Mid-term Evaluation of iDE Mozambique's

Strengthening the Missing Middle in Agribusiness for Rapid Transformation (SMART) Project

June, 2021

INNOVISION
Research | Technical Assistance | Project Management

Team

Sadruddin Imran
Horacio Morgado
Raja Fuegner
Azmul Huda

Contact Information

Sadruddin Imran
Chairman and CEO

Email: Sadruddin.imran@innovision-bd.com
Phone: +8801713004666

INNOVISION
Research | Technical Assistance | Project Management

Innovision Consulting Private Limited
House 26 (Level 3 & 4), Road 6, Block J
Pragati Sarani, Baridhara, Dhaka - 1212

E-mail: info@innovision-bd.com
Website: www. Innovision-bd.com

Acknowledgement

Innovision Consulting expresses gratitude to iDE Mozambique and SIDA, for awarding this assignment and for trusting on the capacity to undertake this midterm evaluation of the SMART Project.

We specially thank Ms Hanna Marsk Program Officer, Swedish Embassy, Mr Stefano Gasparini, Country Director, iDE Mozambique; Ms. Lina Henao, Monitoring and Evaluation Director, iDE Mozambique; and Ms Natasha Diane Buchholz, Business & Operations Manager, for explaining the contexts of the project and purpose of the assignment. Their support with the necessary documents and technical direction for designing the methodology and survey plan, coordination and management helped us to conduct the evaluation effectively and efficiently.

We finally acknowledge the wholehearted cooperation rendered by the respondents of the survey, the SHFs, SCFs, FBAs, key-informants despite restrictions during this Covid-19 pandemic situation. Without their time and support, the work would not be complete and evidential. Their contribution helped us to undertake an informative and rigorous study, which we believe will advise the project to improve the strategies and reach to the intended outcome.

Acronym

AFAP	African Fertilizer and Agribusiness Partnership
COVID	Coronavirus Disease
ECPA	Escola em Campo para Pequenos Agricultores (Farmers' Field School)
FAO	The Food and Agriculture Organization
FBA	Farm Business Advisor
FGD	Focus Group Discussion
FRRI	Farmer Resilience and Rebuilding Initiative
GAIN	Global Alliance for Improved Nutrition
HH	Households
iDE	International Development Enterprises
IDI	In-Depth Interview
IFDC	The International Fertilizer Development Center
IIAM	Umbeluzi, Empresa Piri-Piri Elefante
IPM	Integrated pest management
ITTF	Input Trade and Technology Fair
KII	Key Informant Interview
MIS	Management Information System
MSD	Market Systems Development
MTR	Mid-term Review
MZN	Mozambique Metical
NTT	Nuclei of Technology Transfer
PPI	Poverty Probability Index
PPS	Probability Proportion to Size
SCF	Small Commercial Farmers
SHF	Smallholder Farmer
SIDA	Swedish International Development Agency
SMART	Strengthening the Missing Middle in Agribusiness for Rapid Transformation
TC	Technology Centers
USD	US Dollar
WHO	World Health Organization

Executive Summary

International Development Enterprises (iDE) Mozambique is implementing a 5-year project titled Strengthening the Missing Middle in Agribusiness for Rapid Transformation (SMART). Swedish International Development Cooperation (SIDA) is funding SMART project. The project intends to increase the competitiveness of small commercial farmers and smallholder farmers involved in major value chains in cash and food crops along with strengthening the private sector players.

The mid-term evaluation is conducted to evaluate the interventions achieving the market system change while the project faced challenges posed by the COVID-19 after the cyclones Idai and Kenneth. The evaluation looked at the relevance of SMART interventions to the needs of the farmers, effectiveness in bringing in the outcome, efficiency of implementation, impact in the farmers productivity and income and their poverty. The evaluation also assessed the likelihood of the sustainability and scale of the intervention after SMART exits. Moreover, the evaluation assessed the gender equity and social cohesion. The mid-term evaluation is intended for helping the SMART team to learn from what works and what does not work well, informing decisions on adjustment of the project implementation strategy.

The information required for this evaluation is collected from both quantitative and qualitative approaches. Quantitative research is based on the sample survey with the SHF with a sample size of 384 (at 95% confidence level, and 5% tolerable error). The sample is distributed among intervened provinces of Manica (165), Sofala (187) and Tete (32) following a PPS method (probability proportion to size) and selected by systematic random (circular) sampling. The qualitative approach is on in-depth interviews (IDI) with the FBAs and SCF (21), focus group discussion (FGD) with SHF (10), and key-informant interviews (KII) with project implementers, government extension offices, other NGOs, private sector companies, etc.

The mid-term evaluation assessed SMART's three stream of interventions: a) FBA and SCF upgrade initiative, b) Farmers' Capacity Initiative, and c) Value Chain Initiative.

Relevance: The SMART project started working in the agricultural sector where the market system constraints were the poor access to markets, lack of quality seeds, lack of processing facilities, lack of access to working capital, poor logistics, poor access to electricity, etc. The surveyed farmers confirmed the similar being as their needs prevailing before SMART started working. After SMART intervention, most (91%) of the surveyed SHF reported receiving services from the FBAs. Moreover, the SHFs participated in different interventions such as training on agri-business (16%), agricultural practices (57%), financial literacy (11%), farming as a family business (75%), etc. Whether these interventions were appropriate is assessed by SHF's benefits received; where 94% gained agricultural knowledge from it. Additionally, almost all (99.5%) of the surveyed SHF applied at least one good agricultural practice, while 98% applied at least two and 92% used three or more good agricultural practices. The surveyed farmers also showed their satisfaction with the SMART interventions (78% were extremely satisfied while 16% were moderately satisfied). The project was adapted to the changed situation of Idai and COVID-19 where the project organized an Input Trade and Technology Fair (ITTF). Although ITTF was supporting the farmers immediate needs in a crisis situation, this was also distorting the market system by partially pushing out the existing market actors operating in agro input supply at the local level. Majority (83%) of surveyed farmers identified ITTF as their source of the inputs. It is recommended that the FBA model is strengthened and rightly implemented by facilitating the existing market actors placed in the geography constrained by lack of access to quality inputs and services in order to tackle the unintended outcomes of ITTF and create scale and sustainability of the access to quality inputs. Moreover, the project should create awareness and demand for quality seeds in the SHF so that they perceive the change in behavior and purchase quality seeds in the long run.

Effectiveness: Not all the indicators were assessed by definition because of the unavailability of the respective baseline values. The achievement of the project outcome has been assessed to indicate the effectiveness of the project interventions. In the output level, 75% of the FBAs reported their customers doing a repeat transaction. The FBAs were doing a gender equitable business where 48% of their customers were female. Over three-quarters of the surveyed SHF (77%) showed satisfaction over FBA services. These indicators suggest an effective implementation of the FBA+SCF upgrade initiative. While assessing the effectiveness of implementation of the intervention 'Farmers capacity initiative', a low percentage of the SHF (11%) were showing financial literacy. However, a high percentage (95.8%) reported having knowledge of the source of improved agricultural input markets. Analyzing the value chain initiative, around 92% of the SHF showed knowledge of improved agricultural inputs while 58% showed knowledge of improved output markets. Around 62% of the FBA/SCF were linked with the private sector input companies while 42% of them were providing linkage facilities to their SHF counterparts. On the other hand, 33% of the FBA/SCF were linked to the private and public sector output market actors and providing linkage facilities to the SHF.

In the outcome level where the project worked to make the FBA and SCF business profitable, 57% of the FBA/SCF were found profitable. The FBAs were also accessing KIVA loans and 65% of them completed one cycle successfully. Almost all (99.2%) of the respondent SHFs are found knowledgeable of good agricultural practices and most of them (99.5%) are practicing. The uptake of improved technical and risk management skills was quite satisfactory. It is recommended that the output market linkage be improved further. The interventions were provided equitably regarding gender, where roughly over half of the program participants were female. The benefits perceived were also equitable.

Efficiency: The efficiency comes from the fair distribution of the interventions and the implementing staffs. The project needs re-defining its focus per geography and adapt specific activities according to the geographic conditions, and agricultural dynamics etc. The staff should also be positioned regarding the intervention concentration and the beneficiaries. However, the ECPAs are found efficient, particularly when coupled with the FBA development and the linkages through the ITTFs considering it as a low input intervention.

Impact: The impact level indicators targeting increasing the household income generated from climate resilient agriculture activities were analyzed for agricultural income and household income. The yearly household agricultural income was MZN 13,597 (USD 221) yearly while the total household income considering other sources of income is was MZN 46,905 (USD 762) for the 2019-20 agricultural season. The agricultural income is representing 29% of the total household income. As an impact of the interventions, very little of the SMART beneficiaries started adopting improved irrigation systems such as motorized pump (3%), drip irrigation (.03%), etc. For the people who adopted the irrigation techniques, these either lowered agricultural cost or increased yield. As a point of attribution, 76% of the SHFs reported learning improved irrigation techniques from the SMART.

As an unintended negative impact, a distortion was observed in which producers do not buy from their local agro-dealers as frequently as they did before; rather, wait for the ITTFs. While some local FBAs might take part in the fairs (e.g. seed supplier companies and their subsidiary FBAs are selling directly at the ITTFs), the others do not. During our primary data collection, local FBAs confirmed their non-presence, although they are almost the sole local agro-dealers in respective areas (e.g. in Dombe). On the other hand, in several areas, the producers confirmed that they do not know who they bought the seeds from in the ITTF and their whereabouts. Farmers rather informed us that they prefer and actually waits for the ITTF. Further reason to this is that the inputs in the ITTF is for free with the voucher system. This, according to the MSD principles, is conflicting to their intention to increase agricultural investments. A contrary effect to the input service market system strengthening was noticed therefore. However, a continuous business relationship

between producer groups and FBAs was important to secure sustainability. In that relationship, the FBAs should be the primary point of reference for any agricultural input and information and services (e.g. which fertilizer or pesticides to use). Findings from the MTR show that this is not happening in a large part of Manica and Sofala province. Therefore, this is negatively impacting the existing market system, which is supported through other interventions of SMART.

System Change and Resilience: From a sustainability point of view, the project addressed important functions in the market system by ensuring availability of inputs through ITTF, the creation of linkages between FBAs and SHF to some degree and by fostering knowledge transfer through ECPAs in the field. However, the linkages of SHF with the private sector require improvement. The incentive for the FBAs was loosely defined and might lower their drive to work with the SHF in the remote places. Regarding resilience, the post-Idai interventions such as ITTFs would support affected families with the inputs that increase resilience in the vulnerable times. However, there was no evidence of the project's communication plan in terms of climate readiness, consciousness and plan for the beneficiary and market actors. More on sustainability, there have not been a clear transition plan sought for its different interventions and actors in at the field level. It should be defined how KIVA works without SMART and how the market actors or SHF could continue ECPAs.

Gender Equity and Social Cohesion: Regarding the intervention implementation, a balanced mix of women and men were intervened and were strengthened in their capacities as producers and FBA. 56% of the SHF who know and practice at least one good agricultural practice, were female. The intervention Farming as a Family Business raised awareness about the importance of commercial agricultural and also inclusion of women in agriculture.

Recommendation and Way Forward: The SMART M&E system needs to be improved with an appropriate approach in place (e.g., DCED approach). The logframe needs to be structured with well-defined measurable indicators. The reporting system should measure the output, outcome and impact level indicators in intervals that currently are focusing only on the activity level. The interventions need to engage the market system actors with defined targets and facilitated to bring in systemic change in the producers. The partnership should be defined with clearer aim with adequate incentive and right skill of the partners. The facilitation should go to the market actors end as a principle of the MSD intervention. Overlap in the interventions makes attribution/contribution difficult that should be clarified.

Looking forward, SMART should create incentives for the farmers (such as an affordable price and availability of inputs) as well as the market actors (profitability, exposure to new market) to make it sustainable. Finally, the project should target the right geography (could narrow down and specify the targets) with the agricultural context in mind and deploy experienced or upgrade skills of their staff to understand and better apply the interventions (following MSD approach).

Table of Contents

List of Tables

1 Introduction

1. Introduction

1.1 Background of the Project

International Development Enterprises (iDE) Mozambique is implementing a 5-year project titled Strengthening the Missing Middle in Agribusiness for Rapid Transformation (SMART). Swedish International Development Cooperation (SIDA) is funding SMART project. The project intends to increase the competitiveness of small commercial farmers and smallholder farmers involved in major value chains in cash and food crops along with strengthening the private sector players in the supply chains, who respond to urban and rural demands, providing access to inputs and output markets, adequate infrastructures, technologies, working capital through non-formal finance mechanism and technical assistance.

1.2 Objectives of the Assignment

The project faced challenges throughout the implementation period from the calamities caused by cyclones Idai and Kenneth (in 2019) as well as COVID-19 (at the start of 2021 and onwards). This midterm evaluation of the SMART project is intended to evaluate the interventions undertaken by SMART and their impact on the market system change (in product and service provision by the farm business advisors (FBAs) and other market system actors) sustainably. The evaluation also assesses whether these mentioned interventions were relevant to the beneficiary needs and requirements, as well as effective to solve the market system constraints and building resilience in the small-holder farmers (SHFs) in a disaster-prone environment. The evaluation further assesses the level of efficiency in implementing the implementation of activities. The mid-term evaluation will help the SMART team to assess the progress of the ongoing interventions, learn from what works and what does not work well in the crises posed by the cyclones and the pandemic, informing decisions on how the project implementation may be adjusted and improved. The evaluation also identifies areas of improvement and recommendations for the rest of the agreement period. This midterm evaluation has assessed the following aspects of the SMART project in line with OECD/DAC criteria guided by specific evaluation questions.

Relevance: If the project interventions are technically adequate and appropriate solutions to the root causes of the development problem? How has the project remained relevant to the cyclone and pandemic scenario? And if the project approach was the most appropriate one and how that could adapt to the changed scenario?

Effectiveness: How and to what extent the project intervention contributed to the intended outcome, and how to increase the effectiveness? If the project was equitable to the different genders, poverty statuses, disabilities, and other social identities, and how to make the project more equitable?

Efficiency: If the project elements, its staffing structure and capacity were aligned and coordinated to gain efficiency in project implementation and whether there were better alignment or coordination possible?

Systemic Change and Resilience: If there are early signs of systemic change in scale, sustainability, and resilience, climate resilience? If there were any lessons and additional activities required for climate resilience?

Gender Equity and Social Inclusion: If the project implemented in rights perspective, transparent fashion, with accountability mechanism to avoid discrimination? If the target groups participated in the project planning and implementation? If the project has affected gender equality and norms?

2 Methodology

2. Methodology of the Midterm Evaluation

2.1 Research Design

The research team collected the information required for this evaluation from both quantitative and qualitative approaches. The quantitative research based on a sample survey with the SHF and SCF evaluates the effectiveness of the project interventions measuring the impacts in line with the project logical framework (logframe) indicators. Survey with the farmers also informs how relevant were the interventions to the beneficiary's needs. We collected part of the required data from secondary sources.

Qualitative information from farmer groups is used to cross check and validate the quantitative information. Information required for assessing the relevance, effectiveness, efficiency comes from qualitative research conducted with the market system actors, key informants, project implementers etc. Useful information for assessing operational and financial efficiency is derived from an analysis of project documents such as the baseline report, narrative reports, intervention strategy, M&E reports, financial reports, etc. The sustainability and resilience of the interventions is assessed by evaluating readiness of the market system actors and the beneficiaries respectively on how they could continue carrying out the activities beyond the life of the project and their ability to cope with adverse situations (climate resilience).

2.1.1 Project Document Review

The study team started the midterm evaluation with the review of the project documents including the project logframe, baseline report, regular monitoring reports/narrative reports, financial reports, beneficiary database, market systems assessment report, etc. The project document review provided an understanding of the project and capacitated to design the approach and methodology of the study. We measured a few of the indicators using the project monitoring data (entirely or partially).

2.1.2 Quantitative Assessment Design

2.1.2.1 Sample Size Determination for SHF and SCF

The sample size was calculated using the formula (1) that resulted in a sample size **n = 384**. The sample size was calculated based on a conventional response distribution assumption considering the following assumptions: p = 0.5 (assumed), Z (alpha) = 1.96 (at 95% confidence level), and a tolerable error (e) = 5%.

$$n \geq \frac{Z^2_{\frac{\alpha}{2}}}{e^2}\, p\,(1-p) \ldots (1)$$

The SMART project worked with the SHF in three provinces of Sofala, Manica, and Tete in Mozambique. The 375 sample (excluding the SCF samples in Maputo, described below) is distributed among the SHFs across the three intervened provinces according to the gender divide, as per probability proportion to size (PPS) method. However, considering the administrative challenges, the districts that were assigned with a sample size less than 10 were relocated with additional samples taken from the other districts with higher samples. A few samples were further relocated within districts in Sofala because of the challenges in accessibility due to recent cyclones and floods. The sample distribution is shown in the Table 1below along with planned versus actually achieved numbers, with a detailed calculation in the Annex 2: Sample Size Calculation.

Table 1 Sampling framework-quantitative survey with the SHF

Province	District	Sample size planned			Sample size finally surveyed		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**
Manica	Gondola	20	28	48	22	25	47
	Macate	15	23	38	14	27	41
	Manica	5	5	10	4	12	16
	Sussundenga	7	10	17	9	17	26
	Vanduzi	14	13	27	15	20	35
Sofala	Dondo	53	80	133	38	62	100
	Nhamatanda	30	45	75	48	39	87
Tete	Angonia	17	14	31	18	13	31
	Tsangano				0	1	1
Total sample		**167**	**221**	**388**	**168**	**216**	**384**

2.1.2.2 Sample Selection Process for SHF groups

For selecting a respondent of the study, a systematic random (circular) sampling scheme is followed that includes the following steps:
Step-1: Listing all the SHFs according to their location (district and locality) and gender.
Step-2: Divide the total number (SHFs) by the sample size and draw a random number in between 1 and the quotient. The randomly drawn 1st number is the first respondent.
Step-3: Then continue adding up the quotient with the 1st drawn random number and select the successive respondents. In case, a refusal, we considered the next numbered person and followed the process.

A proper representation of SHFs according to the location/province and gender was ensured, according to the framework given in the Table 1.

2.1.3 Qualitative Assessment Design

We collected the qualitative data on the progress of the project from FBAs, beneficiaries, project leads, private-sector partners and other external stakeholders. The qualitative data informed us about the relevance of the program intervention to the beneficiary needs, effectiveness of the intervention on the impact on the beneficiary, and sustainability, etc. The analysis has been crucial to identify key intervention areas and the areas that require improvement. The Key-informant Interviews (KII), In-depth Interviews (IDI), Focus Group discussion (FGD) are used as the approach for qualitative data collection. The number of qualitative activities and the approaches are described below.

In-Depth Interview (IDI): We conducted IDIs with the FBAs and SCFs to understand the benefits of market system linkages with the forward and backward market system and its effectiveness to understand the effectiveness of the intervention along with the sustainability (their readiness). IDIs were a face-to-face interview administered by a semi-structured question guide. Further IDIs were conducted with the institutions supported under the horticulture pilot project in Maputo (IIAM – Umbeluzi, Empresa Piri-Piri Elefante, LDA; Presidencia da Republica, United Purpose, ADPP). Although 27 IDIs were planned, 21 were finally conducted considering the data saturation (where we get the desired information and additional qualitative interviews generates repetitive information).

Table 2 Number of IDI conducted with the FBAs

Province	District	Sample size finally surveyed		
		Male	Female	Total
Manica	Chimoio		1	1
	Manica		1	1
	Sussundenga	1		1
	Vanduzi	1		1
Sofala	Dondo	1	1	2
	Nhamatanda	1	2	3
Tete	Angonia	4		4
	Cidade de Tete	1	0	1
Maputo	Boane	1		1
	Matola	2	1	3
	Manhica	1	1	2
	Marracuene		1	1
Total sample		13	8	21

Key Informant Interviews (KII): We conducted KIIs with project implementers, private sector partners, other projects working in the similar sectors etc. to understand if the interventions were relevant to the needs of the actual beneficiaries, if were designed according to their needs, and if the endeavor would be sustainable in the long run. KIIs were face-to-face interviews administered by semi-structured questionnaires. We conducted 9 KIIs in this evaluation.

Focus Group Discussions (FGD): We administered FGDs in an interactive group setting where smallholder farmers shared their views and opinions, their experiences in discussion mode. This provided us with the information to judge the interventions relevance to the beneficiary needs, their effectiveness, cross check the impact data generated from sample survey. FGDs were conducted based on an unstructured question guideline where we recorded open-ended responses. A total of 10 FGDs were conducted with the SHF groups, including the SHFs trained on financial literacy in Farming as a Family Business (FaFB) concept.

Picture: Data Collection from the respondents

The Table 3 below shows a brief on the number of qualitative interviews and the respondents.

Table 3 Sample size in a nutshell

Mode of data collection	Size/ number	Description
Document review	Relevant documents	Baseline report, log-frame, other project documents, MIS report, etc.
IDI	21	With farm business advisor (FBA) and project beneficiaries, 8 from each province and ensuring male-female representation
KII	9	Donor, Private sector partners, project implementers, similar type of projects, government officials involved in the project
FGD	10	10 FGDs with representation of major agricultural value chains, and gender; and 3 with the financial literacy program participants.

2.2 Limitations and Challenges

The evaluation team found challenges with the reporting and project logic during document review. The project baseline was missing most of the indicator values from the logframe and lacked a clear theory of change (ToC) for the project.

SMART is a complex project in nature, and it is even more difficult to understand due to overlapping interventions implemented across the project areas and also differently implemented in the different provinces. It took us a while to understand how the project works, through which interventions it reaches out to beneficiaries, partly because of the lack of a sound M&E system, including a clear theory of change for the intervention logic. Although, it became much clearer during the field phase but not upfront due to unclear project documents and lacking results and intervention chains. Further, the project built upon previous projects of iDE, especially in the area of financial literacy (savings and loan groups), making impact assessments through the project itself more difficult as it was more a continuation and continued support without any visible phase out of the project.

There are also limitations in interpretation of results compared to the overall indicators, as the project phrased the indicators unrealistically and did not collect data to allow interpretation or measurement. Unrealistic and too broad indicators is also a reason they were never measured and therefore interventions were not fine-tuned to suit better to the project targets following a defined M&E plan. For the evaluation team, it is difficult to compare project results during the mid-term evaluation as partially no baseline data is available to compare with.

It was difficult to get the views from the government at the local level because of conflicting schedules.

Evaluation of the SMART Project: Findings from the Survey

3. Demographic information and assessment of interventions

3.1 Demographic Information of the Respondents

Demographic Analysis of the SHF

There have been a good mix of surveyed respondents coming from different ages. While most of the respondents (79%) are in the working age of 18—55 years, the average age is 43 years. 63% of the surveyed respondents are the household head themselves (Table 28). Among the rest of the respondents (37%), most of them (92%) were having their spouse as the household head (Table 29). 56% of the respondents were female. The gender of the household head is important for programmatic decisions and targeting and we found that 79% of household heads are male (Table 30). The average size of the family is around 7 persons, which is the highest in Manica (8.15) and the lowest in Tete (5.91) among the provinces (Table 31). Regarding education of the respondent SHF, 20% of them have joined no formal education program while 10% of them know only the alphabets. Another 22% completed first level elementary school (Table 32).

Regarding source of family income, almost all the respondents (99.7%) reported agricultural farming as one of the major sources of their family income. Producing and selling charcoal (24%), animal husbandry (21%), small business (17%), wage labor (16%) etc. are the other significant source of family income (Table 33). The primary farmer in a family has been doing agricultural farming for an average of 20 years (Table 34).

The smallholder farmers own an average of 3.21 hectares of cultivable land, of which they use 2.15 hectares for agricultural production (Table 4). The smallholder farmers cultivate an average of three crops in a year.

Table 4 Agricultural land and crop intensity

		Gender				Province						Overall	
		Female		Male		Manica		Sofala		Tete			
	Unit	Mean	Base (n)	Mean	Base (n)	Mean	Base (n)	Mean	Base (n)	Mean	Base (n)	Mean	Base (n)
Land area own	Ha	3	195	3.5	144	3.38	163	2.27	145	6.78	31	3.21	339
Land area used for production	Ha	1.91	171	2.47	131	1.94	152	1.71	119	4.87	31	2.15	302
Number of crops cultivated (last year)		3	216	3	168	3	165	2	187	3	32	3	384

Demographic Analysis of the FBA and SCF

We conducted In-depth interviews (IDI) with the FBA and SCF where 62% were SCFs while the other 38% were FBAs (Table 35). Two-thirds (67%) of the interviewed market actors are female (Table 36). The average age of the FBA and SCF is 44 years, and the average business running experience is 11 years (Table 37). One third (33%) of the FBA/SCF completed their first level of secondary school, 20% completed the higher secondary school and another 20% the tertiary education (Table 38).

3.2 Assessment of the interventions undertaken by SMART

SMART builds on the low agricultural productivity of smallholder farmers associated with the fragmented agricultural supply and value chains, and poor access to agro-extension and financial services. The project intended to implement interventions following the Market Systems Development (MSD) approach by developing the agricultural enterprises, the Farm Business Advisors (FBAs) working in the input, output, and support services market systems. The project facilitated the FBAs to serve the SHF and Small Commercial Farmers (SCFs) with improved products and services with an aim to increase agricultural productivity.

To achieve the project objectives, iDE implemented activities under three components (with an inception phase to better understand the agribusiness market, identify potential partners and their capabilities). The components and their intended results are:

1. FBA and SCF upgrade initiative: This intervention area intends to develop the market system actors in the supply chain by developing the FBAs and filling existing gaps in the supply chain. The project conducted the following major activities under this intervention area:

- Train the FBAs and SCFs in business planning and management: the FBAs are expected to analyze the market, set prices and negotiate, keep records, track cash flows, analyze their business financial performance, etc. from these trainings. 160 FBAs (46% women) and 101 FBAs (42% women) were trained in the year 2019 and 2018, respectively. Another 80 FBAs were trained on business planning and 40 FBAs on management in the year 2020.

- Support the FBAs in business registration and getting necessary business documentation (identity card etc.) for opening bank accounts: 52 FBAs were facilitated by the registration in 2019 with an expectation to ease their access to support services such as access to formal markets and finance. In 2020, the project supported 98 FBAs (44 women) to legalize their businesses, obtain required documents such as Identity Card or Bilhete de Identidade (B.I), Tax Identification Number or NUIT, and open bank account, legal rights to their lands (DUAT) etc.

- Facilitate FBAs in access to finance: The additional financial resources accessed supported the FBAs to purchase improved technology (greenhouse, solar pumps, irrigation equipment, etc.) and manage working capital. 55 FBAs (40% women) in 2018, 45 (58% women) in 2019 and 26 FBAs (85%) in 2020 availed soft loans through the KIVA platform.

- Train well drilling service providers: The project trained 12 entrepreneurs in manual well drilling using the jetting model in 2019. The project also trained 10 metal fabricators on rope pump fabrication to combine service with well drillers in 2020. The service providers are expected to serve the community with well drilling services.

- Facilitate SCFs in producing and marketing certified seed: The project supported 5 SCFs to produce certified seeds of groundnuts and soybeans. This intervention is expected to provide the SHF with low-cost, high-quality seeds, changing their habit of using retained seeds with low productivity.

- Facilitate SCFs access to protected production technology (in the form of introducing them to greenhouses) for improving the commercial production of horticulture.

Apart from these major activities, the project supported Idai affected FBAs with emergency support to recover from the damages. 32 FBAs heavily affected by Idai were supported in 2019 with building materials, food and agro-inputs to help them restore their business and livelihood.

2. Farmers' Capacity Initiative: This intervention area intended to improve the farmers' exposure and access to innovation, technology, finance, etc. The following major activities were conducted under this intervention area-

- Establishing Farmers Field School (FFS) or ECPAs (Escola em Campo para Pequenos Agricultores): SMART established 125 ECPAs in 2017-18 agrarian season, 107 in 2018-19, 355 ECPAs in 2019-20, and 416 in 2020-21 agrarian season. ECPAs are farmer field schools established to train the SHFs on agricultural production and technologies by grouping them to teach different practices along the production cycles of the diverse crops. With the trainings, farmers are expected to learn about the different varieties and qualities of seeds, the appropriate quantities to be sown in an area, their correct spacing and sowing and planting in line, as well as other good agricultural practices, including drip irrigation, dry mulching (for vegetables and beans), etc. Farmers are also expected to adopt improved technologies such as using the organic materials as natural fertilizer when preparing the field (instead of burning the field and all organic material), preparing the field and soil and producing organic fertilizer-Bokashi (especially for vegetables), etc.

- Facilitating financial education training: Around 1,220 farmers (49% women) were trained in financial education training that was conducted in 2019; out of which, 430 (64% women) were supported to join in 13 savings and loan (S&L) groups. The low-cost financing from the S&L groups helped SHFs to buy certified seeds and agro-inputs, start small businesses, have available and increase capital of the existing business, and buy food items jointly, benefiting from economies of scale by purchasing in large packages and dividing amongst group members, etc.

- Establishing Technology Centers (TC) and Nuclei of Technology Transfer (NTT): The project established three TCs in Chimoio, Dondo, and Ulongue to facilitate agricultural research, demonstration, and knowledge/skill transfer activities, linked to training centers in these locations. The NTTs are demonstration and dissemination programs of improved technologies among the SHFs/SCFs. Technologies include, amongst others, greenhouse, tunnel, solar pump, rope pump, thresher, seed calibrator etc. that are intended to increase farm productivity and quality of produce, lower the cost of production, etc.

- Organizing agricultural Input Trade and Technology Fairs (ITTF): The project organized 29 ITTF fairs in Manica and Sofala provinces with participation of commercial input suppliers (76), FBAs (4), 48,000 beneficiaries And the FAO agricultural kits program. The fairs gave access to quality inputs to the SHFs.

Apart from these major activities, the project facilitated the establishment of demonstration plots established by the FBAs and with the ECPA's, technology centers, diversification of farmers' source of income, facilitating improvement of gender equality and equity through farming as a family business (FaFB) approach, etc.

3. Value Chain Initiative: This intervention area is intended to ensure availability of strong input supply, value addition, aggregation, market linkage and agribusiness development services to the farmers. The following major activities were conducted under this intervention area:

- Linking the FBAs with the agri-input companies: SMART facilitated linkages between FBAs and agri-input companies selling seed, fertilizer, pesticide, etc. The FBAs (146, 38 and 78 FBAs in the year 2020, 2019 and 2018, respectively) were linked with such suppliers including Pannar seed, Bayer, Syngenta, Casa do Agricultor, Easi Seed, etc. The facilitation is intended to ensure sourcing of quality inputs with discounted price and facilitate buying with credit for the FBAs.

- Linking the FBAs with the agri-output buyers: The project facilitated the linkages between FBAs and the agri-output buyers sourcing agricultural products in the intervention areas. The FBAs (139, 28 and 5 FBAs in the year 2020, 2109 and 2018, respectively) were linked with such buyers including supermarkets, hotels, local markets, hospitals, etc. The facilitation intends to ensure a market and a fair price for the SHFs who are selling their produce to the FBA, and allowing an expansion of their areas of operation, and other associated benefits.

- Linking the FBAs with the SHFs: FBAs that were linked with the input and output markets were also linked with project farmers to ensure provision of better products and services to these SHFs. The linkage is done through channels including ECPAs and savings and loan groups. The linkage is intended to facilitate the access to quality inputs and output markets for the SHFs.

Apart from the major activities, the project also linked 1,700 SHFs directly to a feed producing company, namely EDP, in Ulongue district, for the direct supply of soybean by the SHFs to that company.

3.2.1 Who Does and Who Pays Analysis:

The who does, who pays analysis gives an idea of sustainability of the interventions under an MSD project[1]. We discussed how the interventions are currently paid for and who is paying for carrying out the interventions in the current situation. We further analyzed who will continue doing the interventions/follow-up activities post-project and who might pay for those activities. We developed an ideal who does who pays scenario according to the MSD principle that the project should strive to achieve.

Table 5 Who does and who pays analysis of SMART- ideal versus current scenario

	Current Scenario in the Project				Idle Scenario	
Activity / Intervention	Who Does during the project	Who Pays during the project	Who does after the project/at the end of the project	Who pays after the project/at the end of the project	Who does after the project/at the end of the project - Ideal	Who pays after the project/at the end of the project - Ideal
1 FBA and SHF upgrade through input and output	SMART	SMART	The strategy around ITTFs (beyond humanitarian) is unclear and there is no evidence that	Not Clear	FBAs or lead producers.	Farmers pay for their input.

[1] https://beamexchange.org/guidance/vision/who-does/#:~:text=The%20sustainability%20analysis%20framework%20(also,the%20capabilities%20of%20market%20actors

markets, ECPAs			FBAs or lead producers would continue implementing ECPAs beyond the project.			
2 Farmers capacity initiative through technology centers	SMART	SMART	Identified partners: academia, training centers should continue demonstrating new technologies and promoting them. ECPAs might be continued with lead producers continuing training SHF but support, inputs are provided by SMART and no strategy exists for phase out as it seems. FBAs are rarely implementing ECPAs.	Sustainability of ITTF related activities unclear as it is 100% financed and implemented by SMART/ iDE. The same applies to the ECPAs - knowledge-wise it can be continued but the lead producer has no incentive and no material to implement the ECPA in the following (no budget for seeds, etc.).	FBAs or lead producers.	Farmers or internalized in the government program.
3 Value chain initiative: availability of strong input supply, value addition and agribusiness development services	SMART	SMART	The supported private sector actors / agro dealers continue operating with their linkages and explore new ones (but are not well prepared to do that apparently). Mainly, other projects who continue supporting.	The supported private sector actors / agro dealers continue with their established relations and discounts seen the system has been set up with suppliers. Other projects continue supporting (big assumption). At the output level, sometimes FBA continue working with SHFs and the link to buyer markets, in other cases SHF groups should directly link to buyers and cover costs related to that (but are not well aware of that)	Private sector actors, agro dealers, FBAs	Private sector actors, agro dealers and FBAs.

3.2.2 Access to finance

The project has been quite innovative in partnering up with KIVA to provide zero-interest loans to their beneficiaries. Through KIVA, the project helps beneficiaries (particularly FBA and SCFs and selected SHF) access a financing package for investment in technology and other assets. It is a cost sharing investment, and it follows specific eligibility criteria. So far, there are over 200 borrowers in the 4 provinces, which is still a small number compared to the project's intended outreach and the financing

needs of the target population. Indeed, only 20% of our respondents through in-depth interviews stated they had benefited from this facility. Some showed satisfaction towards the KIVA loan and others reported difficulties in repaying the loan, mainly due to the risky nature of their activities.

Besides the KIVA product, SMART has also successfully supported the strengthening and organization of some savings groups at community level. The evaluation found that the few groups that exist are working well and that many were already in place before SMART. These are very diversified groups in terms of the participants and are not linked to the ECPA groups in the areas where both exist. More support is needed as these groups represent a significant chance of supporting farmers in their agricultural planning, empowering women at the local level as well as providing resilience against climatic and economic shocks in the project intervention areas.

3.3.3 Monitoring and evaluation System

The SMART M&E system was planned to be done following the donor committee for enterprise development (DCED) compliant measurement system including preparation of the results chain, measurable indicators, targets, and specific evaluation plan to estimate attributable changes. Data was planned to be collected using a robust cloud-based management information system (MIS).

However, there have been deviations in the execution. No results chain was prepared for interventions. The indicators require clarity in definition and calculation methodology. More importantly, the indicators in different levels of the logframe (activity, output, outcome and impact) were not logically connected, leading an activity towards an output followed by an outcome and finally an impact. The baseline data was collected, however, most of the indicator values were missing there. Follow-up data were collected in yearly progress reports. However, the progress reports were reporting the immediate results of the activities, whereas the values for the output, outcome were not collected. No training of M&E staff in reporting MSD interventions was reported. There were no DCED mock audits conducted.

Evaluation of the SMART Interventions According to DAC/OECD Criteria

4. Evaluation of the SMART Interventions According to DAC/OECD Criteria

4.1 Relevance and Strategic Fit of the Project

> How relevant is the project to the priorities and needs of the target group and policies in the three program areas?

SMART project started working with the smallholder farmers and small commercial farmers in the context where 97% of the farmers were growing low-value staples, mostly rainfed. Average yields were extremely low (below 1 ton per hectare) that required interventions in the input and output market system. The constraints included lack of input retailers, extension agents, access to credit, secure markets, high-value output markets, farmers' lack of access to improved production practices and emerging agricultural know-how, modern agricultural technologies, that hindered quantity and quality of their crops. In terms of gender norms, female farmers were excluded from attractive commercial agriculture because of poverty, traditional gender norms, and modern gender-biased government policies and business practices[2]. SMART value chain report identified the following systemic constraints in the target areas: a) Poor access to markets; b) Lack of locally produced seed; c) Lack of processing facilities; d) Lack of access to working capital; e) Poor logistics; f) Poor access to electricity.

In this backdrop, the project implemented interventions to increase income of the smallholder farmers through improved agricultural activities, creating a demand for agricultural inputs and technologies through improved extension services, developing access to the improved input and output markets and innovative microfinance. SMART intended to do this by strengthening the farm business advisors (FBAs) and facilitating connections of the smallholder farmers and small commercial farmers with the private sector market actors.

To analyze the relevance of SMART interventions to the beneficiary needs, this evaluation team examined the needs and requirements prevailing in the smallholder farmers' end through identifying the constraints they were facing before SMART intervention. The focus group discussions (FGDs) with the farmers revealed the constraints they were perceiving, as listed under the broader areas as follows-

Productivity or Yield: Farmers were perceiving lower yield, because of unavailability of quality seeds, pest attacks, long agricultural cycle, unavailability of quality fertilizer and pesticides, and low productivity of the soil (because of micronutrients) before they worked with the SMART project.

Quality of Agricultural Products: The quality of the agricultural products was suboptimal contributed by excessive pest attacks in the field and no knowledge how to treat the pests and diseases, as well as losses in the storage, lack of quality seeds for achieving higher production yields, etc.

Number of crops in a field in a year: There was a mixed opinion. While a few of the FGD participants reported a lower number of crops, the others saw no difference. However, farmers reported they used to produce mainly staple crops and no horticulture crops and at the subsistence level before SMART started interventions.

[2] *Source: SMART inception report*

Access to inputs: FGD participants agreed on the topic that there was limited access to the quality inputs. Farmers were using retained seed for most staple crops as they had no access to certified seed. It was the general tradition to use retained seed and farmers were affected by fraud by the seed retailers. They FGD participants also reported their also lacked of the knowledge to produce organic fertilizer or did not know how to use and which fertilizer or pesticides to use before the project started.

Picture: Packets of improved seeds used by beneficiary smallholder farmers

Agricultural practices: The participant farmers reached a consensus that they partly did not know about and mostly did not practice the improved agricultural practices such as sowing in line, plant spacing between lines, mulching, appropriate use of pesticide, use of organic pesticide, how to use seed efficiently. Farmers confirmed that, although many of the projects previously informed them about these improved practices, they did not realize the necessity to follow it.

Technological equipment and knowledge: There was a mixed opinion. A few of FGDs revealed the farmers did not have access to improved agricultural equipment such as irrigation pump, sprayers, harvesters, threshers, while other FGDs revealed that the smallholder farmers still have limited access and know-how of the improved agricultural equipment.

Linkage to input and output markets: The FGD findings inform that connection to the input and output market was missing in many locations before SMART started its intervention. Although this is improving in some areas while is still interrupted in the other areas. The local agro-dealers in some target areas (now working as the FBA) have expanded their businesses through business skills development support from SMART. Agro-dealers previously working in distant main-town now are allocating subsidiaries in the small communities. For example, Mr. Joao Guerra who used to have a shop in Nhamatanda city grew his business and set up at Nhangona community in Metuchiri area. He is further expanding in other communities in Metuchira area. Producers are getting better access to inputs where they can claim settlement of issues related to seed quality (e.g. farmers get new seeds in replacement of seeds with poor germination quality). Therefore, linkages between FBAs and producers work especially well in mentioned areas. However, poor linkages is observed in a few of our study locations, such as in Vanduzi district. The smallholder farmers there face issues like low price of their produces, greater bargaining power of the buyers, adverse impact of the intermediaries, lack of access to high value markets due to backward transportation and lack of knowledge about where market opportunities exist.

Access to finance: All the FGDs revealed that the smallholder farmers had minimum or no access to financial institutions that hindered their opportunities to save or invest from external financing sources. The constraints identified by the smallholder farmers themselves denotes their needs. SMART project rightly started its interventions with the objective to improve productivity and quality through access to quality inputs, improved agricultural practices, technologies and knowledge, improved access to the markets in forward and backward linkage areas and access to finance.

In a nutshell, we can conclude that the interventions were relevant to the needs of the smallholder farmers. As a whole, there was a good selection of interventions for the project and the interventions are relevant to the needs of the smallholder farmers and other involved actors. However, doubts were cast about the relevance and implementation of the NTTs to cater for the farmers' needs. The purpose of the NTTs beyond demonstration and a nice to have intervention, was not clear.

4.1.2 Technical Adequacy of the interventions:

SMART project interventions facilitated connections between the small holder farmers and FBAs to promote improvement of input and output services and access to the market. They were further provided with different interventions consisting of training on agricultural practices, financial literacy etc.

Around 91% of the SHF reported receiving services from FBAs in the agrarian season 2019-2020.

> Are the project interventions (FBAs, ECPAs, NTT, TECH and gender mainstreaming) technically adequate and appropriate solutions to the development problem at hand? Do they address the

Table 6 Smallholder farmers' receipt of services from the FBAs

Services received from FBA in the agrarian season 2019-2020	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Received services from a fellow farmer or FBA	91%	91%	86%	95%	97%	91%
Do not received services	9%	9%	14%	5%	3%	9%
Don't know	1%	0%	1%	0%	0%	0%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

The respondent farmers also reported receiving technical assistance from the project such as training on agri-business (16%), agricultural practices (57%), financial literacy (11%) etc. The training on farming as a family business was intended to establish equitable gender norms in the smallholder farming activities, that the intervention was capable to achieve. We found evidence of women engaging increasingly to the agricultural activities and realizing the benefits of it. Moreover, the intervention served the larger need to make producers aware that farming is business and income from this source should be treated similar to income from business and used to plan household needs, where 75% of the respondents participated (Table 7).

Table 7 Percentage of respondent smallholder farmers participating SMART intervention activities

Agricultural events where farmers participated during the past year	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Participated in a Farming as family business training	77%	72%	54%	91%	84%	75%
Participated in a training on agricultural practices	53%	62%	67%	45%	75%	57%
Participated in a training on financial education	9%	14%	11%	11%	13%	11%
Participated in a training on agri-business	14%	19%	22%	11%	19%	16%
Participated in a teaching session on a Demonstration plot	84%	92%	92%	84%	88%	88%
Participated in an Input Trade and Technology Fair (ITTF)	65%	71%	54%	90%	13%	68%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

It is pertinent to assess if the interventions were adequate to the needs or solving the constraints prevailing in the market system. A majority of the respondents (around 94%) replied that they received agricultural knowledge while half of them (50%) benefited with higher yields. Other farmers were also benefiting from a reduction in loss of cultivation (20%), increase in sales (13%), better price (9%), and diversity of source of sale.

Table 8 Benefits of SHF with the facilitated relationship with the FBAs and project interventions (ECPAs, etc.)

How were the farmers benefited from the service by the FBA	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Agricultural knowledge	95%	92%	93%	95%	94%	94%
Higher yields	46%	55%	56%	42%	65%	50%
Reduction in loss during production/harvest/storage	15%	26%	22%	18%	23%	20%
Increased sales	12%	14%	9%	16%	13%	13%
Better prices	8%	11%	9%	10%	7%	9%
Selling to more/ different buyers	5%	8%	8%	4%	7%	6%

While the training taught farmers multiple good agricultural practices, they retained the knowledge and applied those differently in their farming. The table below shows the percentage of farmers applying good agricultural practices learnt from the SMART intervention activities.

Table 9 Application of good agricultural practices learnt from SMART intervention

Which of the good agricultural practice farmers applied during the past agricultural season (last 12 months)?	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Sowing in line	95%	97%	98%	95%	94%	96%
Proper crop spacing	87%	90%	86%	89%	94%	88%
Use of certified seeds	71%	76%	70%	76%	72%	73%
Soil preparation	47%	51%	50%	46%	59%	49%
Using mulch	47%	48%	57%	42%	31%	48%
Intercropping	33%	31%	24%	38%	41%	32%
Integrated pest management (IPM)	16%	26%	21%	22%	13%	21%

Using organic fertilizer/pesticides	21%	20%	27%	13%	28%	20%
Improved storage	16%	20%	27%	11%	13%	18%
Planning the production	15%	17%	21%	10%	28%	16%
Producing new crops	13%	16%	15%	17%	0%	14%
Reduced tillage	8%	13%	16%	7%	0%	10%
Irrigation (for vegetable)	3%	8%	3%	8%	3%	5%
Crop rotation	2%	7%	6%	2%	13%	4%
Other	1%	4%	2%	2%	3%	2%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

Picture: Farmers implemented good agricultural practices

Most farmers are applying multiple practices in their agricultural activities (Table 10). Almost all of the respondent farmers are applying at least one or two improved practices while 92% of them are applying three or more practices. Since there is no baseline information in this regard or any target for this mid-term period, a comparative analysis is not possible here. However, it is very positive to see that 72.9% of the respondents mentioned that they are using certified seed as it is a very important practice and will have a very positive impact on the farmers productivity levels. This may be due to the ITTFs in grand part, but also confirms the level of outreach this activity has had. Considering the high uptake of improved agricultural practices, we conclude that the SMART interventions were appropriate and partly adequate in bringing about the intended change. However, we believe that there is further scope to work on other practices such as safe pesticide use and production planning, in order to be able to foster the adoption process by successfully changing the farmers' habits and practices.

Table 10 Farmers' application of good agricultural practices (last 12 months) learnt from SMART interventions

Farmers' application of good agricultural practices (last 12 months) learnt from SMART interventions	Female	Male	Manica	Sofala	Tete	Overall
% of SHF using at least one good practice	100%	99%	100%	100%	97%	100%
% of farmers using at least two good practices	98%	99%	98%	98%	97%	98%
% of farmers using 3 or more good practices	90%	94%	90%	93%	97%	92%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

4.1.3 Relevance of the Project in the Areas Impacted by IDAI:

The project adapted quickly to maintain its relevance as circumstances in its operation have changed. It managed to introduce a needed humanitarian solution, after the cyclone Idai, one which presented a big potential towards avoiding market distortions that are often generated by free donations of agricultural inputs and establishing the basis for a continued effort towards systemic change. The challenge was compounded by the onset of the COVID pandemic, which the project was able to tackle in allowing that inputs reach the beneficiaries without compromising their health. Now the challenge lies on whether the project has carefully ensured the next step.

> How has the SMART Project remained relevant to the clients and beneficiaries operating in areas impacted by Cyclone Idai? How has the adapted approach referred to as the Farmer Resilience and Rebuilding Initiative (FRRI), which uses voucher-based Input Trade and Technology Fairs, contributed to the humanitarian needs of existing beneficiaries?

SMART organized the Input Trade and Technology Fairs (ITTF) to ensure availability of quality inputs on the onset of the crisis of inputs after the cyclone Idai where 68% of the surveyed smallholder farmers attended (Table 11).

Table 11 Smallholder farmers participated in an Input Trade and Technology Fair (ITTF)

Smallholder farmers participated in an Input Trade and Technology Fair (ITTF)	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Percentage of farmers participated in the ITTF	65%	71%	54%	90%	13%	68%

4.1.4 Appropriateness of the Approach

SMART project was designed with the right ingredients of a market system development program such as improvement of input and output market system,

> Given the context, was this the most appropriate approach for a market system program? What additional components of the project need to adapt to the new operating environment?

developing linkages with the private sector such as input suppliers and commercial buyers, etc. However, the project is not using the elements of MSD approaches effectively to changed operating environment and market system. For example, the Input and Trade Fairs rightly intended to promote the appropriate source of quality input in post Idai period; however, this further distorted the existing market system of local agro-dealers in the community, whereas iDE promoted these local agro dealers through some other interventions. The FGD respondents in Manica said that they do not prefer buying from Agri-dealers, rather depend on the fair. Although, the local agro-dealers participate in the fair, the reasons behind farmers' preference on ITTF is because of the voucher-based incentive they get. This has been creating a contra-MSD impact in the end.

This is supported by the quantitative survey findings and illustrated with the table below (Table 12), where 83% of the respondents identified input fair organized by SMART project as a source of their agri-inputs. In comparison, preference for the existing market was low such as local agro dealers (16%), provincial agro dealers (6%), etc. Moreover, higher dependency on the retained seed is also sought (42% from own production and 11% from other farmers).

This was also supported by the FGD findings, where the farmers recommended organizing more such fairs because they lack the access to pesticide (quality products are unavailable in the local shop), fertilizer (fraudulent by the local shops with quality), agricultural technology (unavailability of irrigation system, thresher, irrigation pump, etc.) and connection to source of finance. Although these technologies are available in the market, there is lack of demand for buying with a price.

The agri-fair is very beneficial for the smallholder farmers, and they showed their preference to it seeing they get access to quality inputs for free through the employed voucher system. Therefore, SMART project needs to set mechanisms to achieve scale and make it sustainable so that the fair reaches a greater number of target beneficiaries and is organized regularly even after SMART leaves.

Additionally, the scale and sustainability of the existing intervention to strengthen the FBAs and creating linkages with the SHF could be a solution to the requirements of the smallholder farmers. The project has the right components of the MSD approach that needs to be executed. For example, the FBA and franchisor model needs to be scaled up so that the smallholder farmers in all the target locations get access to the essential agricultural knowledge, inputs and technological services that otherwise is missing in the region.

Table 12 Source of inputs for the smallholder farmers

Where do farmers get the inputs for the production (certified seed, fertilizer/organic fertilizer, pesticide, IPM) in	**Gender**		**Division**			**Overall**
	Female	Male	Manica	Sofala	Tete	
Own production /retained	46%	36%	24%	63%	13%	42%
Retained seed from within the community (community people, neighbours, friends)	13%	8%	9%	12%	19%	11%
From the Input Trade & Technology Fair (SMART)	82%	84%	80%	95%	28%	83%
Agro dealer in the next town	16%	15%	20%	11%	25%	16%
Agro dealer in provincial capital	6%	7%	9%	3%	13%	6%
Directly from input companies' sales agent	1%	2%	2%	1%	3%	2%
No market available for inputs for main production crops	0%	1%	1%	0%	3%	1%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

4.1.5 Involvement of the Farmers and/Agricultural Actors in Project Designing Implementation and M&E

> Was there any involvement of the farmers/agricultural business actors in the project designing, implementation and M&E?

The project conducted the value chain analysis, gender assessment, environmental impact assessment, conflict sensitivity assessment etc. where they engaged the target beneficiaries in order to designing the interventions. The geographic and demographic context was taken into consideration during the assessments. The implementation of interventions involved the SHF, FBA, SCF, private sector partners, and government counterparts effectively.

Satisfaction of the Project Participants

As shown in table 4 that around 91% of the smallholder farmers received services from FBA. They were further enquired about their satisfaction on the services. A majority of the respondents (77%) reported extreme satisfaction while the other few (16%) showed moderate satisfaction on the services they received from FBA.

> How satisfied are the program participants with the benefits rendered?

Table 13 Satisfaction level of the SHF on services provided by the FBAs

Satisfaction of SHF with the services provided by the FBA (Likert Scale)	Respondent's Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Extremely dissatisfied	1%	1%	1%	0%	0%	1%
Not satisfied	0%	0%	0%	0%	0%	0%
Neutral	7%	5%	8%	5%	3%	6%
Moderately satisfied	15%	17%	21%	12%	16%	16%
Extremely satisfied	78%	77%	70%	83%	81%	78%
Base (n)	**216**	**168**	**165**	**187**	**32**	**349**

Analysis on the services that the FBAs provided to the smallholder farmers is shown below.

Table 14 Types of services provided by the FBA to the SHF

Services provided by the FBA	Gender		Division			Over all
	Female	Male	Manica	Sofala	Tete	
Input purchase	9%	13%	16%	6%	6%	11%
Introduced quality inputs	62%	67%	64%	60%	84%	64%
Received agricultural advice	87%	86%	79%	91%	94%	86%
Sold agricultural products	8%	11%	6%	11%	19%	9%
Got connected to input markets (inputs, fertilizers, etc)	8%	11%	13%	4%	19%	9%
Got connected to output markets (buyers)	3%	7%	5%	4%	13%	5%
Received market information (prices, etc)	4%	8%	5%	6%	6%	6%
Others	10%	11%	17%	6%	3%	10%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

4.2 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?

We looked at all the main outcomes and outputs (in the updated logframe) and try to respond to them based on the quantitative survey to assess the effectiveness of the project so far. This midterm evaluation assessed specific logframe indicators to evaluate if the project achieved its intended output, outcome, and goal. However, a few of the indicators have not been measured by definition due to unavailability of the baseline value or collection of suitable data along project implementation (for those not being able to assess in a single data collection exercise such as the mid-term review). The mid-term values in that case would be a reference for the end line evaluation. For example, the indicator '1102: Percentage increase in profit of FBAs/SCFs participating as key-players in cereals, cash-crops, horticulture and inter-season crops' cannot be measured without a baseline value. We therefore put the profit of the FBA/SCF here as the midterm reference value.

Output Level: To achieve the output, the project implemented three interventions: a) FBA+SCF upgrade initiative, b) Farmers' capacity initiative, and c) Value chain initiative.

The project supported FBAs and SCFs to have a client base, three quarters of which is doing repeated transactions (75% of the customers), indicating a steady business environment. The customer base consists of 48% of females, denoting a gender equitable business. While assessing SHF's satisfaction over FBA's/SCF's service provision, more than three quarters of them showed extreme satisfaction (77.6%) while around 16% showed moderate satisfaction. All these indicators show an effective implementation of the intervention 'FBA+SCF upgrade initiative'.

A lower percentage of the respondents, the intervened SHF are demonstrating improved financial literacy (11%) as an outcome of the training conducted through ECPA. The project further organized 29 Input Trade and Technology Fair (ITTF) in 2 provinces where 48,000 SHF and SCF, 76 input traders and private sector representatives participated. The intervention resulted in 95.8% of the SHF citing improved access to agricultural markets. All these indicators show effective implementation of the intervention 'Farmers' capacity initiative'.

The project implemented the intervention 'Value chain initiative' to facilitate improved input supply and market linkages. As an output, around 92% of the SHF showed knowledge of improved agricultural inputs while 58% showed knowledge of improved output markets. The project facilitated linkage of FBA/SCFs to private sector market actors. Around 62% of the FBA/SCF were linked with the private sector input companies while 42% of them were providing linkage facilities to their SHF counterparts (none of the FBA in the Manica reported of doing the linkage). That said, linkages of SHF through FBAs to input supply markets is not necessarily the target while it is the FBA's role in the market system to fill this part; and not every individual SHF would buy from the seed supply company directly. Hence, interpretation of this data and the way it is understood should be considered with care. 33% of the FBA/SCF were linked to the private and public sector output market actors and providing linkage facilities to their SHF counterparts. While assessing the effectiveness of the value chain initiative intervention, a further scope of market linkage is sought, especially for the output market areas (where only one third of the FBA/SCF were linked with the private sector). The FGD findings also agree with

this proposition where SHFs raised their requirement to be linked with the high value market to get a smooth corridor for their products and higher price.

The output indicator values at this mid-term stage have been measured in the Table 15 below.

Table 15 Midterm values of the output level indicators

Output 1110: "FBA+SCF upgrade initiative" – A network of profitable male and female small commercial farmers and FBAs interacting with a gender-equitable client base is established. 1120: "Farmers' capacity initiative" – Increase male and female farmers' access to innovations, technologies, and farming business models through the establishment of technology centers, agribusiness incubators, NTTs, and demo plots 1210: "Value Chain Initiative" – Improve input supply, value addition, aggregation, market linkages and agribusiness services to male and female farmers through a franchisor model made up of an established network of input suppliers, aggregators, agribusiness service providers and other change agents.			
Logframe Indicator	**Baseline Values**	**Midline Values**	- **Analysis plan/Commentary**
1112: Percentage of farmer-clients satisfied with FBAs/SCFs, by service type (M/F)	Not available	Extremely satisfied: 77.6% Moderately satisfied: 15.9% Neutral: 6.0% Not satisfied: 0.0% Extremely dissatisfied: 0.5%	- Satisfaction level of the beneficiaries quite high.
1113: Percentage of FBA/SCF clients demonstrating repeat transaction with an FBA/SCF across all areas of service (M/F)	Not available	Percentage of FBA/SCF clients doing repeat transactions = 75%	- Repeat transaction made in last one year is satisfactory (average of all respondents).
1114: Percentage of FBA/SCF clients completing a transaction by gender (M/F)	Not available	Percentage of FBA/SCF clients that are women = 48%	- The benefits that SHFs received were gender neutral.
1121: Percentage of SHFs that know where to access improved inputs if they want it	Not available 39% of the respondents reported no access to market information in the baseline. This could serve as a comparison point	Overall: 91.9% Manica: 87.9% Sofala: 96.3% Tete: 87.5% Female: 92.1% Male: 91.7%	Source of improved inputs includes- - From the local service provider /shop in the community (including FBAs) - From the Input Trade & Technology Fair (SMART) - Agro dealer in the next town - Agro dealer in provincial capital - Directly from input company's sales agent

1122: Percentage of SHFs with knowledge where to access improved output markets for sale	Not available 39% of the respondents reported no access to market information in the baseline. This could serve as a comparison point	Overall: 58.3% Manica: 63.6% Sofala: 49.7% Tete: 81.3% Female: 59.3% Male: 57.1%	Source of improved output market includes – - Local aggregator/middlemen in the local market/Local output buying posts - Aggregator/middlemen in the neighboring community - Large company/ agri-processing company came to buy - Selling through the producer association
1123: Number of IFFTs sessions held, and the number of people who attended.	0	ITTFs in 2020 - Number of ITTF = 29 (in 2 provinces) - Number of participant beneficiary = 48,000 - Number of participant input supplier = 76	Source: Project data (ITTF final report 2020)
1127: Number of SHFs demonstrating improved financial literacy (M/F)	Not available	Number of SHF 43 (11%)	- Financial literacy among participants quite low, which resulted in low access to finance.
1211: Number of FBAs and SCFs linked to private sector companies (M/F)	0	- Number of FBA/SCF linked to the private sector companies = 13 out of 21 surveyed - Percentage: 62% Additional information: 10 FBA/SCF linkage was facilitated by SMART	- All of the project supported FBA/SCF are expected to be linked with the private sector
1212: Percentage of FBAs and SCFs linked to private sector input suppliers/providers and providing access to SHFs (M/F)	0	- Percentage of linked FBAs/SCFs providing access to SHFs = 42%	- Moderately satisfactory
1213: Percentage of FBAs and SCFs linked to private sector output buyers and providing access to SHFs (M/F)	0	- Percentage of FBAs/SCFs linked to output market providing access to SHFs = 33%	- Comparatively low than input market linkage. Requires intervention on the output market linkage
1214: Percentage of smallholder farmers citing improved access to agro markets through the project (M/F)	Not available	- Percentage of SHF citing improved access to agro markets = 95.8%	Farmers using improved input market and output market (as are in indicator number 1201 and 1202)

Outcome Level: In the outcome level, the project intended to make the FBA/SCF business profitable to make this business model sustainable. 57% of the key-player FBA/SCF[3] were profitable, with an average yearly profit margin of MZN 524,599 (USD 9,130) in the year 2020. While facilitating access to finance for the FBA/SCF through KIVA loan, 65% of them completed one cycle of KIVA loan.

The project interventions were intended to increase productivity of the SHF. Although, productivity of Soya and Sesame is increased from baseline by 6.08% and 42% respectively, the productivity is decreased for the beans slightly by 0.9%. The productivity of horticulture is found 5,386 Kg/Ha and of Maize as 1,114Kg/Ha where a comparative analysis was not possible, as baseline data was not available. The table below shows average yield in KG per hectare according to the gender and province.

Table 16 Average yield (in Kg/Ha) (in the agrarian season 2019-2020)

Average Yield: KG/Ha	Female	Male	MANICA	SOFALA	TETE	Overall
Beans	338	577	544	315	553	438
Horticulture	4,262	6,480	3,680	7,243	.	5,386
Maize	1,006	1,321	1,426	736	2,141	1,144
Sesame	356	389	404	349	.	375
Soya	325	941	825	.	629	645

Most of the respondent SHFs are found knowledgeable (99.2%) of good agricultural practices (GAP) and are practicing GAPs (99.5%). Knowledge on good agricultural practices include weeding, mulching, organic fertilizer, production plan, certified seeds, spacing, crop rotation, production diversifications, improved storage, protected environment. However, as consistent with the output level indicators regarding access to the output market, 58% of the SHF are selling their products through an improved market channel (definition of improved output channel is given in the (Table 17).

While the uptake of improved technical and risk management skills is quite satisfactory along with the agricultural productivity, the output market linkage is up for further improvement. The project can further strengthen the FBA and franchisor model to translate good agricultural productivity into higher value.

The outcome indicator values at this mid-term stage have been measured in the Table 17 below.

[3] Key-player are the FBA/SCF who have their enterprise activities as their primary source of income throughout the year.

Table 17 Midterm values of the outcome level indicators

Outcome 1100: Increase in the competitiveness of male and female small commercial farmers and male and female smallholder farmers involved in major value chains, including cash and food crops, mainly with better access and use of technology as seeds, irrigation and conservation agriculture. 1200: Stronger core private players, providing access to adequate infrastructures, technologies, inputs and working capital, through non-formal finance mechanism (catalytic funding and matching grants) and technical assistance with specific real expertise.			
Logframe Indicator	**Baseline Values**	**Midline Values**	**Analysis plan/Commentary**
1101: Percentage of FBAs/SCFs profitably participating as key-players in cereals, cash-crops, horticulture, and inter-season crops value chains (M/F)	Not available	Percentage of profitable key-player FBA/SCF = 57% - Additional information: - Number key-players = 16 (out of 21) - Number of profitable key-players= 12 (out of 16)	- Profitable Key-player FBA or SCF ÷ Number of FBA or SCF interviewed. - Key-player are the FBA/SCF who have their enterprise activities as their primary source of income throughout the year.
1102: Percentage increase in profit of FBAs/SCFs participating as key-players in cereals, cash-crops, horticulture, and inter-season crops (M/F)	Not available	Yearly average net profit = MZN 524,599 (USD 9,130)	- (Mid-term Profit – baseline profit) ÷ Baseline profit - Since baseline profit is not available, the average net profit at midline period is reported only; calculation of percentage increase is not possible.
1103: Percentage of FBAs/SCFs successfully completing a non-formal loan cycle (M/F)	Not available Entrepreneurs	Percentage of FBA/SCF completing a Kiva loan cycle = 65% *(130 out of 200 completed the loan)*	- Kiva loan database (number of ''ended'' loans ÷ number of uploaded loans)
1104: Increase in agricultural productivity (kg/ha) of SHFs in cereals, cash-crops, horticulture, and inter-season crops value chains (M/F)	Horticulture: Not available Beans: 442 Kg/Ha Soya: 608Kg/Ha Sesame: 264Kg/Ha Maize: Not available	Horticulture: 5,386 Kg/Ha Beans: 444 Kg/Ha (increase 0.45%) Soya: 645 Kg/Ha (increase 6.08%) Sesame: 375 Kg/Ha (increase 42.05%) Maize: 1,114Kg/Ha	- Baseline values for horticulture and maize are not available. - Maize is included here as a cash crop that is found with high frequency, 97% of respondents cultivated maize. - Horticulture includes (cabbage, carrot, cucumber, kale, lettuce, onion, pepper, pumpkin, tomato), - Beans includes (black eyed peas, butter beans, pigeon pea)

1105: Percentage of SHFs demonstrating improved technical and/or risk management skills (M/F)	Percentage of SHF know of- - At least one good agri. Practice: not available - At least two good agri. Practice: not available - Three or more good agri. Practice: 34%	Percentage of SHF know of- - At least one good agricultural Practice: 99.2% - At least two good agricultural Practice: 99% - Three or more good agricultural Practice: 98.4%	- Knowledge on good agricultural practices are (weeding, mulching, organic fertilizer, production plan, certified seeds, spacing, crop rotation, production diversifications, improved storage, protected environment)
1107: Number of SHFs successfully completing a non-formal loan cycle (M/F)	Not applicable	No information obtained on the completion of loan cycle	
1201: Percentage SHFs purchasing quality inputs (seeds, soil nutrition, disease prevention, irrigation, technology, etc.) (M/F)	Percentage of SHF applying- - At least one good agri. Practice: not available - At least two good agri. Practice: not available - Three or more good agri. Practice: not available	Percentage of SHF applying- - At least one good agricultural Practice: 99.5% - At least two good agricultural Practice: 98.2% - Three or more good agricultural Practice: 91.9%	- This is a proxy indicator: use of quality input as a proxy to purchase of quality input - Application of good agricultural practices are (weeding, mulching, organic fertilizer, production plan, certified seeds, spacing, crop rotation, production diversifications, improved storage, protected environment)
1202: Percentage of SHFs selling through improved output marketing Channels (M/F)	Not available	Percentage of SHFs selling through improved output marketing channels = 58.3%	Improved channel- - Local aggregator/middlemen in the local market/Local output buying posts - Aggregator/middlemen in the neighboring community - Large company/ agri-processing company came to buy - Selling through the producer association)

4.2.1 Equitable Experience of Outcome

While assessing the project outcome achievement equitably regarding the gender, poverty status, disability, etc., we found an active engagement of both the genders in project interventions (Table 18).

> Do project participants experience outcomes equitably? Particularly among participants of different genders, poverty statuses, disabilities, and other social identities. If so, why? If not, why not? What can be done to make the project more equitable?

Although the base number is too small to draw a conclusion, the participants of the linkage activities of both input and output markets were mostly male.

Table 18 Participation in intervention activities by gender

Type of project activity	Intervention participants by gender		Participant base (n)
	Female	Male	
Participants of a Demonstration plot	54%	46%	336
Participants of a Farmer Business School training	58%	42%	287
Participants of a training on agricultural practices	52%	48%	218
Participants of a training on financial education	47%	53%	43
Participants of a training on farming as a family business	48%	52%	62
Participants of an Input Trade and Technology Fair (ITTF)	54%	46%	261
Participants of a linkage event with input providers	29%	71%	14
Participants of a linkage event with buyers	25%	75%	12

Around 91% of the respondent SHF received services from the FBA. Of the service recipient, 56% were female.

Table 19 Gender of the SHF service recipient from an FBA

	Service recipient by gender		Base (n)
	Female	Male	
Received services from an FBA	56%	44%	349

The outcomes were perceived by the smallholder farmers almost equitably in regards to gender. A higher percentage of the female participants of various intervention activities (as in the Table 18 above) showed knowledge and practice of the good agricultural practices (Table 20).

Table 20 Farmers' knowledge and practice of good agricultural techniques

Respondent farmers' knowledge on good agricultural techniques			
	Female	Male	Base (n)
% of SHF know of at least one good practice	56%	44%	381
% of SHF know of at least two good practices	56%	44%	380
% of SHF know of 3 or more good practices	57%	43%	378
Respondent farmers applying good agricultural techniques during the past agricultural season			
	Female	Male	Base (n)
% of SHF using at least one good practice	56%	44%	382
% of SHF using at least two good practices	56%	44%	377
% of SHF using 3 or more good practices	55%	45%	353

The gender analysis of the benefits perceived by the SHF shows the females were slightly higher in percentage in realizing the benefits of services provided by the FBA. This is shown in the table below.

Table 21 Benefits of services provided by FBA according to the gender of service recipient SHF

Benefits perceived by the SHF from services received from an FBA	Female	Male	Base (n)
Agricultural knowledge	57.2%	42.8%	332
Higher yields	52.3%	47.7%	176
Less loss during production/harvest/storage	42.9%	57.1%	70
Increased sales	52.2%	47.8%	46
Better prices	46.9%	53.1%	32
Selling to more/ different buyers	42.9%	57.1%	21

The qualitative information also agrees with the above evidence. During the field investigation, we did not sense any gender bias in terms of project implementation. Many of the producer groups and ECPAs were led by the women FBAs. Nor was there evidence of beneficiary selection based on status, disabilities, or other social identities. The project targeted diverse income levels and with a focus on the lower income group. The project targeted poor and small subsistence producers as beneficiaries for the "farming as family business" training and intervention.

4.2.2 Effectiveness of the Project Team Working with Stakeholders

> How effectively and appropriately has the project team worked with different stakeholders and involved them in relevant stages through the process (partners, alliances, private sector, policymakers, media, etc.)? What difference did the partnership make to the project outcomes?

The SMART project has built good and strong relationships with local government partners (SDAEs) particularly during the ITTFs and field days. This is also true for the few institutions (universities, training centers, etc.) in which iDE has attempted at establishing technology transfer centers. However, there was no clarity about the strategy for technology dissemination to SHFs and how/or that activity would continue beyond SMART. The FBAs cannot say it strongly whether they would continue the embedded services (advising SHF on advanced cultivation technique and inputs, linking them with market actors etc.) that they provide to the SHF currently. The general impression is that services are not used by the farmers to its full potential and the partners don't have a clear technology transfer strategy beyond the immediate training needs of the institution for its students.

The same goes for the private sector partners. The project trained agro dealers and aggregators to a great effect. It also linked them to existing suppliers in Manica and other places. This was confirmed during interviews. However, the project yet to generate reliable linkages at scale at the community level beyond the main villages. Most farmers are still devoid of input supply chains at that level. At the output level, the linkage outcome is even more unsatisfactory. The project has to establish the reliable partnerships in which the private sector was convinced of the value to explore more difficult areas out of their comfort zones and be willing to invest on distribution channels/marketing to smallholder farmers. As stated several times, the relationship established during the ITTFs, was purely commercial and lacked a common vision/incentive between the SHF and the partners.

SMART has worked sporadically and superficially with other projects/NGOs, with no concrete strategic outcomes. The best partnership they established was the one with GAIN, and the KIVA, opportunity international and the other involved actors, for the ITTFs. This was confirmed by GAIN during the field visits.

4.2.3 Interventions that were more effective

Which interventions have been more effective to achieve respective logframe indicators most?

The most effective one has been the "FBA and SHF upgrade initiative" through the ECPAs and the ITTFs, which allowed for the access to good quality inputs and good agricultural practices (Table 12), therefore contributing to higher yields and incomes. No systemic change achieved from this intervention so far and the project needs to seriously look into this aspect.

Next to that, some training and capacity building initiatives for several local commercial actors, has been somewhat efficient. At least there was evidence during the field visits.

4.3 Efficiency

4.3.1 Alignment of the Project Elements to Gain Efficiency

How might the different elements of the adapted intervention (FBAs, ITTFs, ECPAs, NTTs, TECH and gender mainstreaming) be better aligned and coordinated to gain efficiency in the project implementation?

The different interventions in the different geographies in which the project operated, might have benefited from better integration and as a result bigger impact and efficiency. Isolated, often expensive investments in technology and training without a clear long-term strategy or plan around the investment might prove inefficient. One example is the NTTs. We did not find any evidence or mention of the positive effects these investments are having for local farmers or how they are aligned to other project interventions. Desk review showed specific technology set up and training actions without much depth at farmers' level. The project needs to redefine its goals for such interventions, the roles partner actors will play in such investments in the short and long term, as well as how they can be better used to maximize farmers benefits, complementing the other interventions at SHFs level (FBAs, ECPAs, etc). We recommend that the project also defines well the level and depth of interventions, for greater efficiency.

The implementing staff could be better distributed, considering the implementation requirements. The project could also benefit from a better hiring strategy and distribution of human resources. The project targets larger geographic areas with diverse interventions. One example is the four field technicians positioned in Sofala (particularly Nhamatanda), when the investments with SCFs in Maputo are not getting the needed human resource. The SCFs in Maputo reported a very weak relationship with the SMART project. The supervisor positioned in Beira should play a greater business brokering role in the field with the partners, for greater project efficiency and effectiveness.

This might be early to conduct a cost benefit analysis on the impact of the inputs provided through the ITTFs. However, the ITTFs can be evaluated in two ways: first, it is efficient in terms of how much was invested and what this might represent as immediate benefits for the beneficiaries, especially in post

Idai situations. Particularly considering the opportunity cost of not having this support available to the SHFs. Second, it might prove very inefficient in the long run, if the investment is not properly used to generate the kind of medium or ownership from the market actors to long-term change it has the potential to generate.

However, the ECPAs are efficient, particularly when coupled with the FBA development and the linkages through the ITTFs (access to inputs). It is a low effort activity (from the project end) that can rip significant benefits. The FGD findings (described under relevance section) also agree to that where the farmers sought it as an effective media for improved input and technology transfer. Better coordination and alignment between the ITTF and the FBA support interventions is needed.

4.3.2 Sufficiency of the Staffing Structure

According to the findings from the field investigation, the project needs strengthening its staff (hiring smartly) and using it to deliver the project effectively and efficiently. There is a general impression that many of the top to medium level operational staff are working in a sort of "do it all" mode. Given that iDE is growing, and it will have other projects to implement, this must be well decompressed, and roles well assigned for the benefit of SMART.

> Is the project staffing structure and overall capacity sufficient/well aligned to achieve the project objectives? If not, what recommendations can be made to the project structure that lead to greater impact?

One premise to implementing successful MSD project is that it must have the appropriate staff in place for it. Regardless of the project's thematic focus, it needs people who can think systematically and be able to transmit it to the private sector/market actors or rather instill it into the people. To define ways in which they can buy the partners into their ideas and therefore build strong and fruitful partnerships that represent a win-win scenario for all.

The M&E system of the SMART has been carefully assessed during this evaluation in reference to the project inception documents (refer to the section 3.3.3 Monitoring and evaluation). Although, the project is making its efforts to remedy that. With the organization of the ITTFs, the project has proved that it has qualified, young and energetic staff capable of delivering a good project. However, an MSD project requires M&E of systematic changes with prescribed M&E systems (e.g. DCED standards).

4.4 Impact of the Project

4.4.1 Achievement of the Outcomes

Measurement of the Impact Level Indicators: The project impact level indicators targeting increasing the household income generated from climate resilient agriculture activities is calculated for both agricultural income and total household income. The agricultural income is calculated as the agricultural revenue from cultivated crops in the last year. The household income is the yearly income taking agricultural income and income from any other sources into account. Since the baseline value was not available for the said indicators, it was not possible to make a comparative analysis in both the cases. The average agricultural income is MZN 13,597 (USD 221) while the total household income considering other sources of income is MZN 46,905 (USD 762) in 2019-20. As we tried to compare the data with the national reference value, we found no credible updated source of such data for Mozambique. The other part of the indicator, the agricultural income is found at 29% as a portion of the total household income.

> How far the Project outcomes achieved compared to the targets (based on project indicators)? What are the reasons?

Table 22 Progress According to the Logframe Indicators: A Comparative Analysis of the Midline Values

Impact/Goal Reduce poverty for smallholder farmers, particularly women and youth, in the Beira corridor and Maputo province			
Logframe Indicator	**Baseline Values**	**Midline Values**	**Analysis plan/Commentary**
1001: Percent change in agriculture household income generated from climate-resilient livelihood activities	Not available	Yearly Agricultural Income in 2019-20: Overall income: MZN 13,597 (USD 221) Manica: MZN 8,715 (USD 142) Sofala: MZN 10,797 (USD 175) Tete: MZN 55,127 (USD 895) Female: MZN 4,354 (USD 71) Male: MZN 15,991 (USD 260) Yearly HH Income: Overall HH income: MZN 46,905 (USD 762) Manica: MZN 36,790 (USD 597) Sofala: MZN 44,322 (USD 720) Tete: MZN 114,159 (USD 1,854)	Analysis plan - Yearly agricultural income which is the household income from multiple agricultural activities (Agricultural revenue – cost of production) - Yearly household income (Agricultural income + income from other sources) - Percentage: (Agricultural income to total household income) Commentary: - Comparative analysis is not possible because of unavailability of the baseline values. Therefore, the indicator cannot be measured (percentage change in income), rather generated the midline value that can be used for a base for analysis in the end line evaluation.

		Female: MZN 15,777 (USD 256) Male: MZN 54,968 (USD 893) Agricultural income to HH income: Overall: 29% Manica: 24% Sofala: 24% Tete: 48% Male: 29% Female: 28%	
1002: Number of people lifted out of poverty through increased sustainable incomes		Is not measured	

The project has been relevant for the needs of the target population, both in terms of all the efforts towards creating access to the inputs, technology, and knowhow as well as through the quick response with input fairs post cyclone Idai, particularly in Sofala and Manica. Partners and particularly smallholder farmers confirmed the relevance of the project for their communities.

SMART project started working on the target region to help the smallholder farmers to adopt improved agricultural technologies that would increase their agricultural yield. The project identified lack of irrigation as the hindering factor to higher yield in the first place. They promoted improved irrigation technologies such as Drip irrigation, motorized pump, solar pump, modern canal, etc. to replace traditional irrigation systems or rainfed cultivation norms. Small number of SMART beneficiaries started adopting improved irrigation systems.

Table 23 Adoption of improved irrigation technologies by the SMART beneficiaries (multiple responses counted)

	Gender		**Division**			**Overall**
	Female	Male	Manica	Sofala	Tete	
Rainfed/natural irrigation	91%	90%	86%	94%	94%	91%
Bucket / watering can	11%	13%	19%	7%	3%	12%
Motorized pump	1%	5%	2%	4%	0%	3%
Drip irrigation system	0%	1%	0%	0%	3%	0%
Gravity irrigation system	1%	0%	1%	0%	0%	0%
Base (n)	**216**	**168**	**165**	**187**	**32**	**384**

How effective the improved irrigation technologies were to the development of yield and agricultural profitability, was responded by the SMART beneficiaries. Those who irrigated their fields manually with bucket or watering can saw either increased yield (67%) or lowered cultivation cost (33%), which, according to SMART baseline report, were the primary needs of the smallholder farmers. 76% of the respondents contributed this knowledge and application of irrigation to the SMART project.

Table 24 Impact of the bucket watering system on agricultural cultivation

How did the improved technique help agricultural cultivation? Response for Bucket/watering can	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Lowered cost	33%	33%	23%	54%	100%	33%
Increased yield	50%	62%	61%	46%	0%	56%
Base (n)	**24**	**21**	**31**	**13**	**1**	**45**

Those who used the motorized water pump saw an increase in the cost (by 33%) however, also realized an increase in the yield (67%).

Table 25 Impact of the motorized pump on agricultural cultivation

How did this technology help? Response for motorized pump	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
Increased cost	0%	44%	50%	25%	0%	33%
Increased yield	100%	56%	50%	75%	0%	67%
Base (n)	**3**	**9**	**4**	**8**		**12**

The respondents were enquired about the source of their knowledge on the improved irrigation system, where 76% of them attributed SMART project as their source of knowledge.

Table 26 Source of learning on improved cultivation technique

Where did you learn the improved cultivation technique?	Gender		Division			Overall
	Female	Male	Manica	Sofala	Tete	
SMART project	71%	81%	74%	85%	0%	76%
From fellow farmers	50%	38%	45%	38%	100%	44%
From government extension offices	8%	19%	16%	8%	0%	13%

4.4.2 SMART Contribution versus Other Complementary Programs

> What is iDE SMART's contribution in this process vs other complementary programs of iDE SMART and other organisations?

The target regions are heavily covered by development projects creating an overlap in SMART intervention where SMART is building on previous projects both from other organizations and iDE's ones. However, the contrary situation is also observed in diverse areas where the public extension services or other programs are not working (because of limited capacities). SMART is coordinating diverse organizations and projects especially with the public authorities to the best possible extent; this is clear, especially with implementing ITTF and NTTs.

Collaboration with other projects takes different forms, including providing complementary services and assistance to existing projects and their beneficiaries. Examples include providing business

development skills to agro-dealers supported by AFAP in Sofala and linking them to supplier networks. Another example includes sharing knowledge and logistical support to IFDC to organize an agricultural fair (from the knowledge developed from ITTF and voucher system). SMART is supporting beneficiaries in Macumba em Nhamatanda district where World Vision, Kulima, ADPP and other organizations are active, but excluding the mentioned beneficiaries from intervention.

Anyhow, overlap with other projects is inevitable for operating in the Idai affected areas. Important here is the approach that SMART follows and distinguishes it from other projects. Diverse feedback from producers was that many projects came providing immediate help and support, providing inputs, seeds, and food. However, iDE Mozambique is one of the few organizations providing continued assistance and not only leaving inputs for use only.

4.4.3 Intended and Unintended Outcome

Very little unintended positive or negative results were identified at a wider scale - partly because the interventions covered a wide range of areas including linkages to input and output providers, arranging buyers, improving agri production, trying to increase female involvement and benefit from agri production etc.

> What are the unintended positive and negative results of the project?

However, an unintended negative result was observed where the ITTF partly distorted the local agro-dealers. The producers get used to sourcing their agricultural inputs such as seeds, fertilizers and pesticides, agricultural equipment etc. from ITTF fairs instead of buying from the agro-dealer in their community or nearby cities. Local agro-dealers supported by the SMART in some of the areas (e.g. in Dombe, Manica), confirmed not to participate in the trade fair in their community as other competitors were being invited and exposing their products at the fairs with which they cannot compete. Subsidizing inputs in voucher systems after the cyclone was necessary however, is slowly but surely creating market distortion for local agro dealers losing their clients to the program.

The external factors such as cyclone IDAI forced the project into adapting and restricted access to certain project areas. COVID was another which seriously affected contact and mobility.

4.5 System Change and Resilience: Scale and Sustainability and Resilience

4.5.1 Early Signs of Systemic Change in Scale and Sustainability and Resilience

In the center of the country, there are no early signs of the project generating systemic change, as the overall understanding is that this project did not have enough time to start implementing activities geared towards behavioral change of the people. The project addressed important functions in the

> Are there early signs of the project generating systemic change in scale (project is influencing and benefiting people beyond those directly involved in the intervention); sustainability (that the changes and impacts will last beyond the end of the project without external assistance) and resilience (market players can adapt to changing market conditions)? What are the key learnings so far?

market system in trying to bring about availability of inputs for the smallholder farmers, the creation of FBAs and by fostering knowledge transfer through ECPAs in the field. Ho[wever, the next step, that would allow the smallholder farmers up-taking some of the practices as well as maintaining linkages with the private sector both at local level (very thin market with few market actors and very few variety of products and quality) and with suppliers further located in the main villages, was not sufficiently evidential with scale. The region was hit by the cyclone and the project then migrated into a different model of intervention (humanitarian/emergency market systems) in the forms of the ITTFs, without clarity in terms of fostering those markets and forging those relationships between farmers and input suppliers. A very good intervention was the direct linkage between the ITTFs and the ECPAs to demonstrate value of the inputs, albeit we could argue for more involvement of the private sector there too. Questions are raised about sustainability of the FBA model without the kinds of incentives that the project provided, especially to the remote intervention areas. The FBAs would require At output level, little was done beyond the very few well-functioning and relevant FBA aggregators.

In general SMART built a very good case for knowledge transfer and capacity building without clarity about next steps towards a more sustainable market system (resilience). This might be more evident after a few years post ITTFs.

The case of Maputo is different. Smaller intervention in terms of immediate beneficiary outreach, but clearly one that represents a case of 'systemic change in scale' with the introduction and positive adoption of protective cultivation and irrigation technology around the green belt area of Maputo. There was evidence of the good numbers these businesses are achieving and the market competitiveness this brings, particularly in terms of import substitution against the imports from South Africa. There was even evidence of people producing to sell in South Africa. Having said that, we could not measure and attribute this success entirely to the project's interventions due to the already existing market dynamics in the area. In the specific case of green houses, there are also issues that relate to poor technical assistance for using these new technologies efficiently (which is not entirely a responsibility of the project from a market systems point of view), the burning effect of the plastic coverage raising questions about if the technology introduced is really adequate for local conditions, as well as the questionable resistance of the structures against strong winds that are more frequent in the local context. However, the project did not succeed in establishing evidence of a local market actor taking over this business and providing continued technical assistance to users of these greenhouses which would make the intervention more systemic. This case is an example of an intervention logic not being concluded and not being monitored on its impacts and potential shortcomings which can be adapted and improved when using the MSD approach and its recommended M&E system at its full scale.

4.5.2 SMART's Contribution to the Climate Resilience

Climate resilience is ever more important in the context in which SMART operates. There was evidence of some social networks that were built or supported by the project at local level. Savings groups, the networks generated through the ECPAs and the interdependence that exists between the members is a positive change in terms of building resilience against climatic shocks. Post-IDAI, the ITTFs represented not only a humanitarian activity but also support so that affected families didn't have to let

> How has the SMART Project contributed to increasing climate resilience for households, communities and private sector actors to anticipate, absorb, and adapt potential future climate related shocks and stressors? Are there additional activities that should be integrated into SMART that ensure a greater impact on climate and market resilience?

go of the few assets they had left and therefore maintaining a certain level of resilience which might have been otherwise worsened. With the introduction of good quality inputs, the ITTFs also contributed to the increase in productivity and levels of income of the farmers adding to their resilience against climatic shocks. Specifically, there was evidence of the introduction of shorter cycle and weather resistant varieties.

However, there was no evidence whatsoever of the project's communication work about what those practices represent in terms of climate resilience so that actors can anticipate, absorb and adapt to future shocks in a conscious and planned manner. Knowledge dissemination aims to increase the awareness level on climate risk. The project must engage into a more active knowledge dissemination effort through existing local structures and leaders. The ECPA might be a good platform. As mentioned before, a next step was left missing that would allow the project to start testing uptake of some of the practices by the farmers as well as the linkages between those farmers and the private sector, particularly at local level. The project must foster market access at community level as it may also affect the resilience capacity of the local households. This can be achieved by attracting private investment into those areas. This could be done by supporting and strengthening social networks at community level, e.g. creating producer groups, facilitating bulk buying and selling. Supporting the formation of these networks, incentivizing participation of households to agricultural savings groups, agricultural associations, or community projects, may also help farmers recover their wealth level after a climate shock.

4.5.3 Sustainability of SMART and Its Transition Plan

A SMART transition plan was not presented to the market system actors, and the wider stakeholders, nor is there a clear exit strategy per intervention. The interventions have not even been tested in terms of systemic impact. According to the key-informant interviews, ITTFs cannot be sustainable without IDE nor can the change in behavior (farmers start investing in good quality input) be tested at this point. FBAs might have a sustainability, scalability and replication case around them, depending on how well their business models are doing. From a project perspective a solid training package was delivered; however, doubts remain about the sustainability of the market linkages for the FBAs.

> How **sustainable** is the SMART program? Are the changes in the lives of the project **beneficiaries likely to be sustained**? Are the **stakeholder/policy stakeholders** aware of **SMART transition plan**?

There are questions on the sustainability of the ECPAs without the FBAs or leaders and therefore questions on the continued engagement of the leaders without project incentives (inputs, t-shirts, bicycles, etc). The sustainability of savings groups and the extent to which the project is really working towards that goal should be tested. KIVA does not operate without a partner project, such as SMART or IDE for that matter.

There might be a sustainability case around the technology transfer support to SCFs around the Maputo green belt given the business incentive and reinvestment capacity of the SCFs. However, there is no evidence of existing local actors or structures that can be used to build sustainability scenarios.

4.6 Gender Equity and Social Inclusion

4.6.1 Project Implementation with Rights Perspective

Through project strategy documents, value chain assessment, gender assessment, the baseline etc., relevant information was collected from the future target group informing the project team about needs and shortcoming that built the base for the design of project interventions. Therefore, the target group being smallholder farmers as well as intermediaries (service providers like local agro-dealers) to the design was provided in an indirect and suitable way.

Has the project been implemented in accordance with a **rights perspective**: i.e. Have target groups been participating in project planning, implementations and follow up?

However, the scale to which the target groups have been involved in project implementation and follow up is not clear. The target groups have been benefiting from interventions, however, data on implementation progress and opinions about the successful impact was not collected until recently. This is due to the unstructured M&E system that has been in place.

4.6.2 Effect on Gender Equality

Regarding the intervention implementation, both women and men are strengthened in their capacities as producers and local agro-dealers. 56% of the SHF who know and practice at least one good agricultural practice was female (certified seeds, mulching, improved irrigation, safe pesticide, crop spacing etc.). Again 56% of the SHF who know the source of the improved inputs and output market were female and 38% of the FBAs were female.

Has the project any positive or negative effects on **gender equality**? Could gender mainstreaming have been improved in planning, implementation or follow up?

Apparently, a balanced involvement of both genders was achieved through the interventions that means these aspects were well considered in the planning and implementation phase. Follow-up activities could not be assessed, as there were no results by the time the project was implemented.

The strengthening of women as local input providers, the FBAs, has created an important positive effect on the position of women in the community. A relatively large number of women have been supported in being an FBAs. Especially the input providers of seeds, fertilizers and pesticides in the communities. 49% of the total FBAs trained by the SMART project were female. While some have already been performing that function to a certain degree, they are benefited through the business skills building, getting access to tools for business management, exposure to the input and output market linkages, and access to finance. Women have been strengthened to the level of being equal partners in business to the man in case of these community-based agents.

The project implements a special training module on “Farming as a family business” in which not only emphasis is put on raising awareness about the importance of agricultural production as a business-oriented activity, but also the inclusion of women in agriculture and their right to benefit from this economic activity.

4.6.3 Farming as a Family Business Contributing Improved Gender Norms

> How has the project focus on "farming as a family business" contributed to improved gender norms and roles within households and communities? Have there been any negative repercussions as a

The farming as a family business model is very beneficial for changing the mindset of the producer and being aware about their important role in the agricultural production chain as a commercial actor and valorizing their work and profession. Despite the implementation of the mode, we see no specific and attributable change in the role of the woman in comparison to the general environment. This might be since changes in gender norms are a longer process which requires constant awareness raising and discussion about it than only a training and lifespan of three years of a project. Further, it is a process that has been initiated already by diverse other actors, including previous projects and simultaneously ongoing projects, to which iDE Mozambique has been contributed over the last ten years. However, some of the most important influencers of having brought profound change to the perception of the role of the women was named to be the church.

Moreover, the processes of changing the norms of women and their role and benefit in agriculture have been ongoing already. No distinct change could be identified nor any negative repercussions were mentioned as a result of it. Having said that, bringing a major change in beneficiary mindset in terms of perceiving their work as a commercial activity and perceiving generated income should be well managed; however, not managed like ‘‘necessary for survival” that is associated with the subsistence production usually farmers trapped into. Awareness about the commercial farming and agricultural production as family business with equal contributions would reap the benefit, although in the long run.

Recommendations and Way Forward

5. Recommendations and Way Forward

5.1 Recommendations

The SMART M&E system needs to be improved: The baseline data was not available for most of the indicators. Follow-up data collection or comparable data collection was not planned throughout the project period that could be used otherwise. The follow up data collection could further give an overview of the progression and needed intervention for steering. Many unrelated documents and databases are maintained that are difficult to manage and require effort to get updates on core data.

Moreover, the Logframe is not well-structured failing to show the logical relations throughout different levels leading to the goal/impact level. The indicator definitions require clarity and measurability, defining how to collect and calculate values and what to understand with it. Intermediate indicators to track progress of the private sector partnership, measured against set targets (of linkage, serving SHF, accessing inputs etc.) could have shown the clear pathway to systemic change.

The project already acknowledged the weaknesses in M&E at the time of this evaluation. Efforts have been made to improve M&E capacities building a stronger team and dynamics by hiring a new M&E director.

Market orientation of MSD interventions is needed: The weak logframe logic is triggering the missing market-dynamic vision that would lead to more sustainability (and is actually the title of the project). A momentary engagement of the actors and without any follow up and continuous facilitation until strengthened relationship and adoption of the intervention would hinder sustainability. It is recommended that the project builds a clear strategy around further strengthening of the partnerships with the private sector defining the aim of such partnerships in terms of generating sustainable systemic change. Roles and steps must be well defined in that case. This must be applicable to the input fairs as well. Especially buyer relationships require more support and facilitation. Currently the output buying is happening via Input Fairs, which according to the SHF is not sufficient. Buying through FBAs has been effective though that needs to be clarified about the strategies and goals.

The donor should guide the project into the right direction and spot the requirement of improvements in light of MSD approach. Frequent revisions in this regard could guide the strategies. Looking forward, the donor should also define what their priorities are in terms of project implementation, modalities and objectives, as per geographic areas and context, i.e. the humanitarian development nexus. The level of project intervention and incentives must be very clear from the onset.

Interventions fragmented according to complementary donor funding: While there are specific intervention areas, assessing the impact on the ground turns out more difficult than expected showing a fragmentation and overlap of projects. This makes it difficult to differentiate the impact of SMART compared to other projects; should it be considered to be attributable or contributable. The level of impact is very different in complementary funding or interventions that are geographically different. Mapping according to interventions would bring clarity, to be able to specify what is expected where.

5.2 Way Forward

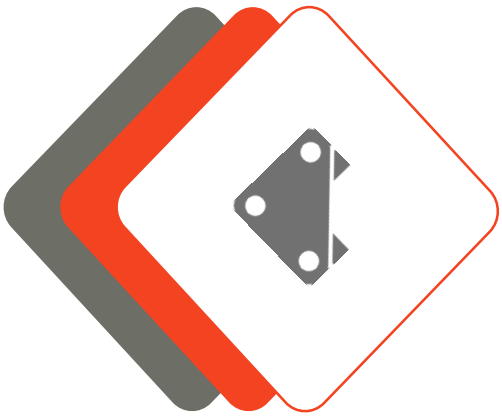
Conducting an independent data quality review: The MTR found several issues in the project's data that invite questions about data accuracy. In order to dispel these questions and allow the project to finish strongly, we recommend SMART works in-house to review thoroughly the data collection and attribution methodology for each indicator and help the M&E team remedy any problems.

Strengthening the strategy around and after the input fairs: The fact that the current project context does not allow for testing exit strategies, because, in fact, the project needed to adapt after the cyclones, suggests that the biggest asset for the project now, is to turn the input fairs into the main driver for systemic change. This is not to drop all other efforts, but rather to make them work together. It is already being accomplished in the way of the establishment of ECPAs post ITTFs, building capacity of ADAs/FBAs and putting them in touch with the private sector for potential partnerships. However, much work is still needed with the private sector partners in terms of their buying into this vision and what their role is in this equation. They need to see value beyond project support and incentives. The project must also work towards creating incentives for the farmers, such as affordable prices of seeds and inputs, which was not the case in the ITTFs. In fact, it was reported that inputs were sold at prices higher than market prices.

Targeting right geography and right beneficiary: Given the current context in the geographical area of the project, an extension of the current project or a future SMART project must be well defined in terms of narrowing down its geographic focus. The project presented many dispersed and ill-defined interventions. For instance, the evaluators failed to grasp the genesis and nature of interventions in Tete and Maputo. While there was some logic to the support to commercial farmers in those areas, the strategy for sustainability and technical assistance was not clear. The latter is particularly true for Maputo. Manica and Sofala are two different contexts within the same corridor. We recommend that a future project narrows down its approach and defines the focus, specific activities as well as level and depth of interventions, taking into account:

a) The intended project outcome and ultimate beneficiaries. This helps build and understand the implementation strategy as well as to be able to react to any deviations in implementation.
b) The agricultural context, market dynamics and previous exposure to development support.
c) The vulnerability of the area to shocks and disasters. This must be integrated into the project's risk management with clear and actionable mitigation measures.

That being said, there is commendable work that was achieved by the SMART project and much more is required. The donor and project must build upon and make use of existing MSD experience in the country, through other partners and projects.



Annexes

Annex 1: Demographic Analysis of the Respondents

Demographic Analysis of the SHFs

Age of Respondents

There is a good mix of surveyed respondents from different ages. While most of the respondents (79%) are in working age of 18 – 55 years, the average age is found 43 years.

Table 27 Age of the respondents

	Gender		Province			Overall
	Female	Male	MANICA	SOFALA	TETE	
Average age of the respondent (in years)						
Average	41	45	43	43	39	43
Concentration in age range						
18 - 25 years	12%	7%	11%	7%	13%	9%
26 - 35 years	31%	21%	25%	26%	31%	26%
36 - 45 years	23%	25%	19%	27%	28%	24%
46 - 55 years	19%	20%	24%	17%	16%	20%
Above 55 years	16%	27%	21%	22%	13%	21%
Base (n)	216	168	165	187	32	384

Household Head

63% of the surveyed respondents are found as the household head themselves (Table 28). For the rest 37% of the respondents having someone else as their household head includes mostly their spouse (92%), their daughter (1%), daughter in-law (1%) and their parents (5%) (Table 29).

Table 28 Household of the repondent

	Gender		Province			Overall
	Female	Male	MANICA	SOFALA	TETE	
Respondent is not the household head	62%	4%	42%	33%	28%	37%
Respondent is the household head	38%	96%	58%	67%	72%	63%
Base (n)	216	168	165	187	32	384

Table 29 Respondent's relationship with the household head (when respondent is not the household head)

	Gender		Province			Overall
	Female	Male	MANICA	SOFALA	TETE	
Daughter	1%	14%	3%	2%	0%	2%
Daughter-in-law	1%	0%	1%	0%	0%	1%
Parents	1%	71%	6%	5%	0%	5%
Spouse	96%	14%	90%	94%	100%	92%
Base (n)	134	7	70	62	9	141

Gender of Respondent and the Household Head

While analysing the gender of the surveyed respondents, 56% of the respondents were female. Moreover, the gender of the household head is important for programmatic decisions and targeting and thus analyzed. 79% of the surveyed respondents have a male member as their household head.

Table 30 Gender of the respondents and household head

	Gender of respondents	Gender of household head
Female	56%	21%
Male	44%	79%
Base (n)	384	

Size of the Surveyed Family

The size of the family is around 7, which is the highest in Manica (8.15) and the lowest in Tete (5.91) among the provinces (Table 31).

Table 31 Family size: number of family members

	Respondent's Gender		Province			Overall
	Female	Male	MANICA	SOFALA	TETE	
Number of male members in household	3.23	3.78	3.9	3.19	2.91	3.47
Number of female members in household	3.51	3.62	4.25	3.05	3	3.56
Size of the family	6.75	7.4	8.15	6.24	5.91	7.04

Education of the respondents

20% of the respondents were found joining no formal education program while a 10% of them were found knowing only the alphabetization. Another big portion (22%) were found completing first level elementary school.

Table 32 Education level of the respondents

	Gender		Province			Total
	Female	Male	MANICA	SOFALA	TETE	
No education	28%	8%	18%	20%	25%	20%
Literacy / Alphabetization	14%	4%	10%	11%	3%	10%
Teacher training	0%	1%	1%	0%	0%	0%
Technical/Vocational training	0%	1%	1%	0%	0%	1%
Up to first level elementary school (EP1)	22%	22%	23%	21%	22%	22%
Up to first level secondary school (ESG 1)	5%	12%	12%	4%	9%	8%
Up to higher secondary school (ESG2)	2%	4%	1%	4%	3%	3%
Up to second level elementary school (EP2)	12%	22%	16%	19%	3%	16%
Other	16%	27%	19%	20%	34%	21%
Base (n)	216	168	165	187	32	384

Major Sources of Household Income

Almost all of the respondents (99.7%) reported agricultural farming as a major source of their family income. While respondents gave multiple response in case their family having multiple significant sources of income. A significant number of families are having producing and selling charcoal (24%), animal husbandry (21%), small business (17%), wage labor (16%) etc. as major source of their family income.

Table 33 Major source of household income (multiple response)

	Gender		Province			Overall
	Female	Male	Manica	Sofala	Tete	
Agriculture / farming	100%	99%	100%	99%	100%	99.7%
Produces and sells charcoal	20%	29%	10%	40%	0%	24%
Animal husbandry	23%	18%	35%	10%	13%	21%
Small business / local retailer business	20%	14%	18%	13%	41%	17%
Wage labor	19%	12%	21%	11%	22%	16%
Collects and sells firewood	13%	2%	9%	8%	9%	9%
Fishing	0%	6%	3%	3%	0%	3%
Salaried job (other than government)	5%	3%	4%	4%	3%	4%
Government employment (professor, health worker, administration, etc.)	0%	1%	1%	1%	3%	1%
Retired with pension	0%	3%	3%	1%	0%	2%
Living from other Government pensions / social subsidies	2%	1%	1%	2%	0%	2%
Working as craftsmen (bricklayer, carpenter, plumber, electrician, etc.) and related work (e.g. brick production)	1%	6%	3%	4%	3%	3%
Artisan business	2%	5%	4%	2%	9%	4%
Remittances (from family or friends)	3%	3%	3%	3%	0%	3%
Other	16%	18%	18%	14%	31%	17%
Base (n)	216	168	165	187	32	384

Tenure of Agricultural Activities

The primary farmer in a family were found doing agricultural farming for an average of 20 years (Table 34).

Table 34 Agricultural farming experience of the primary farmer in a family

How long has the primary farmer in the household been farming?	Gender		Province			Overall
	Female	Male	Manica	Sofala	Tete	
In years	21	20	22	20	18	20

Demographic Analysis of the FBA/SCF

Type of the IDI respondents

62% of the surveyed market actors were SCF while the other 38% were FBA (Table 35).

Table 35 Type of IDI respondent

	Count	%
FBA	8	38%
SCF	13	62%
Base (n)	**15**	

Gender of the IDI respondents

One third (67%) of the interviewed market actors were found female (Table 36).

Table 36 Gender of respondents

	Count	%
Female	14	67%
Male	7	33%
Base (n)	**21**	

Age of the Respondent and the Business

The average age of the FBA and SCF were found 44 years while the same of their business was found 11 years (Table 37).

Table 37 Age of the FBA/SCF and their business

	Average age in years
Age of the Respondent	44
Age of the business	11

Education Level of the FBA and SCF

A one third (33%) of the FBA/SCF were found completed their first level of secondary school, while 20% were found completing each of the higher secondary school and the tertiary education (Table 38).

Table 38 Education level of the FBA and SCF

	Percentage
Up to second level elementary school (EP2)	33%
Up to first level secondary school (ESG 1)	13%
Up to higher secondary school (ESG2)	20%
Tertiary education / university	20%
Technical/Vocational training (tecnico básico/ médio)	7%
Other	7%
Base (n)	21

Annex 2: Sample Size Calculation

Calculation of sample based on the Probability Proportion to Size (PPS)-

Table 39 Sample size calculation

		Population			Proportion to size (%)			SHF sample size		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Manica	Total in Province	2914	3820	6734	17.19%	22.53%	39.71%	69	85	154
	Barue	126	145	271	0.74%	0.86%	1.60%	8	6	14
	Gondola	923	1241	2164	5.44%	7.32%	12.76%	20	27	47
	Macate	696	1079	1775	4.10%	6.36%	10.47%	15	23	38
	Manica	211	237	448	1.24%	1.40%	2.64%	5	5	10
	Sussundenga	303	466	769	1.79%	2.75%	4.54%	7	10	17
	Vanduzi	645	617	1262	3.80%	3.64%	7.44%	14	13	27
Sofala	Total in Province	4122	5793	9915	24.31%	34.16%	58.47%	89	125	215
	Buzi	151	353	504	0.89%	2.08%	2.97%	6	8	14
	Dondo	2909	4177	7086	17.16%	24.63%	41.79%	63	90	153
	Nhamatanda	884	1042	1926	5.21%	6.15%	11.36%	23	28	42
Tete (active only)	Total in Province	165	142	307	0.97%	0.84%	1.81%	4	3	7
	Angonia	165	142	307	0.97%	0.84%	1.81%	9	8	17
SCF Sample										
Maputo	horticulture pilot-active beneficiary	11	6	17	64.71%	35.29%	100.00%	6	3	9
	Active Institution			9						5
Tete	Certified seed producer			5						3
Total beneficiary/sample		**7212**	**9761**	**16956**						**384**

Note: Buzi was taken out considering the inaccessibility due to the recent cyclone. We shifted the sample to Nhamatanda.

Annex 3: Key Research Questions for Assessing Relevance, Effectiveness, Efficiency, Impact, Sustainability

Table 40 Key research questions

Key questions	Data collection method	Information sources	
Relevance: To what extent are the project and its intervention relevant in light of the needs and priorities of clients and target groups?			
How relevant is the project to the priorities and needs of target group and policies in the three program areas? Was there any involvement of the farmers/agricultural business actors in the project designing, implementation and M&E? Has the project identified and addressed barriers to SCF & SHF participation, inclusion and service-utilisation?	● Desk Study ● Sample survey ● In-depth interview ● FGD	● M&E materials (i.e baseline, report, intervention strategy, concept note etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries ● IDI with project beneficiaries	
How satisfied are the program participants with the benefits rendered?	● Sample survey ● FGD	● M&E materials (i.e beneficiary survey, baseline studies etc.) ● FGD with project beneficiaries	
How the geographic and demographic context changed in the program areas? To what extent were the project interventions relevant considering the change in context?	● Desk Study ● Sample survey ● In depth interview ● FGD	● M&E materials (i.e baseline, report, intervention strategy, concept note etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries ● IDI with farmers	
Are the project interventions (FBAs, ECPAs, NTT, TECH and gender mainstreaming) technically adequate and appropriate solutions to the development problem at hand? Do they address the roots causes of the problem? Specifically, how has the SMART Project remained relevant to the	● FGD ● KII ● Desk Study	● M&E materials (i.e baseline, report, intervention strategy, concept note etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries	

clients and beneficiaries operating in areas impacted by Cyclone Idai? How has the adapted approach referred to as the Farmer Resilience and Rebuilding Initiative (FRRI), which uses voucher-based Input Trade and Technology Fairs, contributed to the humanitarian needs of existing beneficiaries? Given the context was this the most appropriate approach for a market system program? What additional components of the project need to adapt to the new operating environment?		● IDI with project beneficiaries	
Efficiency: Has the Project been designed and implemented appropriately to achieve its output results in the most efficient manner? How efficiently have the project's resources been translated into results?			
What are the capacities in the human resources (iDE SMART staff); what are the criteria for selecting partners; what are the accountability mechanisms, monitoring & evaluation systems and learning outcomes?	● Benchmark analysis ● In-depth interview ● Review of program activity timing, schedule, staffing schedule etc.	● Human resource deployment information ● Financial resource information ● Interview with iDE SMART team ● Review the team competence and level of engagement for the realisation of the deliverables within the project lifetime	
How efficiently the project intervention budgets have been utilised to achieve the results against indicators	● Benchmark analysis ● In depth interview with project staff ● Review of intervention budgets, program budgets and allocation	● Program financial resource information ● Interview with iDE SMART finance team ● Review of intervention budget, staffing budget, M&E budgets ● Review of benchmarks used in development projects	
How might the different elements of the adapted intervention (FBAs, ITTFs, ECPAs, NTTs,TECH and gender mainstreaming) be better aligned and coordinated to gain efficiency in the project implementation? Is the project staffing structure and overall capacity sufficient/well	● In depth Interview ● Key informant Interviews	● FGD with project beneficiaries ● IDI with project beneficiaries	

aligned to achieve the project objectives? If not, what recommendations can be made to the project structure that lead to greaterimpact?			
Effectiveness: To what extent has the project achieved its objectives in terms of outputs and outcomes (taking into account their relative importance)?			
To what extent did the program effectively reach its goal and how effectively did iDE SMART reach the most vulnerable farmers and female farmers in the targeted areas? 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? Do project participants experience outcomes equitably? Particularly among participants of different genders, poverty statuses, disabilities, and other social identities. If so, why? If not, why not? What can be done to make the project more equitable?	● Desk Study ● Sample survey ● In depth interview ● FGD	● M&E materials (i.e baseline, report, intervention strategy, concept note etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries ● IDI with project beneficiaries	
How effectively and appropriately has the project team worked with different stakeholders and involved them in relevant stages through the process (partners, alliances, private sector, policymakers, media, etc.)?	● Desk study ● Sample survey ● In-depth interview ● FGD	● Analysis of Theory of change and Logframe ● M&E materials (i.e beneficiary survey, baseline studies etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries ● IDI with relevant stakeholders	
What difference did the partnership make to the project outcomes?	● Desk Study ● In-depth interview ● FGD	● Logframe ● M&E materials (i.e beneficiary survey, baseline studies etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries	
How did the project management contribute to the effectiveness of the project	● Desk Study ● In-depth interview	● Logframe ● Review of logframe, baseline, report ● IDI with project officials	

How effectively did iDE SMART work and incorporate local government institutions, local partners and local communities and involved them in the relevant stage of the project	● Desk Study ● In-depth interview	● IDI with project beneficiaries	
Which interventions have been more effective to achieve respective logframe indicators most?	● In-depth interview Review of secondary reports ● Interviews with stakeholders	● In-depth interview with iDE SMART staff ● Review of logframe, baseline, report ● Interviews with external partners	
Impact: To what extent is the project likely to achieve its impact objectives?			
How far the Project outcomes achieved compared to the targets (based on project indicators)? What are the reasons?	● Desk Study ● Sample survey ● In depth interview ● FGD	● Logframe analysis ● M&E materials (i.e beneficiary survey, baseline studies etc.) ● Interview with other stakeholders ● FGD with project beneficiaries	
What is iDE SMART's contribution in this process vs other complementary programs of iDE SMART and other organisations?	● Organisation mapping ● Desk Study ● In-depth interview ● FGD	● Interview with iDE SMART team ● Interview and FGD with project beneficiaries ● Interview with other organisations with complementary programs/projects in the project areas ● Interview with other stakeholders	
What are the unintended positive and negative results of the project?	● Desk Study ● In depth interview ● FGD	● Theory of change ● M&E materials (i.e beneficiary survey, baseline studies etc.) ● Interview with iDE SMART team ● FGD with project beneficiaries ● Interview with other stakeholders	
How have the external socio-economic and political factors affecting this process, constraints and contributing external factors?	● Desk Study ● In-depth interview ● FGD	● Theory of change ● Interview with iDE SMART team ● FGD with project beneficiaries	

		• Interview with other stakeholders	
Systems Change and Resilience: What is the sustainability of the results of the project for governance in Mozambique?			
Are there early signs of the project generating systemic change in scale (the project is influence and benefiting people beyond those directly involved in the intervention); sustainability (that the changes and impacts will last beyond the end of the project without external assistance) and resilience (market players can adapt to changing market conditions)? What are the key learnings so far? How has the SMART Project contributed to increasing climate resilience for households, communities and private sector actors to anticipate, absorb, and adapt potential future climate related shocks and stressors? Are there additional activities that should be integrated into SMART that ensure a greater impact on climate and market resilience?	• Desk Study • In-depth interview • FGD • KII	• Theory of change • Interview with iDE SMART team • FGD with project beneficiaries • Interview with other stakeholders	
How sustainable is the SMART program? Are the changes in the lives of the project beneficiaries likely to be sustained?	• Sample survey • FGD	• Survey with parents/caregivers • FGD with project beneficiaries	
How sustainable is the SMART program? Are the stakeholder/policy stakeholders aware of SMART transition plan?	• In-depth interview with stakeholders • FGD	• FGD with project beneficiaries • Interview with policy stakeholders/community stakeholders	
Have the SMART staff accomplished transition? What and how it will happen when iDE team leaves?	• Interview with other stakeholders • FGD	• Interview with SMART team • M&E materials (i.e beneficiary survey, baseline studies etc.) • FGD with project beneficiaries • Interview with other stakeholders	
Gender Equity and Social Inclusion: How is the project benefitting the marginal social groups and making them inclusive?			

Has the project been implemented in accordance with a rights perspective: i.e. Have target groups been participating in project planning, implementations and follow up? Has the project discriminated anyone through its implementation? Has the project been implemented in a transparent fashion? Are there accountability mechanisms in the project? Has the project any positive or negative effects on gender equality? Could gender mainstreaming have been improved in planning, implementation or follow up? How has the project focus on "farming as a family business" contributed to improved gender norms and roles within households and communities? Have there been any negative repercussions as a result?	● Interview with other stakeholders ● FGD ● Sample survey ● KII	● Interview with SMART team ● M&E materials (i.e beneficiary survey, baseline studies etc.) ● FGD with project beneficiaries ● Interview with other stakeholders (women rights groups, local government institutions, etc) ● IDI with project beneficiaries	

Annex 4: Survey Tools

A1.1 Sample Survey Questionnaire (Quantitative)

Survey with the SHF

Mid-term Evaluation of
SMART (Strengthening the Missing Middle in Agribusiness for Rapid Transformation)

Target Respondent: Small holder farmers (SHF)
Pre-interview introduction

Good morning / afternoon, my name is …… I am working as an enumerator for iDE Mozambique SMART project. IDE is implementing the SMART project, and you have been chosen to answer some questions. Your answers will be used to evaluate how the project has worked here in the community.
Can I do the interview? Yes No (If NO, thank the farmer and end the interview).
Did you get any training/capacity development/linkage support from SMART/iDE. If NO, end the interview.
ALL QUESTIONS ARE RELATED TO THE AGRICULTURAL SEASON 2019/2020

0.1	INTERVIEWER NAME			
0.2	INTERVIEW DATE		Y Y Y Y M M D D	
0.3	PROVINCE		MAPUTO	1
			MANICA	2
			SOFALA	3
			TETE	4
0.4	DISTRICT	Maputo	Boane	1
			Manhiça	2
			Marracuene	3
			Matola	4
		Manica	Gondola	5
			Macate	6
			Manica	7
			Sussundenga	8
			Vanduzi	9
		Sofala	Dondo	10
			Nhamatanda	11
		Tete	Angonia	12
			Tsangano	13
0.5	Posto administrativo			
0.6	Locality			
0.7	Community			
0.8	GPS Coordinates			

1. Household Roster

1.1	Respondent's last name	
1.2	Respondent's full first name	
1.3	Respondent's sex	1. Male [____] 2. Female [____]
1.4	Respondent's age	[____] years

1.5	Is respondent head of household?	YES → Skip to 1.9	1	YES → Skip to 1.9
		NO	0	
1.6	If not the head of the household: what is your relationship with the head of the household?	Husband/wife	1	
		Father/mother	2	
		Brother/sister	3	
		Grandparent	4	
		Uncle/aunty	5	
		Friend	6	
		Other	99	
1.7	Gender of household head	1. Male [____] 2. Female [____]		
1.8	Age of household head	[____] years		
1.9	How many members are there in your household?	Male		
		Female		
		Total		
1.10	What level of education you completed?	No education	1	
		Literacy / Alphabetisation	2	
		Up to first level elementary school (EP1)	3	
		Up to second level elementary school (EP2)	4	
		Up to first level secondary school (ESG 1)	5	
		Up to higher secondary school (ESG2)	6	
		Tertiary education / university	7	
		Technical/Vocational training (tecnico básico/ médio)	8	
		Teacher training	9	
		Don't Know	10	
		Other	99	
1.11	What are the top three sources of your household income?	Agriculture / farming	1	
		Animal husbandry	2	
		Fishing	3	
		Government employment (professor, health worker, administration, etc.)	4	
		Retired with pension	5	
		Living from other Government pensions / social subsidies	6	
		Salaried job (other than government)	7	|__| First
		Working as craftsmen (bricklayer, carpenter, plumber, electrician, etc.) and related work (e.g. brick production)	8	|__| Second
		Artisan business (Portuguese: Artisanato)	9	
		Small business / local retailer business	10	|__| Third
		Working in someone else's farm (wage labour)	11	
		Day Worker in the agricultural sector (ganho-ganho)	12	
		Travels to work in another town/village	13	
		Collects and sells firewood	14	
		Produces and sells charcoal	15	
		Remittances (from family or friends)	16	
		Other [specify]	99	

1.12	How long has the primary farmer in the household been farming?	[___] years		
1.14	Which of the following types of agricultural events did you participate during the past year? [Instruction: If answer is 'None', skip to section 2]	None -> skip to section 2	0	
		Participated in a teaching session on a Demonstration plot	1	
		Participation at a Field day	2	
		Participated in a Farmer Business School training	3	
		Participated in a training on agricultural practices	4	
		Participated in a training on financial education	5	
		Participated in a training on farming as a business	6	
		Participated in an Input Trade and Technology Fair (ITTF)	7	
		Participated in a linkage event with input providers	8	
		Participated in a linkage event with buyers	9	
		Other [specify]	99	
1.15	Who provided the trainings? [Instructions: OPENS SPECIFIC TO responses in 1.14]	iDE/ SMART- ECPA/ farmers field school/ FBA	1	
		Other government program	2	
		United Purpose / Concern (FAR)	3	
		Swisscontact / AFOC-MSD (FAR)	4	
		KWAEDZA (FAR)	5	
		CLUSA PROMAC	6	
		CLUSA TVET	7	
		Feed the Future	8	
		RAMA (USAID)	9	
		Farmer to Farmer – Land'O Lake	10	
		FAO	11	
		Other development project/ NGO	12	
		Other private company (input/output)	13	
		Other [specify]	99	
1.16	What did you learn from this event? Directly linked to responses in 1.15 – opening this questions related to the answer which was given.	The use of appropriate quantity of seeds	1	
		The use of improved/certified seeds	2	
		Drip irrigation	3	
		Preparation and use of organic fertiliser (bokashi)/ pesticides	4	
		Planting in line	5	
		Dry mulching	6	
		Intercropping	7	
		Rotation of cultures	8	
		Correct spacing	9	
		Post-harvest techniques	10	
		Others	99	
		None	88	

2. Agricultural Productivity and Agri-Household Income (Indicator 1001, 1104)

2.1	What is the total land area that you own? *Unit Codes: 1 – hectares* *2 - m^2*	[____] Area	[____] Unit code
2.2	What is the land area that you use for production? *Unit Codes: 1 – hectares* *2 - m^2*	[____] Area	[____] Unit code

2.3 Crop Code	2.4 Area planted (in Ha)?	2.5 Change in production volume as compared to previous season (taken about same area)	2.6 How did you irrigate that crop?	2.6.a What is the main purpose of agricultural production?	Seed/seedlings *(if farmer uses their own seeds, unit price paid equals 0)*				Fertilizer / Pesticide use	
					2.7 UNIT	2.8 UNIT PRICE PAID	2.9 QUANTITY of UNITS	2.10 Did you use improved / certified seeds? 0 – NO 1 - YES	2.11 Did you apply any fertilizer or pesticides? 0 - NO -> skip to 2.32 1 - YES -> go to 2.12	If YES in 2.11: 2.12 How much did you pay for Fertilizer & Pesticides? (in MZN)

Crop codes (2.3): *1. Black eyed peas* *2. Butter beans* *3. Cabbage* *4. Cucumber* *5. Garlic* *6. Ground nut* *7. Maize*	*8. Onion* *9. Pigeon pea* *10. Pumpkin* *11. Sesame* *12. Soya* *13. Tomato* *14. Cow peas* *15. Kale*	*16. Lettuce* *17. Carrot* *18. Beetroot* *19. Peppers* *20. Chilli* *21. Irish potato* *22. Sweet potato*
Irrigation practices Code (2.6): *1. Rain-fed only,* *2. Gravity system with canals (flooding),* *3. Modern canal system (flooding),* *4. Traditional river diversion,* *5. Buckets and watering cans,*	*6. Motor pump with flooding (canals),* *7. Motor pump with drip irrigation* *8. Motor pump with sprinkler/dispersion* *9. Motor pump with hosepipe* *10. Solar pump with flooding (canals),* *11. Solar pump with drip irrigation system,*	*12. Treadle/ pedestrial pump with flooding (canals),* *13. Treadle/ pedestrial pump with drip irrigation system,* *14. Manual pump with flooding (canals),* *15. Manual pump with drip irrigation system,* *16. Rope and washer pump with flooding (canals),* *17. Others, specify*
Change in yield codes (2.5): *1: Increase 2: Decrease 3: Remained the same*	**Production purpose code (2.6.a):** *1. Primarily sell (commercial)* *2. Primarily consume (subsistence)* *3. Both selling and consuming (semi-commercial)*	**Seed unit codes (2.7):** *1: Kilogram 2: Gram*

Harvest unit codes (2.14): *1: Kilogram*	**Sales Unit Codes (2.17):** *1. Basket – 25kg* *2. Sac - 50kg*	*5. Portion (molho)* *6. Crates - 40kg* *7. Buckets – 20kg*

Other costs			Harvest		Harvest Loss	Sales		
2.13.a: How much did you pay for land use costs? (in MZN) (if didn't rent = 0)	2.13.b: How much did you pay for labor costs? (in MZN) (if traded in goods, put equivalent value in MZN)	2.13.c: How much did you pay for any other production costs (mechanization, DUAT, harvest, etc? (in MZN) (if didn't pay = 0)	2.14 UNIT	2.15 QUANTITY OF UNITS	2.16 Percentage of Loss (during harvest, storage & transport)	2.17 UNIT	2.18 Unit price received	2.19 Quantity of Units

2: Sac - 50 kgs *3: Crates - 40 kgs* *4: Buckets - 20 kg* *5: Basket - 25kg* *6: Other (specify)*	*3. Sac - 50kg* *4. Plastic bag (xadrez/azul)*	*8. Other (specify)*

2.20	Do you have an alternative source of income other than agriculture?	No	0 -> 3.1		
		Yes	1 -> 2.21		
2.21	If 'Yes', how many sources of income does your household have?	[___] Number			
2.22	How much does your family earn from the other sources (other than agriculture reported in question number 2.3 to 2.19) during the last year and how much they spent for it (costs)?	Source Code	Amount earned	Amount spent	Amounts in Meticais or specify unit
		Do not know/do not want to answer			

Income Source Code (2.22)

Agriculture sales	1	Livestock sales	2
Public salary	3	Service provision (machinery, land prep, etc)	4
Salary from working for someone (private sector)	5	Day labourer income (ganho-ganho)	6
Retailer income (agro or conventional)	7	Pensions and other social security payments	8
Fishing sales	9	Artisanal work	10
From firewood sales	11	Revenue from leasing (leasing land, house, etc.)	12
From charcoal sales	13	Remittances	14
		Other [specify]	99

2.24	How many income earning members does your household have?	[____] Number		

3. Improved technical and risk management skills (Indicator 1105, 1201)

3.1	How did you get water from the source to your field for irrigation during the past dry season? *[Inst.: Multiple answer]*	Drip irrigation system	1	If the response is 11, please skip to 3.5
		Bucket / watering can	2	
		Gravity	3	
		Traditional canal system	4	
		Modern canal system	5	
		Motorized pump	6	
		Rope and washer pump	7	
		Solar pump	8	
		Manual pump	9	
		Treadle pump	10	
		Did nothing/rainfed	11	
		Other (specify)	99	
3.2	How did this technology help?	Lowered cost	1	
		Increased cost	2	
		Increased yield	3	
		Other (specify)	99	
3.3	Where did you learn the method?	SMART project	1	
		From fellow farmers	2	

		From government extension offices	3	
		Concern / United Purpose (FAR)	4	
		Swisscontact / AFOC – MSD (FAR)	5	
		KWAEDZA (FAR)	6	
		CLUSA	7	
		From another project (specify)	8	
		Other (specify)	99	
3.4	Can you list the good agricultural techniques that you know of? *(do not prompt with answers, select all that the respondent lists during response)*	Soil preparation	1	
		Use of certified seeds	2	
		Sowing in line	3	
		Proper crop spacing	4	
		Using organic fertilizer/pesticides	5	
		Use of market pesticide	6	
		Using mulch	7	
		Integrated pest management (IPM)	8	
		Reduced tillage	9	
		Irrigation (for vegetable)	10	
		Intercropping	11	
		Crop rotation	12	
		Thresher	13	
		Planning the production	14	
		Producing new crops	15	
		Improved storage	16	
		Protected environment (green house)	17	
		Other	99	
3.5	Of the good agricultural practices, you just mentioned, which did you apply during the past agricultural season (last 12 months)? *(do not prompt with answers, select all that the respondent lists during response)*	Soil preparation	1	
		Use of certified seeds	2	
		Sowing in line	3	
		Proper crop spacing	4	
		Using organic fertilizer/pesticides	5	
		Use of market pesticide	6	
		Using mulch	7	
		Integrated pest management (IPM)	8	
		Reduced tillage	9	
		Irrigation (for vegetable)	10	
		Intercropping	11	
		Crop rotation	12	
		Thresher	13	
		Planning the production	14	
		Producing new crops	15	
		Improved storage	16	
		Protected environment (green house)	17	
		Other	99	

4. Access to agricultural input and output market (Indicator 1202, 1112, 1121, 1122, 1214)

4.1	Where do you get the inputs for the production of your main crops (certified seed, fertilizer/organic fertilizer, pesticide, IPM)?	Own production /retained	1	
		Retained seed from within the community (community people, neighbours, friends)	2	
		At the neighbouring community (community people)	3	
		From the local service provider /shop in the community (incl. ADAs)	4	
		From the local fair(s)	5	
		From the Input Trade & Technology Fair (SMART)	6	
		Agro dealer in the next town	7	
		Agro dealer in provincial capital	8	
		Directly from input companies' sales agent	9	
		No market available for inputs for main production crops	10	
		Other, specify:	99	
4.1. a	Can you please name the input selling entity? *Instruction: Enumerators should check with the list of FBA/SCF and put the name in correct place.*	FBA [_____] SCF [_____] Others [_____]		If Q4.1 -> "4, 5, 6, 7, 8, 9"
4.2	During the 2019/20 agricultural season from where did you purchase inputs for the production of your main crop?	Own production /retained	1	
		Retained seed from within the community (community people, neighbours, friends)	2	
		At the neighbouring community (community people)	3	
		From the local service provider /shop in the community (incl. ADAs)	4	
		From the local fair(s)	5	
		From the Input Trade & Technology Fair (SMART)	6	
		Agro dealer in the next town	7	
		Agro dealer in provincial capital	8	
		Directly from input companies' sales agent	9	
		No market available for inputs for main production crops	10	
		Other, specify:	99	
4.2. a	Can you please name the input selling entity? *Instruction: Enumerators should check with the list of FBA/SCF and put the name in correct place.*	FBA [_____] SCF [_____] Others [_____]		If Q4.2 -> "4, 5, 6, 7, 8, 9"

4.3	Where do you have to go to sell your agricultural products?	Local aggregator/middle men in the local market/Local output buying posts	1	
		Aggregator/middle men in the neighbouring community	2	
		Large company/ agri-processing company came to buy	3	
		Selling through the producer association	4	
		Selling at the side of the road	5	
		Had to transport the produce to sell in the city/more distant market	6	
		Did not intend selling main production crops	7	
		No market available to sell main production crop	8	
		Other, specify:	99	
4.3. a	Can you please name the output buying entity (for the last agri-season)? *Instruction: Enumerators should check with the list of FBA/SCF and put the name in correct place.*	FBA [_____] SCF [_____] Others [_____]		If Q4.3 -> "1, 2, 3"
4.4	During the 2019/20 agricultural season where did you have to go to sell the production of your main crop? (do not include crop under contract farming)	Local aggregator/middle men in the local market/Local output buying posts	1	
		Aggregator/middle men in the neighbouring community	2	
		Large company/ agri-processing company came to buy	3	
		Selling through the producer association	4	
		Selling at the side of the road	5	
		Had to transport the produce to sell in the city/more distant market	6	
		Did not intend selling main production crops	7	
		No market available to sell main production crop	8	
		Other, specify:	99	
4.4. a	Can you please name the input selling entity you sold to in the last production period (last 12 months)?? *Instruction: Enumerators should check with the list of FBA/SCF and put the name in correct place.*	FBA [_____] SCF [_____] Others [_____]		If Q4.4 -> "1, 2, 3"
4.5	Do you receive any services from a fellow farmer or FBA? *Instruction: Enumerators should prompt the name of the FBA from the list provided.*	No >skip to 4.7	0	
		Yes *insert name and* >go to 4.6	1	
		Don't know >skip to 4.7	88	

4.6	What is the service that you receive?	Input purchase	1	
		Introduction of quality inputs	2	
		Receives agricultural advice	3	
		Sale of agricultural products	4	
		Connection to input markets (seeds, fertilizers, etc)	5	
		Connection to output markets (buyers)	6	
		Receives market information (prices, etc.)	7	
		Provides/facilitates access to finance	8	
		Others (specify)	99	
4.7	Did you receive any services from a fellow farmer or FBA in the agrarian season 2019-2020? *Instruction: Enumerators should prompt the name of the FBA from the list provided.*	No >skip to 5.1	1	
		Yes *Insert name* and >go to 4.8	2	
		Don't know >skip to 5.1	88	
4.8	What is the service that you received?	Input purchase	1	
		Introduced quality inputs	2	
		Received agricultural advice	3	
		Sold agricultural products	4	
		Got connected to input markets (inputs, fertilizers, etc)	5	
		Got connected to output markets (buyers)	6	
		Received market information (prices, etc)	7	
		Provided/facilitated access to finance	8	
		Others (specify)	99	
4.9	How have you benefitted from the service by the FBA?	Agricultural knowledge	1	If Q4.5 & Q4.7 -> "1"
		Higher yields	2	
		Less loss during production/harvest/storage	3	
		Increased sales	4	
		Better prices	5	
		Selling to more/ different buyers	6	
		Did not help	7	
		Sales same as before	8	
		Buyers same as before	9	
		Other, specify:	99	
4.10	How satisfied are you with the services provided by the FBA (please rate your satisfaction)	Extremely dissatisfied	1	If Q4.5 & Q4.7 ->"1"
		Not satisfied	2	
		Neutral	3	
		Moderately satisfied	4	
		Extremely satisfied	5	

5. Agricultural Ownership Index (Indicator 1002)

5.1	Which of these items do you own?	Hoe	1	[____]
		Machete	2	
		Sickle	3	
		Hand-held irrigations utensils	4	

		Non-mechanised irrigation system	5	
		Pulverisation pack	6	
		Non-mechanised land preparation equipment	7	
		Non-mechanised planting equipment	8	
		Non-mechanised harvest equipment	9	
		Non-mechanised threshing/shelling equipment	10	
		Non-mechanised transport equipment/ bicycle	11	
		Fishing equipment	12	
		Mechanised irrigation system	13	
		Mechanised land preparation equipment	14	
		Mechanised planting equipment	15	
		Mechanised harvest equipment	16	
		Mechanised threshing/shelling equipment	17	
		Mechanised transport equipment	18	
		Improved crop storage system	19	
		Radio	20	
		Solar panel (11W)	21	
		Motorbike	22	
		Car	23	
		Fridge	24	
		TV	25	
		Other, specify	99	
5.2	During the 2019/20 agricultural season were you under a contract farming agreement? (choose all that apply)	No	1	[____]
		Yes, in tobacco	2	
		Yes, in sugar cane	3	
		Yes, in horticulture or fruit	4	
		Yes, in any other crop	5	
5.3	Have you ever participated in an agricultural course/training that lasted longer than 3 months?	No	0	[____]
		Yes	1	
		Don't know	88	
5.4	Do you own a machamba? (rented machamba does not apply as ownership)	No	0	[____]
		Yes, without any formal title	1	
		Yes, with a formal title	2	
5.5	During the 2019/20 agricultural season did you receive production assistance from an extension officer? (whether it was from NGO, private sector or SDAE)	No	0	[____]
		Yes	1	
		Do not remember	88	
5.6	If YES in 6.5, who did provide this assistance?	SDAE extension officer	1	
		Project SMART	2	
		Project Swisscontact/FAR	3	
		Project Concern/ United Purpose	4	
		Project KWAEDZA	5	
		Project CLUSA PROMAC	6	
		Project CLUSA TVET	7	
		Land'O Lakes – Farmer to Farmer	8	
		Rama (USAID)	9	
		FAO	10	
		Other, specify:	99	
5.7		No, did not need it	1	[____]

	During the 2019/20 agricultural season were you able to get a loan to support your agricultural production? (in-kind loans included) Select only the one where the biggest amount of loan was gathered	No, but needed it	2	
		Yes, from a village savings group	3	
		Yes, from a bank or microfinance institution	4	
		Yes, from a private company	5	
		Yes, from a family member or friend	6	
		Yes, from an NGO	7	
		Yes, from the government	8	
		Yes, from other source or don't remember	9	
5.8	Do you have an alternative source of income, food or resource that you can turn to in the case of an accident or climatic disaster?	No	0	[____]
		Yes	1	
		Don't know	88	
5.9	In the 2018/19 agricultural season were you able to produce enough food crops to be consumed during planting and growing seasons of the 2019/20 season?	No	0	[____]
		Yes	1	
		Don't know	88	

Sample survey with the SCF

[The questionnaire for the FBA will be used for this SCF survey]

A1.2 Qualitative Assessment Question Guide

In-depth Interview (IDI) question guide

Mid-term Evaluation of
SMART (Strengthening the Missing Middle in Agribusiness for Rapid Transformation)

Target Respondent:

- Farm business advisor (FBA),
- Small Commercial farmers (SCF)

Pre-interview introduction

Good morning / afternoon, my name is …… .. I am working as an enumerator for iDE Mozambique SMART project. IDE is implementing SMART project, and you have been chosen to answer some questions. Your answers will be used to evaluate how the project has worked here in the community.
Can I do the interview? Yes No (If NO, thank and end the interview)
Are you over 18 years old? (Just ask the question if it was not obvious from the appearance). If NO, end the interview
Do you have agriculture as your main activity? If NO, end the interview.
Do you have more than 10 hectares of cultivated land? If NO, end the interview.
ALL QUESTIONS ARE RELATED TO THE AGRICULTURAL SEASON 2019/2020

0.1	INTERVIEWER NAME			
0.2	INTERVIEW DATE		Y Y Y Y M M D D	
0.3	PROVINCE		MAPUTO	1
			MANICA	2
			SOFALA	3
			TETE	4
0.4	DISTRICT	Maputo	Boane	1
			Manhiça	2
			Marracuene	3
			Matola	4
		Manica	Gondola	5
			Macate	6
			Manica	7
			Sussundenga	8
			Vanduzi	9
		Sofala	Dondo	10
			Nhamatanda	11
		Tete	Angonia	12
			Tsangano	13
0.5	Posto administrativo			
0.6	Locality			
0.7	Community			
0.8	GPS Coordinates			

1. Household Roaster

1.1	Respondent type	1. FBA	2. SCF
1.2	Respondent's name		
1.3	Respondent's enterprise name		
1.4	Respondent's sex	1. Male [____] 2. Female [____]	
1.5	Respondent's age	[____] years	

1.6	Age of business	[____] years		If <1, end interview
1.6.a	Did you start your business with the help of iDE/ SMART?	Yes	1	
		No	2	
1.7	What level of education you completed?	No education	1	
		Literacy / Alphabetisation	2	
		Up to first level elementary school (EP1)	3	
		Up to second level elementary school (EP2)	4	
		Up to first level secondary school (ESG 1)	5	
		Up to higher secondary school (ESG2)	6	
		Tertiary education / university	7	
		Technical/Vocational training (tecnico básico/ médio)	8	
		Teacher training	9	
		Don't Know	10	
		Other	99	
1.7.a	Please state the number of family members of the household	Male		
		Female		
		Total		
1.8	What are the top three sources of your household income?	Agriculture / farming	1	
		Animal husbandry	2	
		Fishing	3	
		Government employment (professor, health worker, administration, etc.)	4	
		Retired with pension	5	
		Living from other Government pensions / social subsidies	6	
		Salaried job (other than government)	7	
		Working as craftsmen (bricklayer, carpenter, plumber, electrician, etc.) and related work (e.g. brick production)	8	|__| First
		Artisan business (Portuguese: Artisanato)	9	|__| Second
		Small business / local retailer business	10	|__| Third
		Working in someone else's farm (wage labour)	11	
		Day Worker in the agricultural sector (ganho-ganho)	12	
		Travels to work in another town/village	13	
		Collects and sells firewood	14	
		Produces and sells charcoal	15	
		Remittances (from family or friends)	16	
		Other [specify]	99	
1.9		None - >skip to 2.1	0	
		Demonstration plot	1	

	Which of the following trainings have you participated in during the last four years (2017-20)? *[Hint: if the answer is 'None', skip to 2.1]*	Field day	2	
		Training on business planning	3	
		Training on agribusiness management	4	
		Couple's training	5	
		Personalized coaching	6	
		ECPA training	7	
		Agriculture as a family business	8	
		Savings & family budget	9	
		Financial education	10	
		Postharvest training	11	
		Other [specify]	99	
1.10	Who provided these trainings?	iDE/ SMART- ECPA/ farmers field school/ FBA	1	
		Other government program	2	
		United Purpose / Concern (FAR)	3	
		Swisscontact / AFOC-MSD (FAR)	4	
		KWAEDZA (FAR)	5	
		CLUSA PROMAC	6	
		CLUSA TVET	7	
		Feed the Future	8	
		RAMA (USAID)	9	
		Farmer to Farmer – Land'O Lake	10	
		FAO	11	
		Other development project/ NGO	12	
		Other private company (input/output)	13	
		Other [specify]	99	
1.11	What did you learn from the training?	Business record keeping	1	
		Product pricing	2	
		Financial budgeting	3	
		Appropriate use agricultural inputs	4	
		Linkage with input market actors	5	
		Linkage with output market actors	6	
		Farming as a Family Business (FaFB)	7	
		Formalization	8	
		Importance of having Family savings	9	
		Participating in a Savings group	10	
		Importance to set up a budget for the household	11	
		How to establish demonstration fields for producers	12	
		How to look for clients and buyers	13	
		How to make a business plan	14	
		How to set up a budget for my business	15	
		Family financial management	16	
		Postharvest best practices	17	
		Others (specify)	99	
1.12	Which of the knowledge do you currently apply in your business?	Business record keeping	1	
		Product pricing	2	
		Financial budgeting	3	
		Appropriate use agricultural inputs	4	
		Linkage with input market players	5	

		Linkage with output market players	6	
		Implementing demonstration fields for promotion of inputs	7	
		Climate-Smart agricultural practices	8	
		Others (specify)	99	
1.13	Which of the knowledge you disseminate to the SHF?	Business record keeping	1	
		Product pricing	2	
		Financial budgeting	3	
		Appropriate use agricultural inputs	4	
		Linkage with input and output market	5	
		Use of improved seeds	6	
		Correct use of fertilizers and pesticides	7	
		Climate-smart agricultural practices	8	
		Others (specify)	99	

2. Enterprise Performance (Indicator 1101)

2.1	What business/commercial farming are you involved with? *Hint: this needs to be aligned with the "principal activity" in the SCF list*	Agricultural input production		1	
		Agricultural input selling		2	
		Agricultural output trading / aggregator		3	
		Agricultural service provision		4	
		Agricultural machinery selling/renting		5	
		Agricultural farming with improved technology		6	
		Commercial agriculture production		7	
		Other [specify]		99	
2.2	What are the three core products/services of your business? (if that many)	Product/Service name 1: (……..) Product/Service name 2: (……..) Product/Service name 3: (……..)			
2.3	Which crop your product/input/service is applied for?	***[Crop code]***		[___]	MA
2.4	Is this business/commercial farming your primary source of income throughout the year?	Yes		1	
		No		2	
2.5	What do you do with your agricultural production?	Primarily sell		1	If "6, 7" for Q2.1
		Primarily consume		2	
		Both sell and consume		3	
2.6	Have you experienced any of the following in your business/ commercial farming? *[Hint: compare between seasons 2019 and 2020]* *[Inst: enable tick-mark]*		Increased	Decreased	
		Sale volume of products			
		Purchase of stock for selling			
		Sale revenue			
		Product range (expansion or vice-versa)			
		Number of customers			
		Number of suppliers			
2.7		Revenue generated (MZN)			

	How much revenue and profit your enterprise generated in 2020? *Hint: January – December 2020*	Net profit after cost of production (MZM)		
2.8	What proportion of your business revenue you reinvested in 2020?	[____] %		0% - 100%

CROP CODES	*4. Cucumber*	*8. Onion*	*11. Sesame*
1. Black eyed peas;	*5. Garlic*	*9. Pigeon pea*	*12. Soya*
2. Butter beans	*6. Ground nut*	*10. Pumpkin*	*13. Tomato*
3. Cabbage	*7. Maize*		

3. Customer/client base of the SCF/FBA (Indicator 1113, 1114)

3.1	Have you introduced new (products that were not used by the community/clients before) product in your area in the last 4 years?	Yes	1	
		No ->skip to 3.4	2	
3.2	What is/are the new product(s)?			If "Q3.1" is "1"
3.3	How would you rate the demand of those products among your customers?	Very low	1	
		Low	2	
		Moderate	3	
		High	4	
		Very high	5	
		Don't know	88	
3.4	Is there an increase of market actors in your area who are performing the same role as you?	Yes	1	
		No	2	
		Don't know	88	
3.5	Were any of them inspired by you and try selling similar products or conducting a similar business?	Yes	1	IF "Q3.4" is "1"
		No	2	
3.6	How many customers your enterprise served in the year 2020?	Male		
		Female		
		Enterprise		
3.7	What percentage of customers conducted repeated transactions (more than once) with your enterprise in the year 2020?	[_____] %		
3.8	Do you perceive an increase in the number of repeated customers after working with iDE/ SMART	Yes	1	
		No	2	
3.9	How many new customers your enterprise served in the year 2020?	Male		
		Female		
		Enterprise		
3.10	How many suppliers (SHF, other producers, agri-input suppliers/companies) your enterprise aggregated/sourced the products from in the year 2020?	Male		Only If Q2.1 is "3"
		Female		
		Enterprise		
3.11	How many NEW suppliers/SHF/other producers/agri-input suppliers your enterprise collected the products from in the year 2020?	Male		
		Female		
		Enterprise		

	[Hint: only for FBAs]			
3.12	Do you perceive an increase in the number of repeated suppliers (where you source your products from) over the year? *[Hint: only for FBAs]*	Yes	1	
		No	2	
3.12a	How many of the suppliers/SHF/other producers conducted repeated transaction (more than once) with your enterprise in the year 2020? *[Hint: only for FBAs]*	[_____] %		
3.13	What are the embedded services that you provide along with the product you sell to your customer/ aggregate product from SHF/other producers? *[Hint: only for FBAs]*	Advise on improved agricultural farming techniques	1	
		Advise on improved agriculture inputs (seed)	2	
		Advise on improved agriculture inputs (fertilizer and pesticide)	3	
		Advise on use of mechanization in agricultural farming	4	
		Link with the agri-input selling companies	5	
		Link with the output buying traders/market	6	
		Link with the agricultural extension services	7	
		Link with financial institutions	8	
		Advise or publicize in local radio on climate/weather alarms	9	
		Inform on prices	10	
		Others (specify)	99	
3.14	Do the customers demand any other services/product that you cannot provide to them?	Yes	1	
		No	2	
		Do not know/not applicable	88	
3.15	If 'Yes', what are those?			If 'Q3.14' is '1'
3.16	Why cannot you provide the service (elaborate)?			

4. Input-Output Market Linkage (Indicator 1211, 1212, 1213)

4.1	Do you have any business with an input marketing company/agent/supplier?	Yes	1	
		No	2	
		Not applicable	88	
4.2		Yes	1	

	Did iDE-SMART project facilitate the linkage with input suppliers (commercial company, not producer) and output buyers?	No	2	If 'Q4.1' is '1'
4.2.a	How many input market companies/suppliers linkage were facilitated?	[_____]		If 'Q4.2' is 1
4.3	How did the linkage help your business/commercial farming?	Timely availability of inputs	1	
		Improved the offer to farmers	2	
		Better advice to farmers	3	
		Increased clients and sales	4	
		Increased customer satisfaction	5	
		Better quality seed	6	
		Better quality produce	7	
		Did not help	8	
		Production/sales same as before	9	
		Made business worse	10	
		Decreased customer satisfaction	11	
		Other (specify)	99	
4.4	What were the challenges/constraints you were facing before getting linked with input supply companies?			
4.5	Referring to the linkage, are you now able to source more quality inputs from reliable sources compared to two/four years before?	Yes	1	
		No	2	
4.6	Have you facilitated any linkage among your customers and any of the input marketing companies?	Yes	1	
		No	2	
4.7	How many customers you served with the improved inputs from the input marketing companies?	Male		
		Female		
4.8	Do you have any business with an output selling company/traders?	Yes	1	
		No	2	
		Not applicable	88	
4.9	Did iDE-SMART project facilitate the linkage with the output selling company/traders?	Yes	1	If 'Q4.8' is 1
		No	2	
4.9.a	How many output market companies/suppliers linkages were facilitated?	[_____]		
4.10	How did the linkage help your business/commercial farming?	Timely availability of buyers	1	If 'Q4.9' is 1
		Improved sales margins of products	2	
		Better prices for farmers (SHF) products	3	
		Facilitated product aggregation and disposal/transportation	4	
		Increased clients and sales	5	

		Increased customer satisfaction	6	
		Better quality produce	7	
		Did not help	8	
		Production/sales same as before	9	
		Made business worse	10	
		Decreased customer satisfaction	11	
		Other (specify)	99	
4.11	What were the challenges/constraints you were facing before getting linked with the output selling company/traders?			
4.12	Referring to the linkage, are you now able to source more quality (and quantity) inputs/crops/products from reliable sources compared to two years before?	Yes	1	
		No	2	
4.13	Have you facilitated any linkage among your customers and any of the output selling companies/traders?	Yes	1	
		No	2	
4.14	How many customers you linked with the output selling companies/traders?	Male		
		Female		
4.15	During the 2019/20 agricultural season were you able to get a loan to support your agricultural production/agri-business? (in-kind loans included) *Select only the one where the biggest amount of loan was gathered*	No, did not need it	1	
		No, but needed it	2	
		Yes, from the KIVA loan	3	
		Yes, from a bank or microfinance institution	4	
		Yes, from a private company	5	
		Yes, from a family member or friend	6	
		Yes, from an NGO	7	
		Yes, from the government	8	
		Yes, from other source or don't remember	9	
4.16	During the 2019/20 agricultural season were you able to get a loan for your agricultural production with support from the SMART project? (in-kind loans included) *Select only the one where the biggest amount of loan was gathered*	No, did not need it	1	
		No, but needed it	2	
		Yes, from the KIVA loan	3	
		Yes, from a bank or microfinance institution	4	
		Yes, from a private company	5	
		Yes, from a family member or friend	6	
		Yes, from an NGO	7	
		Yes, from the government	8	
		Yes, from other source or don't remember	9	
4.17	If SMART team leaves your region, will it affect your business? How?	[please elaborate]		

5. Access to agricultural finance (Indicator 1127)

5.1	Did you receive any training on financial literacy?	Yes	1	
		No	2	
		Don't know	88	
5.2		Yes	1	

	Did you receive any training on Farming as a family business (FaFB)?	No ->skip to 5.3	2	
5.2.a	If yes, what did you learn from the training?	Business record keeping	1	
		Setting price of the product	2	
		Opening a bank account	3	
		Calculating interests	4	
		Doing agricultural activities jointly, both male and female members of the family (FaFB)	5	
		Formalization of my business	6	
		Developing a business plan / Planning for the business	7	
		How to look for clients and market opportunities	8	
		How to set up a budget for my business	9	
		Importance of having family savings	10	
		Savings groups	11	
		Importance of making/planning a family budget	12	
		Do not know	88	
5.3	Do female family members participate in the agricultural activities/business? *[Hint: applicable for SCF and FBA]*	Yes	1	
		No *->skip to 5.5*	2	
5.4	If 'yes', were they involved already before SMART project started working with you?	Yes	1	
		No	2	
	If 'yes', how did that help your agricultural production/agri-business?	The family is able to increase the agricultural farming (increased land cultivation)	1	
		The assistance from female helped in record keeping/account keeping	2	
		Decrease in cost of farming	3	
		Others (please elaborate)	99	
5.5	During the 2019/20 agricultural season were you able to get a loan to support your agricultural production? (in-kind loans included) *Select only the one where the biggest amount of loan was gathered*	No, did not need it	1	
		No, but needed it	2	
		Yes, from a village savings group	3	
		Yes, from Kiva loan	4	
		Yes, from a bank or microfinance institution	5	
		Yes, from a private company	6	
		Yes, from a family member or friend	7	
		Yes, from an NGO	8	
		Yes, from the government	9	
		Yes, from other source or don't remember	99	
		No, but needed it	2	
		Yes, from a village savings group	3	
		Yes, from Kiva loan	4	
		Yes, from a bank or microfinance institution	5	
		Yes, from a private company	6	
		Yes, from a family member or friend	7	

		Yes, from an NGO	8	
		Yes, from the government	9	
		Yes, from other source or don't remember	99	
5.6	How did the loan help in your agri-production system? [mainly for SCF, for FBA only if he/she is a producer and used the loan for his production]	Purchased agri-inputs	1	IF Q5.4 is "3 & 4"
		Purchased agri-technology	2	
		Diversified crop production	3	
		Used for non-agricultural personal purpose	4	

6. Gender norms and inclusion (elaborative questions)

Gender equity and social inclusion (ask about FBA's status if the respondent is a female. Or ask about their female family member if the FBA is a male).

1. Are you or the women in your family now able to benefit from the engagement in agricultural production/ agri-business? Tell us how?

2. Who takes the decisions at different levels of production and sales? Who execute(s) the decisions? Do you see any changes after SMART/iDE works recently (1-2 years)?

Decision Stage	**Today**	**1-2 years ago,**
Selection of crops to be produced		
Decision on seeds and agricultural inputs to be used:		
Buying seeds and other inputs		
Buying of agricultural equipment, including hiring a tractor or other mechanization technology:		
Hiring of labour for preparation of the field:		
Hiring of labour for supporting planting and other production stages		
Timing of the harvest		
Allocation of harvest volume to different usages (consumption, selling, storage, seeds, paying labour or trading for other goods?		
Where to sell crops or who to sell crops to		
Deciding the final selling price		

3. Who takes the decisions regarding income and expenditure? Has decision making dynamics changed over the last 1-2 years? What are the reasons?
   (Try to understand reasons behind decision making dynamics, or change dynamics).

Focus Group Discussion (FGD) Question Guide

With the Smallholder Farmer

Date:		Name of the conductor:	
Province:		District:	
Administrative Station:		Locality:	

SL	Name	Contact Number	Gender	Name of FBA	Agricultural Product
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Relevance

1. Do you know and work with the SMART project? Y/N.

2. If YES, how do you work/participate/interact with iDE/ the SMART project? And when did you start working with iDE / the SMART project?

3. What were the challenges/constraints you were facing in your agricultural activity before the iDE/SMART project started implementing its activities?

Response:

Productivity/ Yields:
Production quality:
Number of crops produced:
Input Access:
Agricultural Practices employed:
Advisory Support received:
Technological equipment and knowledge:
Market linkages to Buyers:
Access to Finance:
Other constraints:

4. Is there an FBA supporting you in your agricultural activity (name him/her)? How does s/he support you? (The enumerator should mention respective FBA name or type)

Response:

Input Access Support:
Advice on good agricultural practices
Number of Crops produced:
Agricultural Practices /Advisory Support:
Technological Support:
Market linkage Support:
Financial Support:
Other Support:

5. What has changed in your agricultural activity as a result of support from (fill the response where applicable as a result of the kind of support mentioned in Question 4).

Response:

Input Access:
Number of Crops produced:
Agricultural practices:
Use of Technology and other equipment for production:
Market linkages to buyers:
Financial Support:
Other Support:

5.a. Did you participate in ECPA training (Yes/No)? (The enumerator should mention respective ECPA name)

5.b. How did the ECPA training/involvement support your agricultural production?

Response:

Input Access Support/market linkage:
Advice on good agricultural practices:
Agricultural Practices /Advisory Support:
Technological Support:
Financial Support:
Other Support:

6. Are there any products/services that you cannot avail but require for improving your agricultural production and sales? Do you think the FBA could address them? If YES, how could/can the FBA address those?

Support service(s)/ Products that the farmers requires but is/are not available	How could/can FBA address those missing support services or products?

Effectiveness

7. Has this support system (facilitated by iDE/SMART) improved your agricultural output and profit margin? If yes, how? Also, if no, why? *(registering each individual producer and his/her answer)*

SL (Roaster)	Support system improved production level (*answer will be yes or no*)	Why and how the production increased/decreased?	Support system improved profit margin (*yes/ no*)	Why and how the profit margin increased/ decreased?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

8. How would you rate the quality of the input supply facilitated by iDE/SMART? Please rate between "Very poor, poor, moderate, good, very good".

Agriculture product/ crops	How would you rate the quality of the input supply support received? (Very poor, poor, good, very good)

8.a. Tell us about your accessibility to the inputs – (source of inputs/ suppliers; accessibility to those suppliers/ source). Which channels do you use? Tell us about the reason why you are using those channels?

8.a. How the input supply changed after the intervention by SMART/iDE in regards to accessibility/quality/pricing etc.?

9. Did you receive any output selling support/harvest commercialization support? How would you rate the quality of the output selling support you received? Please rate between "Very poor, poor, moderate, good, very good".

Agriculture product/ sector	How would you rate the output selling condition through traders/ FBA (in light of price, new high value market access)? (Very poor, poor, good, very good)?

9.a. Which channels do you use (formal/informal) for selling your outputs? Did these channels exist before the project started?

9.b. How the output selling support/harvest commercialization changed after the intervention by SMART/iDE?

10. Have you experienced any changes (improvement/decline) in the knowledge the FBA has and is transmitting to you as their client regarding inputs (quality, good brands of input, as well as how to apply them with the right quantities / dosage, timing, etc.) since the project started? How did it change?

11. Have you experienced any changes (improvement/decline) in the knowledge and services your extension officer is transmitting to you regarding inputs (quality, good brands of input, as well as how to apply them with the right quantities / dosage, timing, etc.), agricultural practices, level of attendance and availability, etc. since the project started? How did it change?

12. Are you willing to continue using inputs? Do you wish to continue buying from this input provider? If yes, why?

Impact

13. What are the reasons of your increased/decreased yield (production volume / hectare) in your agricultural production? Which of the reasons you would attribute to the iDE/ SMART project? *(Hint: this question is linked to the question number 4)*

Agricultural product	Has the yield increased because of SMART/iDE? (Yes/ No)	Reasons for increase/ decrease of yield

14. What are the reasons of your increased/decreased agricultural income? Which of the reasons you would attribute to the SMART project?

Agricultural product	Has the income increased after project initiation? (Yes/ No)	Reasons for increase/ decrease in income

15. Have you increased your investment in your agricultural production (in land size, inputs and/or other services)? Why/How did you increase it?

Agricultural product	Have you increased your investment (in land size, inputs and other services)? (Yes or No answer)	Why/How did you increase it?

16. Did you experience any unintended positive and negative results through the support of/ linkage to the FBA?

Agricultural product	Unexpected positive results of FBA	Unexpected negative results of FBA

Systems Change and Resilience

17. What percentage of your income did you reinvest in your agricultural production in the last production season?

18. How much of household income you save (%)? Were you saving before SMART/iDE started working? Have you increased your savings recently? Tell us how and why?

19. Has there been any change in the services you receive since iDE / the project started (from traders; retailers; extension officers; etc.)? What are those changes? *(Hint: ask respondents on the FBA behaviour, availability of new products and quality, marketing strategy of FBA)*

    19.a. Has there been any change in the agricultural production since ECPA training/enrolment? What are those changes? *(Hint: ask respondents on the availability of quality products, application of improved technologies/farming practices etc.)*

20. Do you feel more prepared to secure your agricultural production in case of any climate shock such as for floodings, a cyclone or droughts, than you were before the project started working with you? If yes, why and what did you change to prepare yourself better?? (e.g., as evidenced through savings, application of climate smart technologies etc.)?

20.a. Did you better manage your recovery/ revive agricultural production during the recent cyclones? Would you relate that resilience to ECPA training/market linkage or preparedness due to iDE/SMART interventions? (e.g., as evidenced through savings, application of climate smart technologies etc.)?

21. Will you continue using these farming technologies/good practices? Why? Would you also recommend them to other farmers?

22. Do you think other neighbouring farmers also got influenced by your production practice or technologies? Are they copying using such practices and/or technologies?

Gender equity and social inclusion (use the gender lens in every stage i.e. in terms of woman's power in decision making)

23. Are the women now able to benefit from the engagement in agricultural production and selling? Tell us how.

24. Who takes decisions at the different levels of production and sales? Is it the man, the woman or both? Do you see any changes in the recent years (1-2 years) in relation to taking decisions at these different stages?

Decision Stage	Today	1-2 years ago
Selection of crops to be produced		
Decision on seeds and agricultural inputs to be used:		
Buying seeds and other inputs		
Buying of agricultural equipment, including hiring a tractor or other mechanization technology:		
Hiring of labour for preparation of the field:		
Hiring of labour for supporting planting and other production stages		
Timing of the harvest		
Allocation of harvest volume to different usages (consumption, selling, storage, seeds, paying labour or trading for other goods?		
Where to sell crops or who to sell crops to		
Deciding the final selling price		

25. Who takes the decisions regarding income and expenditure? (the man, the woman, or both) Has decision making dynamics changed over the last 1-2 years? What are the reasons for that change?

(Try to understand reasons behind decision making dynamics, or change dynamics.)

Key informants Interview question guide

KII Guide for SIDA

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. To what extent are the objectives of the project still valid for Sweden's development strategy in Mozambique?
2. What is your assessment of the team structure and performance?
3. Project cycle management: Has the required and agreed implementation plan and reporting plan been followed in time and quality?
4. Effects of the Project
   - Do you feel the project succeeds in generating the desired effects? Why or why not?
   - What are perceived positive, negative and unintended effects?
5. Cost-efficiency
   - Has the project been cost effective from your perspective?
   - Have the results been achieved on time?
6. What is your assessment about the project's long-term sustainability from a donor's perspective?
7. Do you have any other observations/ recommendations for improvement or re-orientation of the project from your point of view?

KII Guide for Implementing Agency – IDE (note that questions to IDE will be divided in 3 different groups)

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. Explanation of the project's team structure and main functions. Is the current staffing structure sufficient and effective? Please explain. Is there a performance assessment mechanism?
2. The chronological history of implementation and main results achieved.
    - To what extent are the objectives of the project still valid? Does the current strategy lead to the intended outcomes?
    - What are the main positive and negative outcomes/effects of the project?
    - What are unintended outcomes of the project?
    - How do you measure attribution?
    - What were the major factors influencing the achievement or non-achievement of the objectives? How did geographic and context changes affect the project? How did the project adapt or respond to change?
    - Is the project more effective for some participants than it is for others? Which and why?
    - Is the project more effective in some locations than it is in others? Where and why?

3. Project efficiency and accountability.
    - Have you been able to achieve results within planned periods?
    - Please explain your monitoring and reporting system and plan, including the financial monitoring.
    - How do you involve project partners (private actors / public actors / cooperation with other projects) to achieve intended impacts and your objectives?
    - Do project partners contribute to collect information your monitoring system? Please explain how and how is the experience.
    - Can you give us evidence of cost efficiency of the project?
    - How do you think the project can be fine-tuned to make it more efficient and more effective?
    - How do you account for the different cross-financing of interventions to the respective donors?
4. Medium and long-term sustainability
    - Which changes did the project make so far at market level?
    - Which indirect impact do you expect to generate? Please explain.
    - What is your strategy to reach larger scale?
    - What is your assessment about the medium and long-term sustainability of the project?
    - Have you built exit/sustainability strategies per intervention for this project? Please explain.

5. Partnerships with the private sector / government agencies
    - What kind of partnerships are there with the private sector? What is their role? How effective are they for reaching intended outcomes?
    - What kind of partnerships are there with government agencies? What is their role? How effective is the partnership for reaching intended outcomes?
6. Please talk about synergies/complementarities/overlaps with other donors/similar projects.
7. Please explain your strategy for inclusion of marginalized groups (women/youth/etc).
8. Has the project been implemented in accordance with a rights perspective? Explain.

Key informants Interview Guide for Government officials

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. How do you perceive the interventions promoted/facilitated by the SMART project in terms of quality, usefulness and partnership orientation?
2. Is the project relevant for the government's development framework? Please explain.
3. What has happened as a result of the project and how?
4. What real difference has the activity made to the beneficiaries?
5. Is there any kind of partnership between your institution and the project? Explain.
6. What is your assessment about long-term sustainability of the project?
7. What are your suggestions for long term sustainability?
8. In your opinion, has the project been implemented in accordance with a rights perspective? Explain.

Key informants Interview Guide for Private Sector partners

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. How do you perceive the interventions promoted/facilitated by the SMART project in terms of quality, usefulness and partnership orientation?
2. What kind of activities or partnership exists between your institution and the project? Please explain the nature and respective roles in the partnership.
3. What has changed for you as private sector actor thanks to the project and its intervention(s)? Please explain.
4. How did your market position change? Please explain.
5. How do you think the project can be fine-tuned to make activities and partnerships more effective?
6. Do you think this change will continue after ending the project (short-term to medium-term sustainability)? Why or why not? Please explain.
7. What is your assessment about the long-term sustainability of the project?
8. What are your suggestions for long term sustainability?
9. Do you have any other observations or comments to share with us in regard to the SMART project and its interventions?

Key informants Interview Guide for Other donors

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. Are you familiar with the SMART project?
2. If yes, how do you perceive the interventions promoted/facilitated by the SMART project in terms of quality and usefulness?
3. What are your existing projects, objectives and geographic coverage? Are you currently implementing or intending to implement any MSD oriented project with a focus on agricultural value chain development?
4. Do you see any kind of synergies, complementarities or overlaps between your portfolio and the SMART project?

Key informants Interview Guide for Other projects

Particulars	Details	
Name of Interviewer		
Name of respondent		
Organization		
Designation		
Detailed Location (Administrative, District, Province)		
Contact number/ email		
Date		
Time	Start: AM/PM	End: AM/PM

1. What are your main interventions and geographic coverage?
2. Are you familiar with the SMART project?
3. If yes, how do you perceive the interventions promoted/facilitated by the SMART project in terms of quality and usefulness?
4. Do you see changes in the market dynamics and structure initiated by the SMART project? What are they? Please explain.
5. Are there any negative affects you observe to occur initiated by SMART project interventions?
6. What is your assessment about the medium and long-term sustainability of the project?
7. What would you recommend as useful changes for the SMART project to be more effective in future?
8. Are there any kind of synergies, complementarities or overlaps between your project and the SMART project?
9. Could you see any useful complementary activities to be more effective for both your project and the SMART project? What would they be?