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DIME MOZAMBIQUE CASHEW FARMER ENDLINE SURVEY

FINAL FIELD REPORT



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WORLD BANK GROUP- DIME MOZAMBIQUE



ADDRESS AUSTRAL Consultoria, Lda.
Av. Zedequias Manganhela, 95
1º, 2º e 3º Andar (Prédio 33 andares)
C.P. 2242
Maputo
Moçambique

TEL. +258 21 358 300; +258-823151190
+258 843142781

E-MAIL austral@austral.co.mz
URL www.AUSTRAL.co.mz

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1 Introduction

This is the Final Field Report of the DIME Mozambique Cashew Farmer Endline Survey that describes the activities performed by the field team during the data collection process and explains the data management carried out. The report includes the main challenges faced during the data collection work, and the mitigation measures applied to carry out the surveys for both Farmers and Sprayers. The Endline survey aimed to reach a total of 729 farmers interviewed and interview 34 sprayers. The Final Report on Data Collection is composed by six chapters, as follows:

- Chapter 1 Introduction: it is the present chapter, that states the aim of the Endline study and the structure of the final fieldwork report,
- Chapter 2 Preparation for Data Collection: this chapter explains all the preparatory activities undertaken for the data collection fieldwork, from the design of the survey instruments, sample design, programming of the data collection applications, the recruitment and training of the data collection team and the piloting of the instruments carried out by the trainees,
- Chapter 3 Data Collection: presents the data collection strategy and the results of the data collection work,
- Chapter 4 Data Management: it presents the main tasks of the field team during data collection to manage the collected data,
- Chapter 5: Major Challenges and Mitigation Measures: it summarizes the main challenges faced during data collection work and the mitigation measures applied to overcome them, and,
- Chapter 6: Recommendations, it presents the suggestions aiming at reducing attrition rates and highlights the importance of sharing information on the project procedures to avoid misunderstandings.

Additionally, the Final Field Report contains two annexes:

1. Appendix A: Field Team Members.
2. Appendix B: Data Collection Itinerary

2 Preparation for the Data Collection

This Chapter describes the preparatory activities that took place from 14th February to 21st March 2022.

2.1 Survey instruments and sample design

The endline survey instruments (farmers and sprayers questionnaires) were designed by the Development Impact Evaluation (DIME) and revised and commented by AUSTRAL. The comments allowed DIME to finalize the survey instruments to be used during the training of the data collection field team DIME provided the list with names and contacts of the 729 farmers and 34 sprayers interviewed during the baseline survey, distributed by the selected districts and localities, as illustrated in the table below.

Table 1: Sample distribution

#	District	Locality	Target Group	
			Sprayers	Farmers
1	Angoche	Namaponda	20	414
2	Mogovolas	Nanhupo Rio	6	117
3		Nametil	8	198
Total			34	729

2.2 Authorization, field training materials and COVID 19 Protocol

With support from GIZ, AUSTRAL obtained the authorization (Credentials) from *Instituto de Amêndoas de Moçambique* (IAM). AUSTRAL also elaborated the following documents: the Field procedure plan, that included details on the field logistics, supervision, and quality control protocols, and data collection schedule; the training manual, as well as the enumerators and supervisors training agenda; revised the COVID 19 protocol.

AUSTRAL also organized all logistics for the training (renting of the training venue including catering services for the whole duration of the training from 23rd to 27th March 2021); prepared the COVID-19 prevention kit materials for individual and team for the training and the fieldwork. The COVID 19 kit, included a bottle (500ml) of alcohol-based gel (1 per person per week) and one thermometer per field team (2 in total). During the training and data collection a daily measurement of body temperature was taken from all training attendants/enumerators (AUSTRAL trainers and Technoserve representative included) and, while in the fieldwork, from all field team members.

2.3 Recruitment of the field team members

The two supervisors and two quality controllers were identified before the training (both successfully participated in the baseline survey). For the positions of enumerators, total of 17 field team candidates were recruited (9 enumerators that participated in the baseline survey and 8 that were recruited from AUSTRAL's network of data collectors, with previous working experience with AUSTRAL). The number of enrolled candidates was higher than the needed for the fieldwork final team (three more enumerators) to allow the selection of the best performing trainees, and to have trained back-up enumerators, in case any replacement along the field work would be needed.

The criteria used to select the trainees to carry out the field work included:

- Having successfully participated in the Baseline Survey would be an advantage,
- Be fluent in Emakua, Coti, Elomwe and Portuguese,
- Secondary schooling, as minimum education level,
- Previous survey experience, including usage of smartphones/tablet; and
- Availability to undertake training & fieldwork, during the scheduled period.

2.4 Training of the Field team members and Pilot exercise

The training of the field team members took place in Nampula City with a duration of six days (four days in class (including one additional day¹), one day for the pilot exercise and one day for discussion of the results of the pilot), from 23rd to 28th March 2022. It was facilitated by the Survey Manager, assisted by the Field Coordinator. The Technoserve representative participated in the classroom training in the first day, while the World Bank Field Coordinators attended the training sessions remotely, from Maputo.

The training of the field team was separated in two sessions, one for the enumerators and the other, at the end of each enumerator's training day, for the supervisors and quality controllers. The supervisors and quality controllers attended the training sessions conducted for enumerators. Additionally, on daily bases, at the end of day of enumerators training sessions, the supervisors and quality controllers attended their specific training sessions (see details in the subsection 2.4.2.).

2.4.1 Enumerators training

The enumerators training focused on the reviewing the Farmers questionnaires including interview simulation in pairs and the survey strategy.

Technoserve representative introduced the trainees on the project background. AUSTRAL explained the objective of the endline study; including its sample, the geographic coverage, farmers and sprayers respondents, application of the informed consent form, field team composition, interview

¹ The additional day after the pilot exercise, rs identified some survey topics that needed to be reinforced before the team reached the field.

technics, communication lines and administrative and logistics aspects related to fieldwork and data collection strategy. The classroom enumerators training session ended with one written exam, held before the pilot exercise.

2.4.2 Supervisors and Quality Controllers training

2.4.3 The Supervisors and Quality Controllers training was divided in three sessions. The first session covering both groups (supervisors and quality controllers), where topics prepared for these groups were addressed. Then, two separated and specific sessions were held, one addressed to supervisors and another one addressed to quality controllers, each one with its specific themes. The Supervisors and quality controllers training sessions **were conducted on daily bases** at the end of the day, after the enumerator training sessions. For each group, a specific instrument was analyzed/discussed. The joint session of both groups focused on the administrative and logistics aspects, Sprayer questionnaire, inconsistency checks resolution strategy, data submission and mobilization of community's members (sprayers and farmers). The Supervisors sessions focused on the Supervision technics, spot checks, quality control procedures, sample and collected data control sheet. The Quality Controllers session focused on the back check questionnaire and revisits. At the end of the training sessions and before the pilot exercise the field team went through the first written exam, to evaluate their understanding of the topics dealt during the training. The results of the first written exam for the trainees, were poor, as 6 enumerators had less than 10 points, 12 enumerators had 10 to 14 points, two enumerators had 15 points and only one achieved 16 points. Pilot Exercise

The pilot exercise was conducted on November 26th March 2022 (day 4 of the field team training session) with the aim of testing the efficacy of the strategy, tools and team composition for the Farmer and Sprayers surveys, and the preparedness of the trainees to undertake the fieldwork. The pilot exercise was carried out in Nametil- Sede (Mogovolas District) and was supervised by the Survey coordinator and the Field coordinator with support of the two supervisors and the two quality controllers. A total of 27 Farmers interviews were conducted by the 17 enumerators candidates, it was also possible to conduct one Sprayer questionnaire by a supervisor, and three back check questionnaires (one Sprayer and 2 Farmers) by the quality controllers.

After the pilot exercise, a session to discuss the pilot's results took place. The field team discussed the main challenges and the mitigation measures to overcome the challenges. Before the final exam, the WB Field Coordinators moderated an oral evaluation of each field team member candidate. The Survey Manager, corrected the first written exam, and based on the results of the first written exam it was decided to apply the same exam to assess if the trainees understood all the explanation received during the correction of the first exam. This was followed by the final written exam and selection of the field team members.

Because the results of the oral evaluation were not good, it was schedule one additional day, on the 28th March 2022, for the trainees to practice more on farmers questionnaires. This session was moderated by AUSTRAL Field Coordinator, with support of the supervisors and Quality Controllers. In this additional day, the role of the Supervisors and Quality Controllers was to assist AUSTRAL Field Coordinator on the exercise and discussions with enumerators aiming at improving their own understanding on the instrument to be used. This helped to create an environment where the enumerators supported by supervisors and quality controllers, had more space to express themselves and make more questions. In addition, it helped the Austral Field Coordinator to ensure that the supervisors and quality controllers are on track in regard their own responsibilities. The role of the

Field Coordinator was also to guide and clarify the questions and standardize the information shared with the trainees. During the additional day, the World Bank Field Coordinator also moderated the oral exam. On this day, the team scheduled the trip to Angoche district to be on the following day, 29th March 2022, to start the data collection on 30th March 2022.

3 Data Collection

The data collection process started on 30th March 2022 and ended on 30th April 2022, totalizing 30 days of data collection. The data was collected through smartphones provided by DIME. The data collection was conducted by two teams, each of them composed by one (1) supervisor, one (1) quality controller and seven (7) enumerators as can be seen in appendix A. Each team worked independently, visiting two communities per day (see appendix B), and the data was collected among farmers and sprayers simultaneously.

In the middle of week two, the data collection was performed by 13 enumerators (six enumerators in one team and 7 in other team) because one of the enumerators left the team for personnel reasons. She was substituted by one of the three trained enumerators that, after mobilization, went through refreshment on the questionnaire and field procedures, delivered by the Field Coordinator and evaluated by the World Bank Field Coordinator, before joining the fieldwork team for data collection. From week three, the team was complete as it was composed as initially planned (fourteen (14) enumerators, two supervisors and two quality controller). However, in the middle of week four, another enumerator left the team because another job opportunity, and the field data was carried out by 13 enumerators from this week onwards. The last enumerator that left the team was not replaced as the team was working in the last locality, and the time needed to prepare/refresh the new enumerator to well perform the data collection, would be coincide with de data collection finalization.

3.1 Main accomplishments of data collection

It was planned to be conducted 729 farmers interviews and 34 Sprayers interviews. The Field team managed to conduct interviews with 691 (94.8%) farmers and with all 34 (100%) sprayers. The remaining 38 (5.2%) farmers were not interviewed due to different reasons, as mentioned below:

Table 2: Attrition reasons

Attrition reasons

- Traveling during the field visit, (1,5 %)
- Not recognized (0.8 %)
- Absent up to the last day of the fieldwork in the area (0.8%)
- Moved to other communities, (0,7 %)
- Refusal to participate in the endline (0.5%)
- Unavailable due to illness (0.3%)
- Abandoned Households (0.3%)
- Mental illness (0.1%)
- Unavailable as a family member passed away (0,1%)
- Unavailable because in jail (0.1%)

To reduce the attrition noticed only in the farmers segment, the field team followed the below described strategy:

- contact the unavailable farmers in three different occasions, as follow: the first visit was at the first day of work in the community; the second visit was held at the same day in a different period (afternoon/different hour or on the following day); the third visit was at the day scheduled to perform the back check that could be on the second or third day of work in the community. Apart from the three visits, the field team also tried to locate the farmers by phone. There were cases where farmers were not at home and their phones were switched off, and the team had to trace them using neighbors' phones to monitor them. Only three of the cases initially reported could be traced.
- return to the communities of the unknown farmers and try to locate them through enquiring local authorities and residents, the team also used the GPS Coordinates without success.
- ask sprayers for farmers nicknames, as farmers were listed using their formal names, but they are also known by their nicknames, or any additional information on farmers the sprayers might have from their first meeting. This kind of information might help track down farmers if the names in the lists were not the names the farmers use in the community.
- in case of farmers that moved to other communities, the field team tried to track those farmers, but it was always difficult to find the farmers in the new communities, because most of them were not well known in the new location.

4 Data Management

DIME was responsible for the data management, and AUSTRAL was responsible to solve the inconsistencies highlighted by DIME. To solve the inconsistencies in the shortest span of time, the field team was divided in four groups of 3 to 4 members that worked with the two supervisors and two quality controllers. After uploading the inconsistencies, AUSTRAL Data Manager was responsible to explain to the Field team (field coordinator, supervisors, and quality controllers) the inconsistencies received from DIME team. AUSTRAL Field Coordinator supervised the whole process and conducted daily meetings with all field team members to explain the type of inconsistencies received and clarify why it was highlighted, including the revision on how to ask questions and field procedures before the team started the inconsistencies resolution process, after the resolution process the Data Manager was also responsible to verify and confirm that all inconsistencies reported by DIME Team have been addressed by the field team and that the answers given were within the expected quality standards. Additionally, weekly meetings with DIME Field Coordinators and the field team were used to clarify technical doubts.

To reduce the number of flags, the following strategy was prioritized:

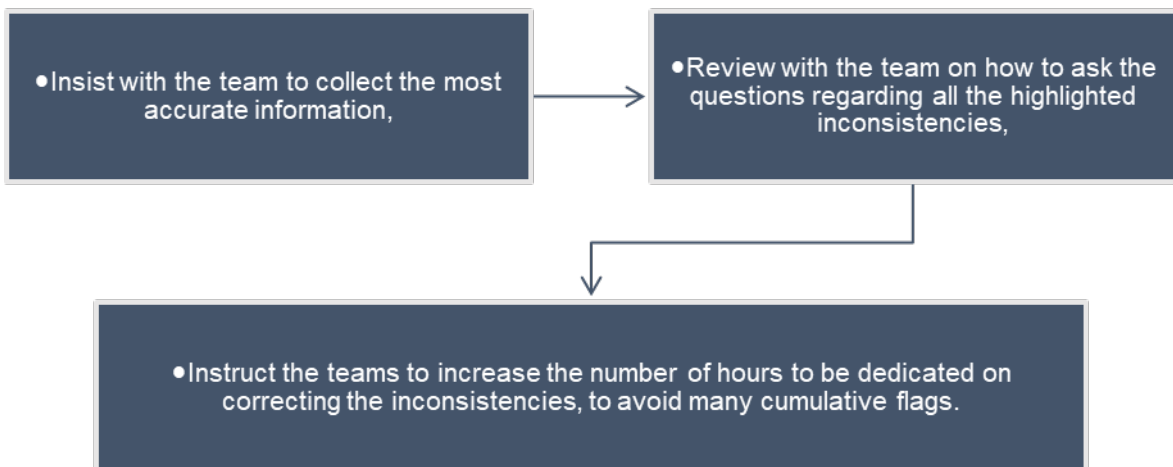


Figure 1: strategy to reduce flags

In general, the inconsistencies for both survey groups were related to:

Sprayers

- number of cashew trees owned by the sprayers during baseline and endline,

- total number of farmers that the sprayers work with comparing with baseline,
- willingness to pay (exchange of first, second and third spraying for a quantity of cashew),
- perceived quantity of cashew yields with one, two or three spraying.

Farmers

- duplicated submissions,
- number of cashew trees owned by the farmers during baseline and endline,
- voucher's use,
- perceived quantity of cashew yields with one, two or three spraying,
- number of sprayed trees,
- willingness to pay (exchange of first, second and third spraying for a quantity of cashew),
- cashew yields versus number of owned trees.

To solve the inconsistencies the field team used the following approach:

- verify the information registered in the enumerator's notebook,
- in case that the information is not complete or does not clarify the inconsistency, call the respondent by phone to clarify the questions in need, and,
- in case of network failure or respondents without phone, revisit the respondents and redo the questionnaire as needed or clarify the information if it was the case.

5 Challenges and mitigation measures

During the data collection process, the field team faced the challenges summarized in the table below and different mitigation measure were adopted as illustrated in the table below.

Table 3: Challenge, impact, and mitigation measure

Heavy raining	additional time to work with the sprayer/in the sprayer's community	› wait for the rain to stop to be able to continue with the data collection
Roads that are blocked due to heavy raining		› use alternatives roads, and motorcycles to reach the areas
Farmers that moved to other areas		› try to locate the farmers and schedule interviews for other day
Farmers that were not available during the mornings period		› interview the available farmers while waiting for the unavailable farmers to come back to conduct the interviews with them › mobilize the farmers using door to door method › try to locate the farmers in the plots and conduct the interviews in the plots › while waiting for the unavailable Farmers to return, resolve the inconsistencies of the previous day

Farmers that are not available due to social events (church)		› wait for the farmers to return to conduct the interviews
Farmers that were not available due to the preparation of presidential visit to District		› contact the farmers and schedule the interviews for the following day
Farmers that were not available due to social events (one community member passed away)		
Distance between households		› use motorcycle to reduce the distance and reach the areas in less time › reach the households by walk
One Farmer that reported having 2000 cashew trees contrary of the 400 reported during the baseline	increase in the number of highlighted inconsistencies	› continue to conduct the interview and inform the World Bank Team
Refusal due to problems with Sprayer	reduce in the number of interviews in the area	› explain the objective of the project, in case that farmer do not accept to participate inform the sprayer

6 Recommendations

We recommend the following:

To avoid misunderstanding regarding the selling moment and price between Farmers and Sprayers,

- Conduct regular meetings with Farmers and Sprayers to:
 - clarify the objective of the project,
 - inform on the project procedures, and,
 - inform the specific activities to be performed by the Sprayers as well as their responsibility.

To reduce the attrition rate,

- Collect/register the official names that farmers are known in the community as well as their nicknames.

Appendix A: Field Team Members

#	Team	Name	Position
1	1	Jairezinho Orlando Álvaro Calisto	Supervisor
2		Elias Agostinho	Quality Controller
3		Fátima Mussa Amade Momade Assuate	Enumerator
4		Fatucha Jojo Jorge Jessenao (left the field in the mid of week two)	Enumerator
5		Ana Angelina Calieque	Enumerator
6		Sílvia Cajapuíra	Enumerator
7		Jordão Jose Geremias	Enumerator
8		Josefina Lobo	Enumerator
9		Tauacal Mulado	Enumerator
10		Sandra Mussa (joined the field team from week three up to end)	Enumerator
1	2	Ernesto António	Supervisor
2		Rui Pompílio	Quality Controller
3		Felicidade Lopes	Enumerator
4		Natacha Juma Henriques	Enumerator
5		Mahamudo Ismael Mussa	Enumerator
6		Páscoa Manuel Joaquim (left the field in the mid of week four)	Enumerator
7		Cristina Amaral	Enumerator
8		Almentina Valeria Elias Muanica	Enumerator
9		Quenito Antonio Inxala	Enumerator

Appendix B: Data Collection Itinerary

Province	District	Locality	Community	Total Planned Interviews	Starting date	Ending Date	Supervisor
Nampula	Angoche	Namapondo	Namaponda-Sede	23	30.03.2022	31.03.2022	Ernesto
			Namaponda-Sede	15	30.03.2022	30.03.2022	Jairezinho
			Napuala	22	30.03.2022	31.03.2022	Jairezinho
			Napuala	18	31.03.2022	01.04.2022	Jairezinho
			Napuala	18	01.04.2022	02.04.2022	Jairezinho
			Marrocane	61	03.04.2022	05.04.2022	Jairezinho
			Comba	10	30.03.2022	31.03.2022	Ernesto
			Comba	20	31.03.2022	01.04.2022	Ernesto
			Comba	40	02.04.2022	02.04.2022	Ernesto
			Comba	26	03.04.2022	05.04.2022	Ernesto
			Marrocane	40	06.04.2022	08.04.2022	Jairezinho
			Comba	11	06.04.2022	06.04.2022	Ernesto
			Nakuzupa	9	09.04.2022	09.04.2022	Jairezinho
			Mupaheia	4	09.04.2022	09.04.2022	Jairezinho
			Mupaheia	10	09.04.2022	09.04.2022	Jairezinho
			Nicuncune	3	11.04.2022	11.04.2022	Jairezinho
			Nacore	10	12.04.2022	12.04.2022	Ernesto
			Namazoco	7	12.04.2022	12.04.2022	Ernesto
			Mavilika	37	08.04.2022	09.04.2022	Ernesto
Mavilika	30	11.04.2022	12.04.2022	Ernesto			
Total				414			

ANGOICHE

MOGOVOLAS

Province	District	Locality	Community	Total Planned Interviews	Starting date	Ending Date	Supervisor
Nampula	Mogovolas	Nametil	Mwatavira	53	13.04.2022	15.04.2022	Ernesto
			Mutharica	58	12.04.2022	15.04.2022	Jairezinho
			Mecutamala	14	16.04.2022	16.04.2022	Ernesto
			Mulewa	8	16.04.2022	16.04.2022	Ernesto
			Mulewa	20	16.04.2022	16.04.2022	Jairezinho
			Mulewa	23	18.04.2022	18.04.2022	Ernesto
			Mabucos	9	18.04.2022	18.04.2022	Jairezinho

Province	District	Locality	Community	Total Planned Interviews	Starting date	Ending Date	Supervisor
			Armazen 50	13	18.04.2022	18.04.2022	Jairezinho
		Subtotal		198			
		Nanhupo Rio	Nanhurio- Rio Sede	12	19.04.2022	19.04.2022	Ernesto
			Nanhupo- Rio Sede	19	19.04.2022	19.04.2022	Jairezinho
			Nanhupo- Rio Sede	25	20.04.2022	20.04.2022	Ernesto
			Nanhupo- Rio Sede	32	20.04.2022	20.04.2022	Jairezinho
			Nanhupo- Rio Sede	2	20.04.2022	20.04.2022	Jairezinho
					27	21.04.2022	21.04.2022
		Subtotal		117			
Total				315			
General Total				729			