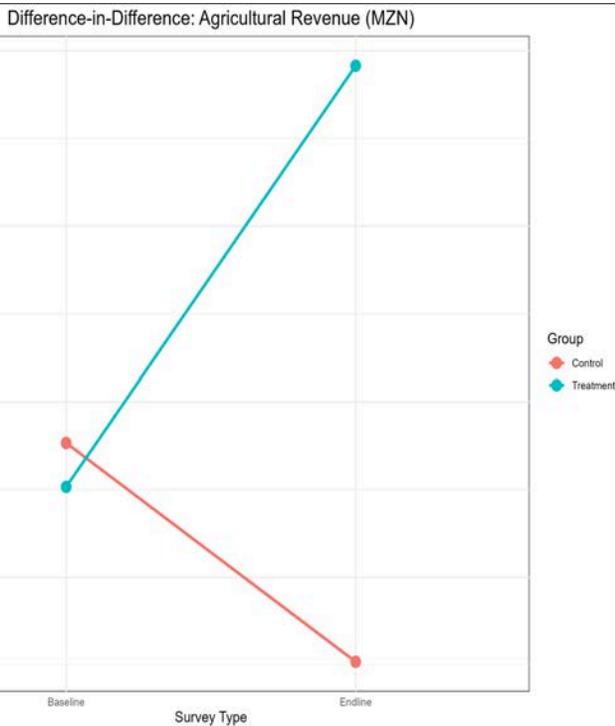
The results indicate that the initial revenue level for the control group at baseline is $148.9 (2024 ppp) which is statistically significant (p = 0.0339). However, there was a notable decline in revenue at the endline for the control group, decreasing by approximately $105.2 (2024 ppp) (p = 0.042). Income was positively associated with revenue (estimate = 0.26, p < 0.0001), showing that participants with higher income experienced higher revenues overall. Additionally, food insecurity, as measured by the HFIAS scale, had a significant negative effect, reducing revenue by $9.5 (2024 ppp) for each unit increase in food insecurity (p = 0.0006).

Importantly, the interaction between treatment and endline was significant and positive ($307.4, p < 0.0001), suggesting that the program intervention positively impacted revenue growth for the treatment group at endline. This effect stands in contrast to the control group's decline, indicating the program's effectiveness in enhancing revenue for the treatment group over time. The combined influence of income and reduced food insecurity further emphasizes how these factors contribute to stronger revenue outcomes for participants.

Qualitative Analysis

Participatory Lived Experiences Prioritization

Beyond quantitative metrics, the evaluation's qualitative aspect, aimed at capturing lived experiences of project clients. A novel participatory methodology in the form of Roundtable Discussions was employed, a semi-structured deliberative process where participants discussed the changes they experienced in their lives resulting from the project and deliberated as a group which of the changes identified were the most important to them.

FGD Participants included: internally displaced persons (IDPs), smallholder farmers, and lead producers, a total of 10 FGD were conducted totaling 120 participants. Separate discussions were held for women and men to ensure a gender-sensitive approach.

The discussions were organized around specific domains, helping participants articulate changes in areas like agriculture, food security, income, market access, and self-agency/self-efficacy/self-perception. To identify the most significant changes, a participatory prioritization exercise was conducted. Each participant received ten tokens per thematic domain and used them to vote on the changes they felt were most impactful, leading to a collective ranking of priorities. Detailed notes captured the richness of the conversations, ensuring that the outcomes were aligned with the study's objectives.

Agriculture

The round table discussions highlighted line seeding/spacing as the most prioritized impact in the agriculture domain, with more than 20% of both women's and men's tokens allocated to this impact. Gender-specific preferences revealed distinct priorities for the most significant impacts. Women prioritized introduction to horticulture, and gaining knowledge of mulching. Whereas, men focused on increase in agricultural production, and utilizing production blocks. Horticulture for the first time, mulching and production blocks followed, for both females and males. Males prioritized increased production while females gave

Prioritization of Agriculture Impacts by Gender
Total Tokens Used: Male = 249 , Female = 239
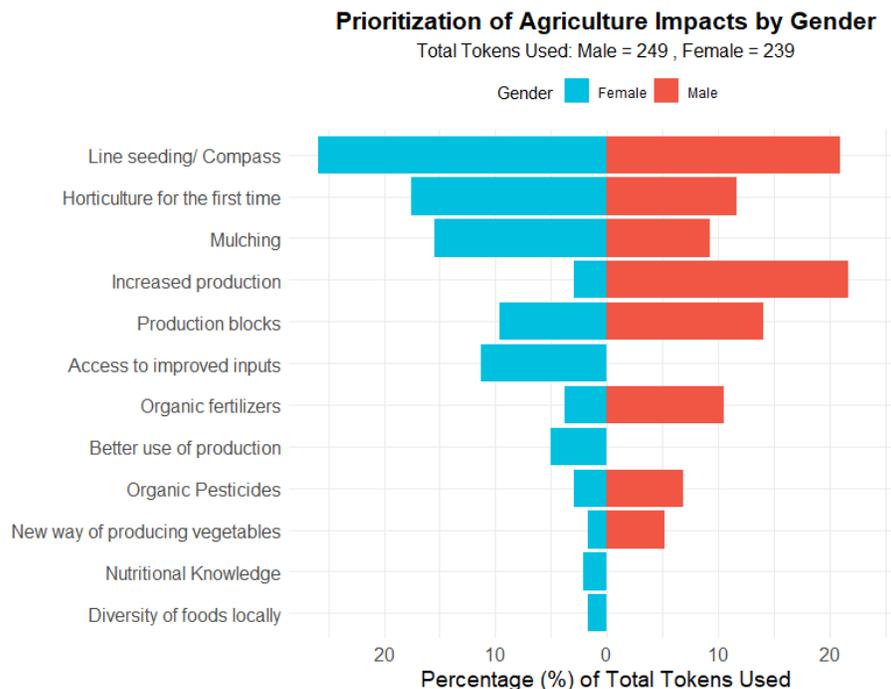
importance to changes males did not identify such as, access to improved inputs, better use of production, new crops, improved marital collaboration, nutrition knowledge, among others.
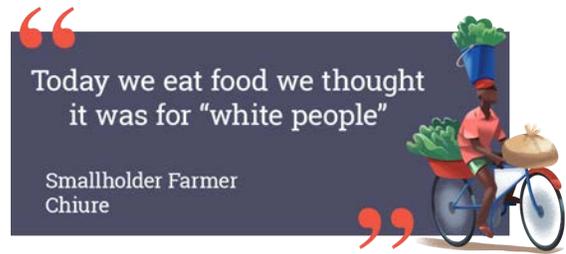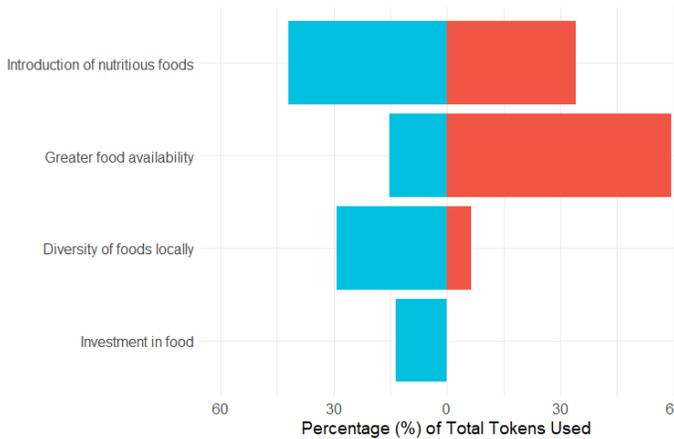
Food Security

Prioritization of Food Security Impacts by Gender
Total Tokens Used: Male = 200 , Female = 243

The analysis of the qualitative data underscores a significant enhancement in food security, primarily through introduction of nutrition crops/foods and greater food availability. Interestingly, one of the male round-tables said that no changes were observed. While men prioritized and allocated the majority of their tokens (60%) to an increase in food availability, women prioritized introduction to nutritious food (42%).

Access to Market

Market access emerged as a transformative outcome of the project, reflected in the strong prioritization of increased sales and improved input access. While these two aspects received the highest number of tokens overall, women brought a unique perspective by prioritizing vegetable sales for the first time and placing greater emphasis on increased sales. The overall findings were adjusted to account for one female group that reported no changes.

Despite allocating fewer tokens, women demonstrated a broader range of impacts, highlighting diverse priorities compared to men, where 58% of the tokens across five FGDs were concentrated on access to improved inputs.

Prioritization of Market Access Impacts by Gende
Total Tokens Used: Male = 248 , Female = 197
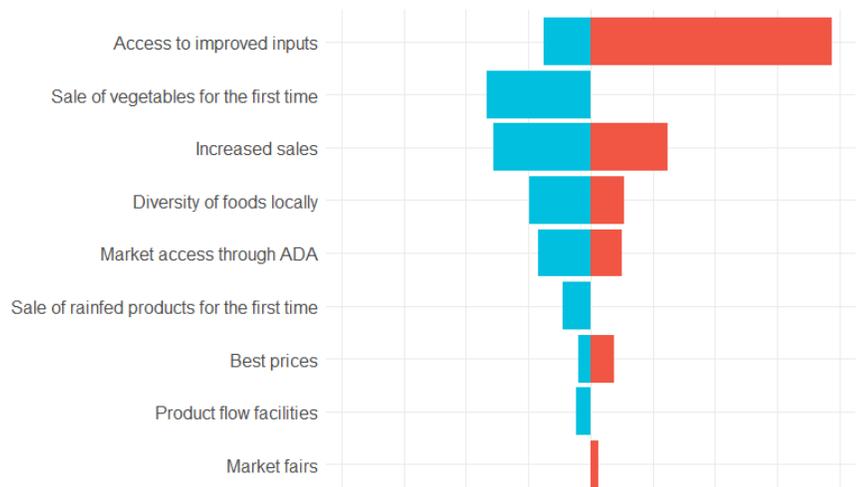
For internally displaced people (IDPs), the diversity of locally available food stood out as a significant impact, with 30% of their tokens focused on this category, emphasizing the critical role of access to local produce.

Income and Prosperity

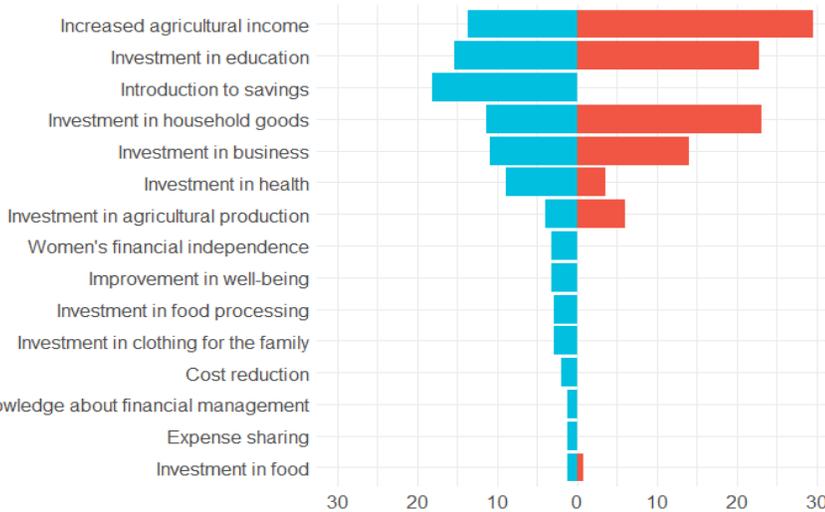**Prioritization of Income Impacts by Gender**
Total Tokens Used: Male = 250 , Female = 248

In the income and prosperity domain, increase in agricultural income was the most prioritized change, highlighting its central role in supporting households to meet basic needs and make forward-looking investments. This increased income enabled diverse uses, such as investments in education, household goods, and business ventures, reflecting the project's contribution to both immediate and long-term economic security.

Gender-differentiated priorities revealed nuanced perspectives. Females ranked the introduction to

savings, investment in education, and increased agricultural income as their top priorities, emphasizing financial security and future-oriented goals. Males, on the other hand, prioritized increased agricultural income, investment in household goods, and education, indicating a focus on material improvements and family well-being.

Notably, both groups recognized education as a shared priority, underlining its importance as a pathway to resilience.

I see myself very differently. People admire me and ask me if I'm taking any pills

SHF, Mecufi
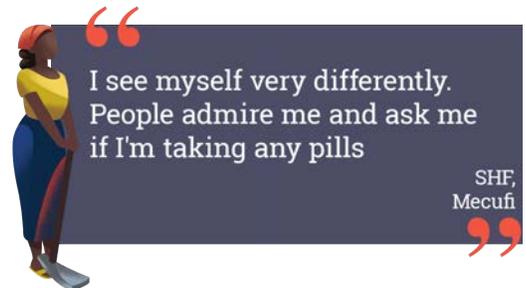
RURAL ENTREPRENEURSHIP

Farmer Business Advisors (FBAs) are rural community entrepreneurs who reach smallholder farmers within their areas of operation as suppliers (ag-inputs) and customers (ag-outputs). They act as the last mile link for inputs and the first-mile link to the output markets. Using a business-oriented approach, FBAs identify farmer needs, nurture and grow

local demand, and optimize market engagements and relationships with preferred suppliers of inputs/equipment and buyers of produce. This work has made the last mile investment ready and was matched with continuous efforts to strengthen the market ecosystem. iDE has created and supported a network of local entrepreneurs with training, business development coaching, market linkages, and credit via Kiva.

FBAs activities

On the Baseline, the FBAs' type of activities were mostly aggregate and sell agricultural products and sell agricultural inputs and equipment. For the endline, there was an increase in the number of FBAs in all the categories being analyzed. The growth was notable for small farmer traders and provision of agricultural services. Additionally, on baseline, the average number of activities per FBA was 1, with a maximum number of activities per FBA being 4. For the endline, the average number of activities per FBA was 2, with the maximum being 6. This means that between baseline and endline there was diversification of activities among the FBAs.

Business growth

In only two years, the average number of business clients grew 210%, from 116 to 359 on an annual basis, evidencing the impact of the business training, market and financial access support provided by BHA. Comparing baseline and endline, the distribution of clients by district shows an increase for both Chiure and Mecufi and reduction for Namuno. This reduction is explained by different factors, mainly the conflicts that are happening in Cabo Delgado, as known, affecting mostly this district among the three being analyzed (business closing, instability, etc).
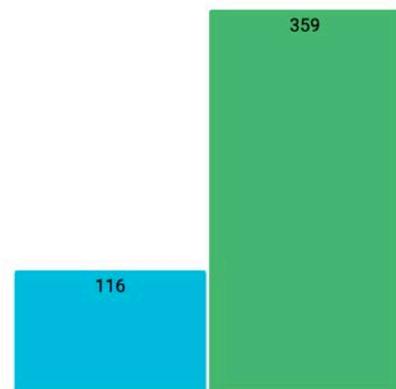
Market Linkages
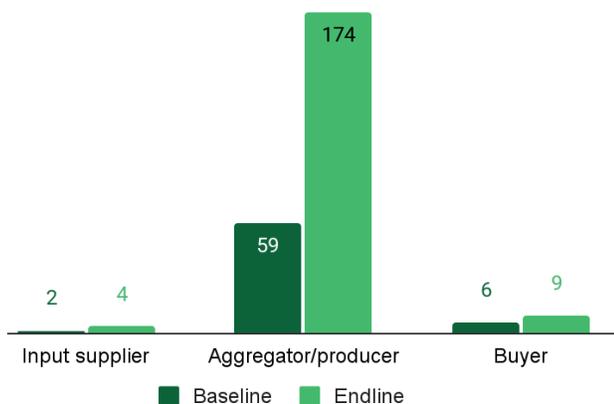
On market access, there was a remarkable increase for output market linkages, on average, FBAs increased from 59 linkages to farmers and/or aggregator to 174 at endline. This is related to the production blocks that linked FBAs with farmers for large scale commercialization. On average, the FBAs had an increase for all types of linkages, doubling the market links with input suppliers and increasing by 50% formal buyer, such as restaurants, hospitals, supermarkets among others. This increase in market connections contributes to business resilience and growth.

Commercialization and Revenue
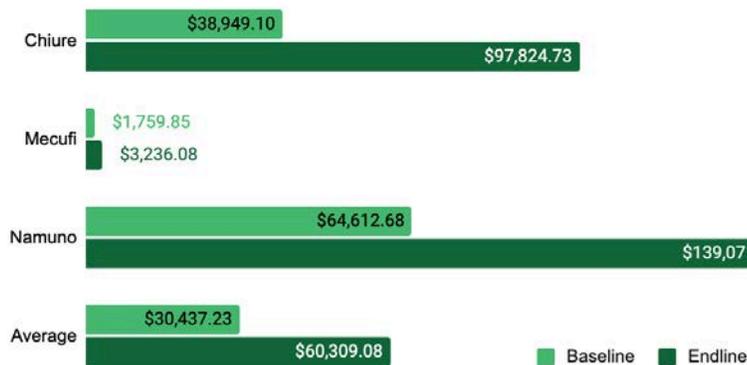
As a result of the businesses and managerial training, digital tool, access to finance and market linkages work, On average, FBAs business' revenue increased 98%, from $30,438.2 annual revenue at baseline to $60,309.1%. There were large disparities among districts with a large revenue increase for Chiure's FBAs (151%) and relatively smaller one for Mecufi FBAs (84%).

In the 2024 rainfed-crop season alone - between April and August - FBAs purchased over 5 thousand tons of grains and injected about 4.000.000 US Dollars directly into rural communities. These entrepreneurs have established linkages with farming groups, and built business relationships with buyers upstream in the value chain. Data originated through interviews and review of accounting books of the 14 best performing FBAs that actively engaged in surplus trading.

Table 8. *FBA one season- main crop commercialization*

	Maize	Sesame	Cowpea	Groundnut	Pigeon pea (Ongoing)
Tons	1649,9	2452,7	68,35	258,6	1307
% of tons by Crop	34,04%	51,50%	1,43%	5,42%	7,62%
Average price per KG (buy)	MZN 14,00	MZN 67,00	MZN 35,00	MZN 40,00	MZN 35,00
Average price per KG (sell)	MZN 19,00	MZN 75,00	MZN 45,00	MZN 45,00	MZN 40,00
Purchase Value (MZN)	MZN 23 098 600,00	MZN 164 330 900,00	MZN 2 392 250,00	MZN 10 344 000,00	MZN 45 745 000,00
Purchase Value (USD)	$365 195,26	$2 598 117,00	$37 822,13	$163 541,50	$723 241,11
Total Purchase MZN	MZN 245 910 750,00				
Total Purchase USD	$3 887 917,00				

TRIANGULATION

In the evaluation, triangulation was employed through multiple strategies to ensure the robustness and reliability of findings. Quantitative surveys were conducted alongside qualitative roundtable discussions, which provided nuanced insights into various domains such as agriculture, food security, market access, income, and prosperity. The findings from these methods are presented in the table below, highlighting the key areas of convergence.

Third, sense-making activities were embedded into the data collection process. Enumerators participated in journey mapping and reflective discussions about strengths, weaknesses, and key observations after each day of data collection. These sessions provided critical insights into the data collection process and allowed for real-time refinements, contributing to a deeper understanding of the context and ensuring high data quality.

Finally, investigator triangulation was incorporated, as different researchers analyzed distinct aspects of the data. Quantitative data was managed by one set of researchers, while qualitative insights from the roundtable discussions underwent thematic analysis by another team. Together, these triangulation methods ensured a robust, well-rounded analysis of the program's outcomes.

Food Security	
Quantitative	**Qualitative**
- **Improved Food Security**: There was a notable decrease in the prevalence of severe food insecurity from baseline to endline among the treatment groups. - **Dietary Diversity**: Improved, a larger proportion of HH consumed more type of food at endline	- **Enhanced Crop Diversity**: Introducing sustainable agricultural practices and crop diversification has improved access to nutritious food options (e.g. carrots and beets) and increased food availability. - **Positive Community Response**: Community members have positively perceived these changes, suggesting an overall improvement in food security. This is supported by a high positive sentiment score as well. - **Diverse Dietary Options:** Respondents from the roundtable discussions highlighted the increased diversity of locally available foods and improved overall food availability. This aligns with the increase in HFIAS scores at the endline.
Agriculture	
Quantitative	**Qualitative**
- **Increased Engagement in Farming:** There was higher participation in agricultural activities at endline, suggesting enhanced motivation and resource availability. - **Adoption of Improved Farming Techniques:** High adoption rates of advanced agricultural techniques, such as spacing, mulching, and the use of organic inputs, indicate successful training and resource distribution.	- **Adaptation to Climatic Challenges**: Farmers have adopted crops suitable for varying climatic conditions, enhancing agricultural resilience. - **Market Valuation of Crops**: Crops like sesame and drought-resistant vegetables have been identified as high-value and suitable for local conditions, reflecting strategic cultivation choices. - **Adoption of Improved Farming Techniques:** Respondents highlighted line seeing, composting and mulching as the most significant impacts observed, along with access to improved inputs, and the use of organic fertilizers and pesticides.
Access to Market	
Quantitative	**Qualitative**

- **Improved Market Access**: There was a significant increase in the percentage of farmers who reported easy access to markets at endline. - **Changes in Input Sourcing**: There was a shift toward sourcing inputs from local and provincial markets, indicating improved market integration.	- **Market Linkages via ITTFs**: Round-table discussion respondents highlighted that Input Trade and Technology Fairs have been crucial in facilitating access to quality seeds and effective market engagements. - **Positive Economic Impact**: Enhanced market access has increased the economic viability of farming practices, though there are noted shortages in agricultural inputs like seeds and fertilizers.

Income & Prosperity	
Quantitative	**Qualitative**
- **Economic Stability**: Increased income has enabled households to make long-term investments in education and home improvements. - **Increased Agricultural Revenue**: There was a significant rise in income from agricultural sales, reflecting improved market access and production output.	- **Economic Empowerment**: Increased income has transformed the economic stability of households, allowing for strategic use of resources for long-term benefits. - **Increased Agricultural Revenue**: Similarly to the quantitative data, which revealed a significant increase in income from agricultural sales, the qualitative data also highlighted increased agricultural income as one of the highest priorities among participants. Notably, this prioritization was predominantly driven by male participants.

Conclusion

The Farmer Resilience and Rebuilding Initiative in Cabo Delgado (FRRI CD) successfully addressed the critical challenges faced by smallholder farmers (SHFs) and internally displaced persons (IDPs) in one of Mozambique's most vulnerable regions. By significantly improving poverty levels, food security, and agricultural productivity, the program has demonstrated its effectiveness in fostering resilience and promoting economic stability. The reduction in poverty—evidenced by the percentage of beneficiaries living below the $1.90/day poverty line decreasing from 60.8% to 45.9%—highlights the program's pivotal role in empowering communities to achieve economic progress. Enhanced agricultural revenues, improved market access, and widespread adoption of advanced farming techniques underscore the initiative's success in addressing structural vulnerabilities and creating pathways for sustainable growth.

Food security improvements were equally notable, with significant reductions in severe food insecurity and increased dietary diversity among participating households. These outcomes were made possible by the integration of high-value crops and advanced agricultural practices, supported by robust training programs and market linkages. Agricultural productivity gains further reinforced the program's impact, with beneficiaries achieving higher revenues and access to reliable markets. Overall, FRRI CD has laid a solid foundation for long-term resilience and self-reliance, providing valuable insights into the potential of market-based solutions to address complex development challenges.

Looking Forward (Recommendation)

The FRRI CD initiative successfully addressed key vulnerabilities faced by SHFs and IDPs in Cabo Delgado, yielding measurable improvements in food security, poverty reduction, and agricultural productivity. To build on these successes, the following recommendations are proposed:

1. Scale Gender-Transformative Approaches:
   Address deeply rooted patriarchal norms to enhance women's empowerment in agricultural decision-making and household economic activities. Expand targeted training and community sensitization efforts to promote equitable roles.
2. Tailor intervention for IDP:
   Positive impacts from the intervention were disproportionate by types of communities, with IDPs experiencing significantly smaller gains. Program design needs to take this into consideration, recognizing, they have access to less land, and face more economical burdens.
3. Expand Access to Certified Seeds and Inputs:
   Despite progress, barriers remain for some participants, particularly IDPs, in accessing high-quality agricultural inputs. Expanding input distribution systems and subsidies could improve adoption rates.
4. Strengthen Local Market Linkages:
   Build on the success of Input Trade and Technology Fairs (ITTFs) to create more sustainable and reliable market systems. Prioritize infrastructure investments to enhance accessibility and efficiency.
5. Support Climate Resilience:
   Encourage adoption of drought-resistant crops and climate-resilient farming techniques to mitigate the impact of environmental shocks.
6. Promote Income Diversification:
   Support diversification into non-agricultural income-generating activities to provide additional resilience against economic shocks.
7. Enhance Monitoring and Learning Systems:
   Establish robust mechanisms to continuously evaluate and adapt programming based on emerging needs and challenges.

The results demonstrate FRRI CD's critical role in transitioning vulnerable households from dependency to self-reliance. Sustained investment in these approaches will ensure long-term resilience and economic stability for Cabo Delgado's communities.

Annexes

FRRI Indicator Tracking Table (ITT)

Sector	Subsector	BHA Indicator No. ^	Indicator Title^^	Disaggregates ^^	Baseline Value**	Life of Award (LOA) / Endline Value**	LOA Target**	Variance **	Comments
Goal: Increase Resilience for smallholder farmers, particularly women and youth, in Cabo Delgado province									
Intermediate Outcome*: Rural farmers are better equipped (material and knowledge) and with increased / improved agricultural production									
Agriculture	Improving Agricultural Production	A02	A02: Number of hectares under improved management practices or technologies with BHA assistance	Crop	Total: 745.57; Maize: 349.05; Groundnuts: 97.60; Cowpeas: 96.42; Cassava: 76.99; Sorghum: 34.09; Sesame: 91.43;	Total: 1,031.01; Maize: 435.88; Groundnuts: 125.16; Cowpeas: 64.68; Cassava: 152.09; Sorghum: 48.19; Sesame: 205.02;	TBD		
Agriculture	Improving Agricultural Production	A03	A03: Number of individuals who have applied improved management practices or technologies with BHA assistance	Sex: female, male, age	Total: 415; Female: 205; Male: 210; Youth: 135; Adults: 266; Old: 14;	Total: 519; Female: 259; Male: 260; Youth: 169; Adults: 331; Old: 19;	6,300		
Agriculture	Pests and Pesticides	A12	A12: Percent of individuals who received training who are practicing appropriate crop protection procedures	Sex: female, male, age	Total: 16; Female: 7; Male: 9; Youth: 8; Adults: 9; Old:7;	Total: 51; Female: 23; Male: 28;	1		
Agriculture	Pests and Pesticides	A10	A10: Number and percent of hectares protected against disease or pest attacks	NA	# 14.24; % 16.3:	# 352.7; % 44.2;	TBD		
Output: A network of profitable male and female rural entrepreneurs interacting with a gender-equitable client base is established.									
Agriculture	Improving Agricultural Production	A01	A01: Number of individuals (beneficiaries) directly benefiting from improving agricultural production	Sex: female, male		9,143	4,500	203%	
Agriculture	Improving Agricultural Production	A01	A01: Number of individuals (beneficiaries) directly benefiting from improving agricultural production	Sex: female		5,969	2,205	271%	

Agriculture	Improving Agricultural Production	A01	A01: Number of individuals (beneficiaries) directly benefiting from improving agricultural production	Sex: male		4,301	2,295	187%
Output: Increase male and female farmers' access to innovations, technologies, and farming business models through the establishment of market day, farmers schools and demo plots								
Agriculture	Improving Agricultural Production	A05	A05: Percent of households with access to sufficient seed to plant	NA		99%	70%	141%
Agriculture	Improving Agricultural Production	K02	K02: Total USD value of vouchers redeemed by beneficiaries	total		698,730	1,086,207	64%
Agriculture	Improving Agricultural Production	K02	K02: Total USD value of vouchers redeemed by beneficiaries	Sex: female		357,853	532,241	67%
Agriculture	Improving Agricultural Production	K02	K02: Total USD value of vouchers redeemed by beneficiaries	Sex: male		340,878	553,966	62%
Agriculture	Improving Agricultural Production	A06	A06: Number of individuals (beneficiaries) directly benefiting from seed systems/agricultural input activities	total		9,377	9,000	104%
Agriculture	Improving Agricultural Production	A06	A06: Number of individuals (beneficiaries) directly benefiting from seed systems/agricultural input activities	Sex: female		4,908	4,410	111%
Agriculture	Improving Agricultural Production	A06	A06: Number of individuals (beneficiaries) directly benefiting from seed systems/agricultural input activities	Sex: male		4,470	4,590	97%
Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Total		8,192	9,000	91%
Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Sex: female		4,402	4,410	100%
Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Sex: male,		3,790	4,590	83%

Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Age: Youth		2,621	2,880	91%
Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Age: Adult		5,161	5,670	91%
Agriculture	Pests and Pesticides	A11	A11: Number of individuals (beneficiaries) trained in appropriate crop protection practices	Age: Old		410	450	91%

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