

End of Project Evaluation Report

Livelihood Opportunities through Sustainable Agriculture (LOSA)



August - September 2019

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Table of Contents

Ac	cronyms & Abbreviations	4
Lis	st of Tables	5
Lis	st of Charts	5
Lis	st of Pictures	5
E)	(ECUTIVE SUMMARY	6
I.	Background	8
II.	Purpose and scope of the evaluation	9
	Evaluation objectives and criteria	9
111.	Evaluation Methodology	9
	Data Collection	9
	Data Analysis & Interpretation	11
	Limitations	11
IV	. Project accomplishment	11
	Outcome 1: Farmers are managing their resources in a sustainable manner	12
	Achievement of the Indicators at the Output Level	13
	Achievement of the Outcome 1 Indicators	15
	Outcome Indicator 1.1 Yield of maize crops for FFS CA participants (Target 30% increase by e of project)	end 15
	Outcome Indicator 1.2 # of CA FFS HHs applying three of three conservation agriculture methods (target 100%)	16
	Outcome Indicator 1.3 # of participating HHs applying at least one of three conservation agriculture methods (target 70%)	16
	Outcome Indicator 1.4 # of LC core group members with management/mentoring and facilitation skills (target 24 participants, of which at least 50% are women	16
	Outcome Indicator 1.5 # of HHs where husband and wife discuss major decisions related to agriculture production.	16
	Outcome Indicator 1.6 # of DRR action plans developed by the communities (target: 2)	17
	Outcome 2: Vulnerable girls and boys, women and men have improved wellbeing and strengthened community	18
	Achievements of Indicators at the Output Level	19
	Achievements of the Outcome Indicators	22
	Outcome Indicator 2.1: # of participants who have adopted two new health promoting behaviours (target 70 % of participants)	22
	Outcome Indicator 2.2: # of HHs using vegetables daily for at least one meal	23
	Output Indicator 2.3 # of HHs benefitting from improved access to water (target: 140)	23

	Outcome Indicator 2.4 # of HH using a hygienic latrine either constructed by CLTS outcome or rehabilitation or by hygiene promotion to use hygienic but non-used toilets (by proxy measure) (target: 100)
	Outcome Indicator 2.5: # of cases of diarrhoea within the target households on a monthly basis (target: once a month or less)
	Outcome Indicator 2.6: # of HH with access to loans through the VSLA scheme (target: 120) 25
V. Ef	fectiveness25
Ur	nexpected Outcomes25
Cr	oss-cutting Issues: Gender, Disability & Environment26
VI.	Sustainability27
VII.	LESSONS LEARNED
VIII.	CONCLUSIONS
IX.	RECOMMENDATIONS
REFE	RENCES:
ANN	EXES:

Acronyms & Abbreviations

ADRA TL	Adventist Development & Relief Agency Timor Leste		
ANCP	Asustralia NGO Cooperation Program		
Aldeia	Hamlet (Tetun)		
CA	Conservation Agriculture		
CLTS	Community-Led Total Sanitation		
Chefe	Head of (village, hamlet)		
DHS	District Health Service		
DRR	Disaster Risk Reduction		
EBF	Eskola Basica Filial/Primary School		
Farmar	Farmer to Market		
FFS	Farmers Field School		
FGD	Focus Group Discussion		
FHH	Female Headed Household		
HH	House hold		
IEC	Information, Education and Communication		
KII	Key Informant Interview		
KG	Kitchen Garden		
LC	Livelihoods Center		
LOSA	Livelihoods Opportunities & Sustainable Agriculture		
ODK	Open Data Kit		
PWD	People with Disability		
QPR	Quarterly Progress Report		
Suko	Village (Tetun)		
VSLA	Village Saving and Loan Association		

List of Tables

Table 1	Respondents of House Hold Survey				
Table 2	Composition of FGDs Participants by Village & Gender				
Table 3	List of Interviewees in KIIs by Village & Gender				
Table 4	Cultivation Methods Applied by Communities				
Table 5	Corn Production by CA Participants				
Table 6	Decision Making in Agriculture by Gender				
Table 7	HH Survey Result on the Knowledge of DRR Plan				
Table 8	The Top 5 Crops Planted by Communities-Before & After				
Table 9	Sources of Clean Water-Before & After				
Table 10	Habits Before and After LOSA Project				
Table 11	Combined Healthy Habits				
Table 12	Number of Diarrhoea and Malaria Cases in 2017 and 2018				
Table 13	Defecation Place-Before & After				
Table 14	Sustainability of LOSA Project Component				
Table 15	FGD Results with School Students				

List of Charts

Chart 1	Output Contribution to Outcome 1 Achievement
Chart 2	Achievement of Output Indicators 1.1 to 1.5
Chart 3	Output Contribution to Outcome 2Achievement
Chart 4	Achievement of Output Indicators 2.1 to 2.10
Chart 5	Community Participation in LOSA Project
Chart 6	Combination of 2 Healthy Habits
Chart 7	Project Component Bundling Effect

List of Pictures

Cover Picture	People Marking Critical Landmarks in Luca
Picture 1	Map of Uma Tolu

EXECUTIVE SUMMARY

From July 2016 to June 2019, Adventist Development and Relief Agency (ADRA) Timor Leste implemented a project, named Livelihoods Opportunities for Sustainable Agriculture (LOSA) under Australia NGO Cooperation Program (ANCP) grant. This project was implemented at Uma Tolu and Luca Villages in Viqueque District that aimed at the improved wellbeing and resilience for agriculture-based communities in Viqueque Municipality by June 2019, through farmers' sustainable management of their resources and improvement well-being of the vulnerable girls and boys, women and men and strengthened community.

The project had 7 main components. They were: Conservation Agriculture (CA) adoption, Kitchen Garden (KG) at community and schools, water system construction at community and schools, latrines building through Community-Led Total Sanitation (CLTS), Hygiene and Nutrition Campaign, and Village Saving and Loan Association (VSLA). Throughout all activities, the project applied the cross-cutting issues of promoting men and women engagement, people with disability, elderlies and promoting environment conservation.

The project had improved the wellbeing of the communities in the two villages by bringing the water and mobilising communities to build the latrines. The project also introduced communities to Conservation Agriculture (CA) and Kitchen Garden (KG). Based on the Household (HH) survey, 19% of the respondents have practiced the three CA methods and 75% respondents have implemented one method. Even those who practiced CA were still doing burning when they cleared the land. To sustain CA practice in the two villages, the project needed to find more effective ways to make farmers want to change the habits.

The water system was the highlight of LOSA project. Communities of the two villages complimented ADRA for bringing the water to the households. It allowed the increased use of tap water from 5.65% to 42.98%, based on the HH Survey. With the water, communities can plant kitchen gardens near their house. The water also makes the latrines functional. The building of the latrines through CLTS methods had been accelerated in Uma Tolu village by the incentive of water. The Chefe Suko of Uma Tolu motivated the community members to build their latrines, by promising that ADRA would make the small water system for them after they finished building their latrines. This and the support of the District Health Service, had allowed LOSA Project to exceed the targeted 100 latrines to 328 latrines built.

The project also installed water at schools and a health post. However, the students did not fully benefit from the access to clean water. At the two schools that the evaluator team conducted Focus-Group Discussions (FGDs), the water was not accessible to students. At EBF 75, the water pump was broken. With no water, the toilets were closed and students had to return home or to find other places to do their toilet purposes. At EBF Aimanas Rai, the septic tank collapsed and thus the water was closed and opened only to water the School Kitchen Garden.

The nutrition and hygiene campaign sessions were well-attended. However, the personal hygiene could only be promoted when the toilet was working and water was available. At one school when the FGD took place, EBF Aimanas Rai, the septic tank was broken, so the toilet was closed and the water was only opened for watering the school kitchen garden. In another school (EBF 75), the pump was broken, so the water did not run and the toilets were closed. Although the students knew that they should wash their hands before eating and after going to toilets, there was no water.

Both students and parents knew that they should eat balanced-diet and animal-based protein was available, as most families had cattle, but the mothers did not allow the cattle to be killed and cooked for the family consumption. They needed them to earn money for cultural costs, such as weddings and funerals. The nutrition and hygiene campaign sessions will be continued by the health posts at the villages, with the support of the District Health Service. However, it does not guarantee the behavioural change when the community does not see it as a priority.

The Village Saving and Loan Association groups was potential to grow in the two communities. In the two villages, 4 VSLA groups were established. Unfortunately, the establishment was delayed. Thus, the 4 established groups could not give loans, and the target of giving 9 loans was not achieved at all. The groups

required one year of saving before they could give out loans to the members. It is good that ADRA will continue accompanying the VSLA groups, through their FarMar (Farmer to Market) Project, a project currently implemented by ADRA Timor Leste.

The project could have targeted women more effectively, by providing activities and separate capacity building for them. The training of the management group was only able to target 23% out of 50% target on women participants. The project exceeded the target of engaging the vulnerable group. Out of the targeted 20 persons, 27 persons were engaged in the project activities.

I. Background

ADRA Timor Leste received a three-year grant from Australian Government's ANCP to implement LOSA (Livelihoods Opportunities for Sustainable Agriculture) Project. The project period was from July 2016 to June 2019 that focus on two villages in Viqueque. Initially the project was planned to be done in Uma Tolu and Bahalarauain, because they were potential for agricultural improvements and there were needs as well as potential to improve community's water and health indicators. However, it would be too overstretched geographically to cover Uma Tolu and Bahalarauain, as the later was further away from Uma Tolu. Therefore, the targeted area was shifted from Bahalarauain to Luca which was located next to Uma Tolu. In Uma Tolu, ADRA had a previous water project, but not in Luca.

The project aimed to achieve improved wellbeing and resilience for agriculture-based communities in Viqueque Municipality by June 2019. The outcomes targeted by the project:

- Outcome 1 Farmers are managing their resources in a sustainable manner.
- Outcome 2 Vulnerable girls and boys, women and men have improved wellbeing and strengthened community

LOSA Project targeted communities and schools in the two targeted villages: Uma Tolu and Luca. The project had the following components:

- **Conservation Agriculture (CA) and Kitchen Gardens (KG)**. The project proposed to create opportunities for farmers in two communities in Viqueque to develop their livelihoods through the practice of conservation agricultural methods. There were three basic methods introduced: no slash & burn, planting distance and mulching, in addition to limited tilling/ploughing. While CA activity was focusing on staple food and legumes, KG was focusing on vegetables using the same conservation agriculture principles. At KG training, composting was also introduced, both solid and liquid composting.
- The training was centred at the Livelihoods Centre (LC) that was individual owned-land, turned into demonstration plots. Each LC was tended by a farmer group. ADRA TL signed an agreement with the owner of the LC land to use the land for demonstration plot for free. As incentives, the owner had water system, a space for conducting training and a warehouse. In the first two LCs, one in Uma Tolu and one in Luca, all of these facilities were constructed. Later, ADRA did not build the warehouse because it was not considered necessary as most farmers did not keep their harvest for too long. After the project ended the group members were expected to continue the practice of using CA in their own land.
- **Farmer Field School (FFS)** was conducted centred at the LCs, with show case visits to the LCs and trained by the LC coordinators and members.
- The project facilitated the formation and training of **Village Savings and Loan Associations (VSLA)** whereby participants would have access to savings and credit services that they could use to add useful assets to their household or farm and that they could better prepare themselves in handling financial shocks that commonly occurred.
- School Kitchen Garden Program. The Kitchen Garden was also targeted at 4 schools in both villages. Students were trained to do gardening with conservation agriculture principles to grow vegetables and legumes. In Timor Leste, the Ministry of Education supports cooking groups to cook supplementary food for students. The harvest from the kitchen garden was expected to encourage students to eat more vegetables.
- **Nutrition Campaigns**. ADRA staff conducted hygiene promotion and nutrition campaigns at the targeted schools and at communities.
- Water System. The provision of improved access to water was crucial for communities. ADRA Timor Leste provided small water system at the points identified by ADRA water engineer. The person provided technical assistance to the villagers where and how to drill the water source. The water systems were installed at the targeted communities and schools.
- Sanitation. ADRA facilitated the construction of the latrines through community mobilisation using the Community-led Total Sanitation (CLTS) method mandate by the Ministry of Health in Timor-Leste. It

includes the hygiene promotion activities to complement the water sector and latrines building both at communities and at schools, in which communities mobilized their own resources to build their own latrines.

- **Cross-cutting issues.** Cross-cutting issues that this project was trying to address included: gender, disability, social inclusion and environment.

II. Purpose and scope of the evaluation

The End-project Evaluation aimed to assess achievements against the set targets, effectiveness and sustainability of the project interventions, and make practical and specific recommendations at both strategy and operational levels for future programming

Evaluation objectives and criteria

• Accomplishment: To assess the achievement of the project at outcome and output levels, the project impacts on household's wellbeing in the target area.

Four Livelihood Centres created by ADRA and staffed by ADRA agriculture, health and village savings specialists can train 890 participants in conservation agriculture and horticulture; hygiene and nutrition; and running savings and loans groups

The trainings and Livelihood Centre resources will increase farmers' climate change adaptation capacity and create greater access to diverse nutritious foods. The health of participants' households will improve and their access to savings and loan opportunities will increase.

Participants trained in conservation agriculture, horticulture, hygiene and nutrition will having increase health, reduced malnutrition and greater food security.

- Effectiveness: To assess how the outputs contribute to the outcomes and goals and how the crosscutting themes were included and addressed throughout the project implementation
- **Sustainability:** To assess the overall management, structure, and results of the project, particularly focusing on ownership by local people of assets, the likelihood of continuance of activities, and potential for enduring behaviour change. The evaluation will specifically focus on assessing the long-term sustainability of project outcomes.

III. Evaluation Methodology

Data Collection

The evaluation used both quantitative and qualitative methods of data collection. The evaluation team used the following common methods to collect project data:

- The quantitative method was using the Monitoring & Evaluation Findings that ADRA Timor Leste had done and collated in the Quarterly Progress Reports (QPRs), as well as from the Household (HH) Survey. The HH Survey also served as the endline. The questions in the survey were mostly copied from the baseline survey with some modification so that it would be able to measure the indicators and to suit the use of Kobo Collect as the tool to collect data.
- While the HH Survey provided the findings in percentage based on sampled results, the QPRs provided the exact quantification such as the size of land applying CA methods, the number of the Farmer Field School (FFS) group members, the members of VSLA members and such data.
- Based on Cochran Formula, with standard deviation of 10%, level of confidence 95%, the minimum number of HH Survey respondents was 98. To anticipate some data errors, we aimed for 110 respondents and 114 respondents were surveyed. Below is the distribution of respondents by village and gender:

Suko	Number of HHs	Minimum Number	Actual	Male	Female
Uma Tolu	431	46	50	26	24
Luca	488	52	64	25	38

Table 1: Respondents of House Hold Survey

- The survey was collected using Kobo Toolbox, an Open Data Kit (ODK) tool. An account has been assigned to ADRA TL and the Project Manager has the password. It can be used for ADRA's future project/research activities.
- The qualitative method was using Focus-Group Discussions (FGDs), Key Informant Interviews (KIIs) and observation during the field data collection. Below is the list of FGDs with the breakdown of the participants by village and gender:

No	Dates	Groups Gender		Total	
			Female	Male	
1	21 August 2019	Uma Tolu Community Members (Fahi Lain Aldeia)	12	10	22
2	21 August 2019	EBF 75 – Students	14	6	20
3	22 August 2019	EBF 75 – Teachers	1	5	6
4	22 August 2019	Luca Community Members (Uma Bot Aldeia)	8	14	22
5	22 August 2019	EBF Aimanas Rai-Students	20	6	26
6	22 August 2019	EBF Aimanas Rai-Teachers	1	5	6

Table 2: Composition of FGDs Participants by Village & Gender

Below is the list of the KIIs by village and gender:

No	Dates	Village	Type of Respondent	Gender
1	21 August 2019	Uma Tolu	Vulnerable Group (PwD)	Female
2	21 August 2019	Uma Tolu	Agricultural Extension	Male
3	22 August 2019	Luca	LC Coordinator	Male
4	22 August 2019	Luca	Member of LC	Male
5	22 August 2019	Luca	Head of Non LC	Male
6	22 August 2019	Luca	Vulnerable Group (FHH)	Female
7	23 August 2019	Viqueque	District Health Service	Male
8	23 August 2019	Viqueque	ADRA Staff	Male
9	23 August2019	Viqueque	ADRA Staff	Male
10	26 August 2019	Dili	ADRA Staff	Male

Table 3: List of Interviewees in KIIs by Village & Gender

It is admitted that the proportion between male and female informants/interviewees was imbalance, as the heads of LC and non-LC were male, as well as the relevant government officers. The existing and former ADRA staff

involved in LOSA project and available for the interviews were also male. The teachers in the two EBFs were also mostly male. While the interviewees from the vulnerable group were both female.

Data Analysis & Interpretation

- Kobo analysed the data to the percentage and was able to present them in charts and graphs. The report presents the data relevant to the evaluation questions, to show the indicator achievements and to provide explanation. It does not present all the findings of the endline results. The end line report is annexed as a separate document.
- The HH Survey did not provide the answers to "Whys" that could be provided in the FGDs and KIIs, and data interpretation from connecting the answers from the quantitative and qualitative data. The use of theory for supporting the interpretation was used when necessary.

Limitations

- Not all indicators could be measured against the baseline, because the baseline did not measure it. It is understandable as some indicators did not require to show a decrease or an increase that needed to be compared with the be baseline. For example, Outcome Indicator 1.3 was 70% of the participating HHs applying at least one of three conservation agriculture methods, it did not require the comparison with the baseline. In the baseline itself, rather than measuring the number of HHs CA methods, it measured the existing practices in agricultural methods before CA was taught. In the baseline study, the respondents were asked to identify the methods they use in agriculture, with the options of the answer were: 1) burning, 2) watering, 3) cutting the trees, 4) carving, 4) using tractor, and 5) mulching; while the CA methods to be measured were: 1) No burning, 2) Planting Distance, and 3) Mulching. Therefore, the endline finding cannot be compared to the baseline.
- The data on the decrease of diarrhoea cases and malaria would be stronger if supported by the data from the health post or the District Health Service. However, the data for 2019 is not available yet, and thus could not be presented to support the data provided by the baseline and the end line.
- The measurement of the maize production was not possible due to the error in data collection. Therefore, the evaluator team apologize for unable to produce the endline for outcome indicator 1.1.

IV. Project accomplishment

The section is outlined following the Theory of Change that this project adopted, starting from output achievements to the outcomes. The findings from HH survey are mostly for measuring outcome indicators, while the output indicators have been measured by the project staffs and reported in the Quarterly Progress Reports (QPRs). The findings and analyses are supported by more qualitative data gathered from the FGDs, KIIs and observation.

Outcome 1: Farmers are managing their resources in a sustainable manner.

The path of change to achieve the can be summarised in the following chart:

1.1 Learning Centre Set Up	1.2 LC NSS CA demo plots	1.3 CA implementation by LC members	1.4 Showcase Demo Visit	1.5 CA Implementation by Community Members
 100% targeted Land agreements (4 out of 4) 50% completed LC infrastructure (2 out of 4) 155% LC members achieved (93 out of 60) 	 100% demo plots identified (4 out of 4) 100% cropping cycles conducted (20 out of 20) 100% NSS CA Database set up, reviewed & revised (1 out of 1) 	 65% LC members plant with CA method (39 out of 60) 125.8% land allocated for CA (25.16 Ha of the targeted 20 Ha) 	 106% showcase demo visits (17 out of 16 visit) 90.16% visitors (577 out of 640) 90.16% IEC materials distributed (577 out of 640) 	 212.5% CA FFS were done (36 out of 16) 115.83% FFS participants applying CA (278 out of 240) 53.07% land cultivated using CA method (63.68 Ha out of 120 Ha) 135% vulnerable individuals participating in CA FFS (27 out of 20)

Outcome Indicators:

The indicator of %age Yield increase of maize crops for CA FFS Participants out of 30% targeted increase was not validated due to data error 19% out of the target 100% HHs of CA FFS Participants applying 3 out of 3 CA methods

75% out of the targeted 70% HHs of CA FFS applying at least 1 methods

54.16% achievements, with 13out of 24 LC core group members with management/mentoring and facilitation skills , 23 % of which are women out of the targeted 50% women

30.7% HHs where husband and wife discuss major decisions related to agriculture production

100% target achieved in development of 2 DRR Action Plans by Community

Farmers are managing their resources in a sustainable manner.

Chart 1: Output Contribution to Outcome Achievement

Achievement of the Indicators at the Output Level



Chart 2: Achievement of Output Indicators 1.1 to 1.5

Looking at the chart above, most targeted outputs had been 100% achieved if not more. The highest achievement was on the CA Farmers Field School (FFS) as resulted from the demo visits. The second highest achievement was the number of people signed up as LC members, and the size of allocated land for CA. The number of vulnerable people participating in CA FFS was also exceeding the target. Out of 240 targeted members, 278 community members participated in CA FFS and adopted conservation agriculture techniques. The HH survey confirmed that 75% of the participants apply at least 1 technique of the CA method.

In the construction of LCs, there were 2 complete infrastructures completed and 1 was done without the warehouse. After a review conducted by ADRA, the warehouse had been considered of little value, as farmers mostly sold their harvest immediately after, rather than storing them. Therefore, building a warehouse as a part of the LC package was considered unnecessary.

Although the target of CA application by the LC members had exceeded the target, it did not necessarily transpire to the community level, as seen in the output indicator 1.5.1 in which only 53.07% target achieved. Those who attended CA FFS and Learning Centre also still applied the traditional method such as burning, ploughing and throw away the weeds/grasses instead of using them as mulches. As recorded in the 12th Quarterly Progress Report, 63.68 Hectares of land was cultivated using CA methods.

In the HH survey, respondents were asked which cultivation method they used and they could mention more than one. The finding shows that at least 51.75% of respondents applied at least one technique of the CA method, but the practice of using traditional methods was also still done.

Cultivation Method	# Respondents	Percentage
No Burning (La Sunu)	59	51.75%
Planting Distance (Uja DIstancia Kuda)	43	37.72%
Others (cut & burn, ploughing, using traditional method, etc.)	39	34.21%
Mulching	26	22.81%

Table 4: Cultivation Methods Applied by Communities

During the HH survey, respondents mentioned that they had learned the traditional cultivation methods from their parents and grandparents. Therefore, it took time for them to completely abandon the practice. The delay in establishing LC also provided them less time for them to completely adopt the system. Knowler and Bradshaw (2007) conducted an extensive review of the 31 researches on CA adoption by farmers around the world to investigate what variables influencing farmers' adoption of CA. The conclusion of the study was inconclusive, meaning that there were no universals variables for CA adoption, neither age groups, level of education, size of land, nor type of labours (family or hired). There was no simple formula to say which factors were more influential for the behavioural change. They found that adaptation was the key, it was important to identify what would make farmers were willing to change their agriculture methods to CA to find an effective strategy for CA adoption.

The study suggested the importance of IEC (Information, Education and Communication) materials to support the adoption of CA, by adapting the materials to the local context. The design should consider the language and types of communication channels preferred by communities. The CA materials had been made simpler and translated into Tetun by ADRA agricultural specialist. Based on the QPR, 640 IEC materials were distributed to those visited the Conservation Agriculture showcases at the LCs. In LOSA Project, the IEC materials were distributed to those participated in Farmers Field School (FFS). The Kitchen Garden that applied the CA methods to vegetable gardens was also taught at the 4 targeted schools, but the IEC materials were not distributed there. During the FGD with EBF Aimanas Rai teachers, the teachers mentioned that Agriculture was a topic taught under Arts and Culture. The KG sessions with ADRA were considered as part of Arts and Culture (Artiskultura) sessions. The dissemination of the IEC materials at schools would have been useful for CA teaching.

In the initial design, the Learning Centers were supposed to be equipped with a water system, training space and a warehouse. On four agreed land plots, 2 Livelihood Centres' infrastructure were completed at Uma Tolu's LC 1 and Luca's LC2, each. Two LCs were constructed without the warehouse, referring to the fact that the existing warehouses were not used. It was also observed during the evaluation team visit, the existing warehouse in LC1 in Uma Tolu was used to store other things but harvest. Community members do not usually store the harvest for long, and they either use or sell them right away. The adjustment made on the design of the LC did not affect the quality of the project result nor its effectiveness.

In encouraging the vulnerable group to join its activities, LOSA has exceeded the target. Out of the targeted 20 vulnerable people to join CA FFS, 27 attended. The target was exceeded, but there could have been more vulnerable people attended as there were a lot of vulnerable people, but they were not recorded well. Also, they only joined the initial activities until they received water.

One issue identified during the FGDs and KIIs with both staff and the vulnerable people themselves (one woman with disability and one female-headed household), was the decrease of participation after the participants received water, including the vulnerable people. The KII with a chefe aldeia and LOSA project staff explained why they did not want to get involved or participate. They have their own priorities and they come when they want to come.

"We can only persuade, but at the end it's up to them to decide." (Chefe of Fahi Lain Aldeia)

In the FGD with the LC members stated that they used to have a member with mobility disability, but he stopped coming after got access to water. Another member who was a female headed household also stopped coming

after she got water access. When we came to see her and asked her why, she said she had to take care of her cattle and she did not have time to attend the meetings anymore.

Achievement of the Outcome 1 Indicators

Outcome Indicator 1.1 Yield of maize crops for FFS CA participants (Target 30% increase by end of project)

The HH Survey did not ask specifically how much land allocated per crop, including corn, but asking the average land allocated per commodity, assuming that the allocated per commodity was in average similar. At the beginning there was already some doubts on the possibility of recording the area, according to the staff most farmers had no sense of size. Therefore, the enumerators were trained to help famers identify the land by asking them to identify the length and width of the land and then the enumerators would do the calculation. The accuracy was still not guaranteed as it was based on respondents' guestimate, and most of land were not exactly rectangular. Similar method was used in the baseline, but in the baseline the enumerator asked the size of land per commodity, including maize.

In the endline, out of 36 respondents attending CA showcase and participating in the CA training, 32 planted corn. In the HH survey, although it had been agreed that the measurement unit of the harvest was in sack, equal to 25 kilograms, some enumerators ask in 'lkat', equal to 27.5 kilograms. Out of 32 respondents, it was unconfirmed which measurement units used by 7 respondents. Therefore, only the answers of the 25 respondents were considered valid (based on the measurement unit). The 25 respondents answered as follow:

Respondent No.	Harvest (in Kgs) for upto 0.25 Has of Land	Harvest (in Kgs) for 0.26- 0.5 Has of Land	Harvest (in Kgs) for 0.5-1 Has of Land	Harvest (in Kgs) more 1 Has of Land
1	50			
2			375	
3	200			
4		250		
5			100	
6			600	
7			500	
8		375	375	
9		500		
10		375		
11			500	
12	2250			
13			500	
14				1325
15		375		
16	250			
17	175			
18	250			
19	350			
20			1250	
21	500			
22		250		
23			500	
24		500		
25			375	

 Table 5: Corn Production by CA Participants

Looking at the table above, it is hard to guarantee the accuracy and one respondent claimed the corn production was very high (2250 kgs) for the smallest plot of land, while another respondent claimed to harvest very little (100kgs) for up to 1 Ha of land. It is admitted that the evaluator team was not able to conclude the achievement of the corn production.

Outcome Indicator 1.2 # of CA FFS HHs applying three of three conservation agriculture methods (target 100%)

19% of CA FFS HHS apply 3 of 3 CA methods. Even though they use CA methods, they still combine them with the traditional methods, such as cutting and burning, throw away the grass and weeds (instead of using them as ground cover) and ploughing. In one FGD, one of the CA participants explained that the soil was too hard without ploughing, therefore in some fields, ploughing was still done. The old practice of using traditional method in agriculture is still hard to replace. In another question of HH Survey, respondents mentioned that they learned the cultivation techniques from their parents. It has been taught from generation to generation, therefore it will take time to replace it with a new method.

The evaluators did not find any research yet to tell whether 19% was too low or considered as significant for CA method adoption. A former colleague from Partners for Resilience project in Flores Island in Indonesia mentioned that in the project, the achievement was 100% of the target group after 3 planting seasons. Unfortunately, the team had not documented this specific experience of CA adoption against period of time.

Outcome Indicator 1.3 # of participating HHs applying at least one of three conservation agriculture methods (target 70%)

In the HH Survey, the finding says that 75% of participating HHs applying at least one of three, as there were 38% respondents stated that they applied 1, 19% applied 2, and the other 19% applied 3 methods. This echoed the finding on Outcome Indicator 1.2 and of the HH Survey on the application of CA methods, as well as the low allocation of land for CA cultivated crops at the community level (Output indicator 1.5.1).

Outcome Indicator 1.4 # of LC core group members with management/mentoring and facilitation skills (target 24 participants, of which at least 50% are women

The LC core group members who received management/facilitation training and mentoring were those who were in the committee membership. Out of 24 members targeted, only 13 were trained and mentored. Out of the targeted 50% of the members to be women, only 23% of the trained members were women. In the KIIs and during Male FGDs, FGD who were member of LC groups expressed their willingness to train others, if there were people interested in learning CA methods.

During the FGD, it was noticeable that women participation and ability to express their opinions were low. They did not want to write, even though they could after some encouragement. In the mixed group interaction (outside of the FGD sessions) they did not speak much when men were around, although there was 1 or 2 women who were quite articulate amongst the men. During the FGD with women in Luca, some participants mentioned that they did not attend training, although not particularly this management/mentoring training, because they though the training was already represented by their husbands. Targeting women for trainings and for other capacity building initiatives should be done more intentionally. Separate capacity building for women is recommended, to increase women participation and to avoid misperception that it is represented by the head of the household.

Outcome Indicator 1.5 # of HHs where husband and wife discuss major decisions related to agriculture production.

Although no target set for this indicator, it is at least expected there is an increasing trend of families where husband and wife take decisions together on major decisions in agriculture production. The change, however, was not as expected. As you can see in the table below, in which the finding in the decision making was in major agriculture-related issues before (from the baseline) and after the LOSA Project (from the end line).

Decision Made by:	Land Preparation (%)		Harves	ting (%)	How the h be use	arvest will ed (%)	Selling th (%	e Harvest %)
-	Before	after	Before	after	Before	after	Before	after
Men	28.4	57.02	9,45	36.84	5.67	29.82	6.2	25.44
Women	8.58	33.33	11,8	24.56	32.3	31.56	26.5	38.6
Men &	62.95	9.65	78,65	38.6	62.45	38.6	68.25	35.96
Women								

Fable 6:	Decision M	aking in Agri	iculture by G	ender

In average, 30.7% respondents made joint decisions in agriculture by men and women, which was a decrease from the one captured in the baseline: 68.07% respondents made joint decisions in agriculture. Although, the end line shows that there was a decrease in percentage of the joint making decision, but at the same time, the decision-making was shared more equally between men and women, except for the decision on when to prepare the land, in which more men decided than women nor than jointly made between men and women. Though the joint decision making decreased, as long as the role of decision-making was shared equally between men and women, it was not a bad outcome.

Outcome Indicator 1.6 # of DRR action plans developed by the communities (target: 2)

According to the HH Survey, Uma Tolu and Luca villages are prone to: flood, strong wind, water crisis, pests and landslides. Earthquake also happened in the past, but not frequently.

Based on the record as reported in the 12th QPR, there are 2 DRR plans developed for the community. CARE facilitated in Uma Tolu and FRATERNA in Luca to develop the plans. Therefore, the end line survey was not to measure the progress, but rather to check the community understanding on DRR. Based on the HH survey 50% of the respondents do not have DRR plan, and 15% do. 47% do not know what it is, as shown in the table below:

Do you have DRR plan?	# Respondents	Percentage
No	50	43.86%
l don't know	47	41.23%
Yes	17	14.91%

Table 7: HH Survey Result on the Knowledge of DRR Plan

The 14.91% who have had the DRR plans, mostly have one for their family, economic/livelihoods assets such as garden and cattle and for their houses. They built the ditch around their houses to prevent the water from coming in, planting trees/bamboos to prevent landslide and around the village to protect the village from flood and strong wind.

Outcome 2: Vulnerable girls and boys, women and men have improved wellbeing and strengthened community

The path of change towards Outcome 2 achievements can be illustrated as follow:

Output 2.1 LC Kitchen Gau Formation	rden	Output 2.2 Non-LC Kitchen Garden Formation		Output 2.3 School Kitchen Garden Program		Output 2.4 LC Health Seminars	Output 2.5 Community Health seminars
 85% target of participants achieved (51 out of 60) 100% Kitchen Gardens form out of 4) 	ned (4	 156.67% target reached of participants received KG training (47 out of 30) 100% target achieved in Non-LC formation (2 out of 2) 		 75% target achieved of School KG formation (3 out of 4) 70% of the targeted children under 18 received KG training (70 out of 100) 75% target achieved of students consumed vegetables from the school KG (600 out of 800) 		 150% target achieved of health seminars conducted at LCs (6 out of 4) 100% target achieved for LC members constructed Hygienic Latrines (40 out of 40) 	 194% target achieved of community health seminars (35 out of 18) 98.47% targeted participants attended community health training (907 out of 920) 520% vulnerable people attended the community health training (118 out of 20)
Output 2.6 CLTS / Hygiene Pror Program	motion	Output 2.7 Water Program		Output 2.8 Village Savings and Loan Cycle for LC members		Output 2.9 Village Savings and Loan Cycle for Community Groups	Output 2.10 Small business enterprise opportunities
 351.33% community members attended hygiene promotion se (527 out of 150) 328% latrines constructed (328 100) 100% schools participating in hy promotion (4 out of 4) 115.5% students participated in hygiene promotion training 	essions d out of ygiene n	 100% water system target achieved in all LCs (4 out of 4) 75% of the targeted water system installed at schools (3 out of 4) 143.38% targeted students benefitting from improved water (1147 out of 800) 100% CAP processs completed (2 out of 2) 100% Non-LC water system construction was completed (2 out of 2) 150% small water access built (6 out of 4) 141% community members with improved access to water is achieved (563 out of 400) 		 50% of targeted VSLA group were formed 38.33% target achieved on active members of LC Members (23 out of 60) 50% target achieved on # of VSLA groups have saved \$202.50 in total over a cycle (2 out of 4) 0% of VSLA groups disbursed 9 loans during a cycle (0 out of 4) 		 150% target achieved in VSLA groups formation 101.6% target achieved on active members of VSLA (61 out of 60) 150% target of VSLA groups have saved \$202.50 in total over a cycle achieved (6 out of 4) 0% traget achieved on # of VSLA groups disbursed 9 loans during a cycle (0 out of 4) 	 100% targeted community members participate in TRM business training achieved (2 out of 2) 100% target achieved of 2 busines plans developed (2 out of 2)
		79% participants h 96.46% HHs cc 460 HHs benefitting 368 HHs usin 13.16% monthly cases of c 84 HI	have a consur og fron ng hyg diarrh IHs wi	adopted two new healthy habits (excer ming vegetables at least once a day (do n improved access to water (328% of t gienic latrines (262.8% higher than the noea (lower than the ones recorded in th access to loans (70% of the targeter	eding ecrea he ta targo the b d 120	; the target of 70%) se from 100%) rget which was 140) et of 140HHs) paseline which was 23.655) 0 HHs)	

Outcome 2: Vulnerable girls and boys, women and men have improved wellbeing and strengthened community

Chart 3: Output Contribution to Outcome 2 Achievement

Achievements of Indicators at the Output Level

		Percentage of Achievements
		- 100.00 200.00 300.00 400.00 500.00 600.00 700.00
	60 LC participants receive kitchen garden training	85.00
	4 LC kitchen gardens formed	100.00
	30 participants receive kitchen garden training	156.67
	2 non-LC kitchen gardens formed	100.00
	4 schools receive the School Kitchen garden training program cycle	75.00
	100 children under the age of 18 receive kitchen garden training	70.00
	800 school children provided veg from the school KG in school	. 75.00
	4 Health seminars conducted for LCs	150.00
	40 LC member HHs hygienic latrines constructed	100.00
	18 community Health Seminar programs run	194.44
2	720 community members received community health training	98.47
Ĕ	20 vulnerable persons received community health training	590.00
Ľ	150 community members sensitised to good hygiene principles	351.33
	100 CLTS latrines constructed	328.00
¥	4 schools participate in Hygiene Promotion	100.00
- 9	800 students receive hygiene promotion	115.50
	4 LCs receive a small water system	100.00
Ū	4 Schools receive a small water system	75.00
j	800 students benefitted from improved access to water	143.38
	2 CAP processes	100.00
Ĭ	2 Small water systems constructed for non-LC KG groups	100.00
	4 Small water access points set up	150.00
Õ		140.75
	4 of VSLA groups formed	50.00
	60 participants are active members of VSLA groups	38.33
	4 VSLA groups have saved \$202.50 in total over a cycle	50.00
	4 VSLA groups disbursed 9 loans during a cycle	0.00
	4 VSLA groups formed	150.00
	60 participants are active members of VSLA groups	101.67
	4 VSLA groups have saved \$202.50 in total over a cycle	150.00
	4 VSLA groups disbursed 9 loans during a cycle	0.00
	2 community members participate in TRM business training	
	2 business plans created	100.00

Chart 4: Achievement of Output Indicators 2.1 to 2.10

The result of the Kitchen Garden (KG) trainings at the communities is satisfactory. Although the number of KG training participants at the LC was lower than expected (51 out of 60 people), the number of the KG training at the community was higher than targeted (47 out of 30 people). During the KII people also appreciated the KG in complementary with the water. The water program is crucial in KG because they could only plant vegetables after they had had access to water. It is reflected in the percentage of people planting vegetables in the HH survey and the top five crops they planted before and after LOSA project:

Befo	re	After		
Сгор	Percentage of Respondents	Crop	Percentage of Respondents	
Corn	89.78	Vegetables	87.72	
Mungbean	63.63	Corn	77.19	
Rice	48.86	Banana	71.93	
Black bean	11.36	Cassava	66.67	
Cassava/Banana	6.8	Black Bean	47.37	

Table 8: The Top 5 Crops Planted by Communities-Before & After

According to two interviewees in the KIIs, the participation could have been increased if the socialisation was intensified. The Chefe Aldeia could have been briefed fully on what the project was about and its activities. Community members sometimes came to him and asked about the activities. It would be good for him to get better understanding on LOSA. It is true that some participants stopped coming after they got the water, but the lack of motive to participate may also be reinforced by the lack of knowledge of what is being planned and the objective of the project itself. It is also suggested that women and men groups are to be separated so that women are more encouraged, as they are often shy among men, and maybe it is what discourage them to come.

In the HH survey, respondents were asked which activity they participated. The participation here could mean differently for different activities. For water project, it meant that they benefited from the water system. For hygiene and nutrition campaign, it meant they attended at least one of the sessions. For LC demo visits, it meant they joined the visit. The highest participation was in the water project, as illustrated in the chart below:



Chart 5: Community Participation in LOSA Project

Thanks to this project, more community members had access to tab water. In the baseline, 11.3% respondents used tab water as their water source. It increased almost four times: 42.98% as recorded in the end line. The project received additional funding for 3 more water systems in May 2019. With the additional water systems, the QPR recorded the number of beneficiaries also increased by 41% from 400 to 563 community members with improved access to water, with additional funding from ADRA Australia.

If before communities rely mostly on the water from the river and wells, now they mostly take water from the tabs.

What is your source of clean water?	Before (%age)	After (%age)
River	31.85%	12.28%
Water Spring	3.2%	13.16%
Pump water	13.5%	0.88%
Well	49.5%	24.56%
Tab water	5.65%	42.98%

Table 9: Sources of Clean Water-Before & After

With the water, the participants of Kitchen Garden program can plant vegetables and other things, as stated by one of community member in the KII:

"Now we have water, we can do anything else. We can plant vegetables... Vegetables give us a good cash."

(Jorge Amaral, Luca)

Water also improve the toilet habits and the environment sanitation. In the FGD, the participants mentioned that the toilets would have not been used without available running water near the house. In the FGD with women in Luca some women expressed their gratitude because now the house was clean. They can wash anything immediately with the water running to their houses.

The downside of the water installation was that after receiving the water, participations in many activities such as LC, VSLA, CA decreased. The decrease was significant. For example, in one non-LC group in Luca, the group started with 15 people. After the members benefited from the water system, the members dropped to 7 only. Other groups experienced similar situation. The Chefe Suko of Uma Tolu had a good way of using the community's wish to have water by making it an incentive. He required community members to complete the building of their latrines, before water access to be given to them. Thus, they finished the latrines to get the water access and appreciated the latrines even more as they built them on their own.

Originally, there were 4 small water systems supposed to be built: 2 in Uma Tolu and 2 in Luca. Because the government has built the water system in one the targeted schools, the water system assistance was reallocated to the Health Post. At the end, 4 water systems were installed: 3 at schools and 1 at the Health Post. Although the 4-water system installed, the output indicator clearly formulated the number of water systems installed at schools. Therefore, the achievement of the output indicator was 75%, regardless.

In the two schools that the evaluation team had an FGD in EBF 75 in Uma Tolu, the water pump was broken, and thus students could not use the toilets at school nor wash their hands. At EBF Aimanas Rai in Luca, the water was also turned off unless when they watered the garden. Because the septic tank was broken, the toilets were closed and by closing the water the taps in the toilets would not run off. Consequently, the students could not wash their hands, either.

The formation of Village Saving and Loan Association (VSLA) groups was facing some challenges and delays at the beginning. At the beginning it was planned to use World Vision's model in which simpler and interested members could just come and set up the group in one meeting. The person who knew how to do it left the organisation, and the replacement was a former OXFAM staff who knew OXFAM's saving and loan scheme, ROMANSA. Therefore, the staff introduced ROMANSA that took some days to train the people and required 15 members to start a group. One group was not formed even after the training because it could not meet the quota.

Eventually 2 VSLA groups of LC participants were formed and 6 were formed at the community. In total, there were 8 VSLA groups and membered by 84 people. The group agreed to the initial saving of \$10 and monthly premium of \$6: \$1 for social contribution and \$5 for individual saving. Some groups meet twice a week, and thus they pay \$3 per meeting. The groups have been formed between 5-6 months before the end of the project completion. They will not give out loans until the savings have been kept for one year. It was noted during the FGDs that they were happy with the saving groups they have. Thus, they do not have to go to the loan sharks for loan nor to go through the complicated procedures at the banks/micro insurance companies. Also, when they start the loans and receive the interests from the loans, the money will return to them and thus increase their savings.

Achievements of the Outcome Indicators

Outcome Indicator 2.1: # of participants who have adopted two new health promoting

behaviours (target 70 % of participants)

In the HH survey/end line study, there was a significant decrease in smoking and alcohol consumption by 18,35% and 12,75% in smoking habit. There was also a slight decrease of daily vegetable consumption by 3.51 %.

	Smoking	Alcohol Consumption/week	Eating Vegetables
Before	49.75	44.65	100
After	37	26.3	96.49

Table 10: Habits Before and After LOSA Project

Overall, the community's healthy habits have improved. The table below shows respondents with at least 2 combined healthy habits.

No	2 Health promoting behaviours	Number	Percentage
1	Non-smoking & no Alcohol consumption in a week	69	60%
2	No-smoking & eating Vegetables	84	74%
3	No Alcohol & eating vegetables	76	67%
	T 11 44 0 11 111 W 111	**	

Table 11: Combined Healthy Habits

The respondents may overlap from one habit combination to the others. There are 69 overlapping respondents from habit combination number 1, 2 and 3. For habit combination #2 (No smoking & eating vegetables), out of 84 respondents, there are 15 outliers that are not sharing habit combination #1 nor 3. For habit combination #3, there are 76 respondents having these habits at the same time and out of that, 7 are the outliers to habit number 1 and 3. The chart below illustrates the overlapping respondents and the outliers. That means in total of 91 respondents adopt at least 2 healthy habits, or equal to 79,8%, which is above the targeted indicator.





Outcome Indicator 2.2: # of HHs using vegetables daily for at least one meal

In the baseline it was recorded that 100% respondents consume vegetables daily. In the end line, only 96.49% respondents consume vegetables daily. The decrease in the vegetable consumption was contradictory to the fact that vegetables is the crop they planted the most (please see Table 4 for reference). They may sell all the vegetables rather than consuming them to make more money, although during the FGDs they stated that they sorted the vegetables. The ones that were of lower quality were consumed and the good ones were to sell.

Output Indicator 2.3 # of HHs benefitting from improved access to water (target: 140)

Based on the record in the 12th QPR, 563 community members had access to water due to the project intervention. This is beyond the target of 400 community members. Based on the household survey, there was a significant increase in the access to tab water. In the baseline,5.65% respondents used tab water as previously shown in Table 9. In the end line, 42.11% respondents use the tab water. As stated by participants of FGDs, with the improved access to water, communities could plant vegetables, use the latrines and plant the kitchen gardens near their houses.

Outcome Indicator 2.4 # of HH using a hygienic latrine either constructed by CLTS outcome or rehabilitation or by hygiene promotion to use hygienic but non-used toilets (by proxy measure) (target: 100)

368 latrines have been built for both LC and non-LC members. The difference in the baseline and end line survey results show a significant decrease in the use of forest for toilet purpose. The baseline record 36.6% of the respondents went to the bush/forest for defecating.

Where do you go to defecate?	Before	After
Forest	73.1%	13%
Modern Latrine	62.5%	64%
Traditional Latrine	1.8%	23%

Table 11: Defecation Place-Before & After

There is a difference in the questioning approach. In the baseline, respondents may choose more than one answers, but in the end line, they were asked to choose one. Even with the different questioning option, the result is too drastic to ignore. Previously, going to the forest was the first option. After, it went down drastically as the last option.

The FGDs with both men and women revealed that the toilets completed with access to water allow them to go to toilet, without being worried. They could also leave the children in the evening, without anxiety that children would need to go to toilet in the bush/forest. They mention that they will not have to embarrassed about relatives sleeping over and ask them to go to the bush for defecating. With the existing toilets, they cleaned the bushes and that reduced the mosquitos, so the malaria cases have decreased as iterated by the DHS (District Health Service) officer.

The data of both malaria and diarrhoea cases can be found in Table 12.

Outcome Indicator 2.5: # of cases of diarrhoea within the target households on a monthly basis (target: once a month or less)

The baseline indicates that 23.65% respondents experience diarrhoea in the past month. The end line asked for cases in the past 3 months, as the project ended 2 months ago. With 39.47% respondents experienced it, the average per month was 13,16%. That means, there was a decrease in the past three months for the diarrhoea cases. This was verified by the DHS officer who was interviewed.

Age	Number	of Cases in	2017 and	2018		
	Acute Diarrhoea		Disentery (Diarrhoea blood)	a with	Malaria	
	2017	2018	2017	2018	2017	2018
<1 year old	1511	1466	55	48	0	0
1-2 years old	2773	2708	179	95	0	0
5-14 years old	1223	1074	80	49	0	0
<15 years old	1798	1726	187	147	0	0

Table 12: Number of Diarrhoea and Malaria Cases in 2017 and 2018

ADRA TL managed to get the data from the DHS in Viqueque, as presented above. The available data was only from the years of 2017 and 2018 as the data for 2019 had not been done. The malaria cases had always been zero from 2017. To confirm the statement of the interviewed DHS officer and the participants of the FGD in Uma Tolu, another data source would be needed. Unfortunately, this evaluation study cannot present it.

Outcome Indicator 2.6: # of HH with access to loans through the VSLA scheme (target: 120) 6 VSLA groups were formed with 61 active members. During the FGDs and KIIs, both FGD participants and the interviewees mentioned that after people received water, their participation in LOSA activities decreased, while the VSLA groups were only established towards the end of the LOSA project. During the HH Survey, some respondents explained that they had bad experiences with loan sharks before and therefore they were afraid to join the VSLA

groups. Another bad experience with the previous saving when somebody in the group in a position of responsibility ran away with their money also created distrust towards these groups.

The VSLA groups need to disprove this by building community's trust. They can build the rapport by showing that the loans and repayment work well in the groups. However, since the groups were only established 5-6 months before the project completion and they would only give loans after one year, they will need accompaniment when the loans started to be given out. The groups mechanism is tested when they start to give loans and therefore they need strong accompaniment there. Via the current project, FARMAR, ADRA is continuing the accompaniment to the VSLA groups.

V. Effectiveness

As elaborated in the previous section, the outcomes were partially achieved. In the achievement of outcome 1, it was successful in teaching communities to apply at least one CA method. In targeting the development of DRR action plans, LOSA also achieved the target, but it was done by CARE and FORTUNAR. In the outcome 2 achievements, most of the targets achieved, except for VSLA. Looking at those results, community seems to adopt new habits better, especially when they are convinced of the benefits such as hygienic latrine usage, healthy habits/lifestyle and environment sanitation that led to decreasing cases of diarrhoea and malaria. However, introducing new farming methods is challenging as HH respondents mentioned that they learned from their parents and grandparents that have been imparted from generation to generation. It does not mean that it should not be done, but it will take more time to change the farming habits.

In the effort of achieving the LOSA project goal for "Improved wellbeing and resilience for agriculture-based communities in Viqueque Municipality by June, 2019", the project has improved the wellbeing by bringing the quality water, facilitating the construction of hygienic latrines, conduct healthy living and nutrition promotion, and building the capacity in kitchen garden. Resilience that will be achieved through conservation agriculture and saving scheme will need more time to prove whether they will continue.

In terms of project management, the project was spread thin with only 9 staff including the development facilitators, and a lot of activities to cover and indicators to achieve. There is so much potential in the project, if it was given more time and more focused on certain themes or objectives. The participation would be higher if the socialisation and IEC materials have been more extensive. The use of chefe aldeia and community champions as peer educators will be more effective than the development facilitators. By having peer educators, there will be more people to help spread the knowledge and show the skills. They will be able to answer questions, possibly cast away some doubts on some activities, and promote LOSA activities that more community members will participate.

Unexpected Outcomes

During the FGDs, some VSLA members found that the members became closer and they had built stronger solidarity amongst themselves. When asked how come, they answered that before they formed a group they were not aware of the others' struggles, especially financially. Now that they know they can help, and the VSLA group will be able to help. Although this has not been targeted by LOSA, LOSA has started to build social capital of the community that may have focused too much on their own problems.

The unprecedented success comes from the water installation and the CLTS as the outcome is more than triple of the targeted HHs that have improved access to water and more than 260% of the hygienic latrine use. Uma Tolu is even declared as Open Defecation Free (ODF) Village. This is quite an achievement for the village, thanks to LOSA project. There were some factors contributing to the success. LOSA project targeted only 400 community members had access to water, but with the addition support from ADRA Australia, 563 community members were supported.

As the latrines construction was using the Community-Led Total Sanitation (CLTS), the resources both materials and labour came from the community members themselves. The District Health Service and the CLTS consortium in the district also provided support in the advocacy. In addition to that, the village government was very supportive, especially in Uma Tolu.

The strategy for the Chefe Suko of Uma Tolu by requiring the water recipient to build latrines first, had resulted in the successful construction and ownership of the latrines. Such strategy can be copied for future ADRA TL's project: find what activity will be an incentive for the targeted community, and make is a package/bundle them together. In this project, water is the incentive, so it should be given later to ensure other activities are done.

Cross-cutting Issues: Gender, Disability & Environment

In the CA FFS, indeed the target was achieved by 135%, in which out of 20 people targeted, 27 participated. The participation in community health training was far exceeding the target. Out of 20 vulnerable people targeted, 118 participated in the community training health sessions. The target was exceeded, but the target may have been too low to begin with.

In the village map exercise, both men and women were asked to show where the female headed households and people with disability lived. Most men could not identify where FHHs lived, but they could identify some of the PWDs. Below is the sample of the map from Uma Tolu:



Picture 1: Map of Uma Tolu

In the village map exercise, participants usually were not able to tell which Female Headed Households (FHHs) and People with Disabilities (PWDs) outside their aldeia/neighbourhood. In the map above, FHHs are marked with FF (Feto Faluk/Widows) and the PWDs are marked with the stars. There are at least 20 people identified in that part of the village that is only one aldeia and Uma Tolu has 3 aldeias. It is possible that there are more, but the FGD participants could not identify and they were not sure that the village government office has the record.

Looking at the possibility of the number of vulnerable people, the participation in the LOSA project by the vulnerable people is quite limited. In engaging the vulnerable group (or whomever the target group is) it is important to ask them what matters to them so that their concerns can be addressed, within the coverage of the project. LOSA could have been more ambitious in reaching to the vulnerable group by engaging them in the assessment to understand their needs better.

The KIIs with a Chefe aldeia and LOSA project staff who stayed in the village, mentioned why vulnerable individuals especially the PWDs did not want to get involved or participate. They have their own priorities and they come when they want to come.

"We can only persuade, but at the end it's up to them to decide." (Chefe of Fahi Lain Aldeia)

It was also mentioned that it was difficult to engage them as they were quite introvert, as also anticipated in the baseline survey. "It was hard to convince them to come. They come when they want to come, "said one of the staffs and confirmed by Fahi Lahin Chefe Aldeia. When an interview was done to one of the FHH who was 60 years old, she mentioned that for her, that she was too busy taking care of her cattle to attend the meetings. She used to attend LOSA activities, and then after she received the water, she stopped coming. The challenges she posed such as taking care the cattle and the house alone was understandable. However, there was a point when she was motivated enough to attend activities, before she had got the water.

We also interviewed a woman with mobility disability, but she could walk with a crutch. She was very determined to participate as many activities as she could. "Why staying at home. I can be out here and learn new things and laugh with others in those sessions. I also learned new things," said she. That lady lived near the LC 1 in Uma Tolu.

Chefe Aldeia of Fahi Lahin proposed to use Chefe aldeia more as the communicator of LOSA project. He said that if the Chefe aldeia was briefed better, they would be able to answer community members when they were asked about the program or when they invite people to attend the activities. Thus, people would be more convinced to participate. In addition to that, one LOSA staff suggested to go to the vulnerable individuals in the targeted community, one by one and explained to them. They might have missed the previous explanation/socialisation meeting of the program and they would be able to be convinced.

Based on the observation during FGDs with communities, men tended to be more active and confident, while women were the opposite. The FGD with women went more slowly than men. It was hard to make them understand nor reflect and express their opinions. When one of the female FGD participants was asked why she did not participate in the saving group, she thought that one family was represented by the head of the family, who was usually male. With this issue and the lack of confidence and articulation, women will be side-lined in the meetings. In the KII, one of the staffs suggested to have separate men and women groups so that women would be more encouraged to attend and speak up.

VI. Sustainability

In terms of sustainability, different components of the LOSA Project have different possibilities. For the learning center and the conservation agriculture, the path to sustainability still needs to be paved. The kitchen garden has a higher possibility to sustain as the crop cycle is fast and it brings a good cash flow to the farmer. The School Kitchen Garden will continue as long as there is water and the kitchen garden is secure from the animal attack.

The good thing about CLTS method was that the latrines were constructed by the community members, and thus they had the sense of ownership. With the water running and the latrines that they own, communities will continue using and cleaning them. There is a sense of pride for community members to have latrines, as expressed during the FGDs. The hygiene campaign will sustain as it supports and be supported by the government program at the District Health Service and the Health Posts. As long as there is water available at school and at home, community members and students will be able to stay clean and wash their hands.

The VSLA will need further accompaniment when they start to give loans to the members. The repayment process is when the groups are tested whether they can sustain or not.

The hygiene and nutrition promotion will continue as they are institutionalised with the health posts at the villages and supported by the District Health Service. It does not mean that the behaviour of community members will change, because there are other factors influencing the habit change. When the protein is not available for children, they will

not be able to consume it although they understand its importance. When the water is not available at school, they cannot wash their hands, regardless their awareness and understanding of handwashing practice.

LC	Learning Centre will be kept by the owner, at least. That means the owner will sustain the
	LC Although during the KII and EGDs they mentioned that they would continue the CA
	practice in their land, it is not guaranteed that the LC members will continue the CA
	practice especially in clearing the land without burning it because burning to clear the
	land is cheaper and less labour. When the group was dissolved, the LC and non-LC
	members must prepare the land and cultivate it on their own. It is more likely to sustain
	the prestice, if the CA members have demonstration plate in their respective land and
	the produce, if the CA members have demonstration plots in their respective rand and
	meintein the dame plate as they own them and it will increase the probability of
	maintain the demo plots as they own them and it will increase the probability of
1/0	Sustainability.
KG	KG brings good cash-flow to the growers. Thus, it has a high probability that KG farmers
	Will continue growing them. Similar to the challenge faced in sustaining CA practices,
	those who join the LC and they are not the owners of the demo plots may not have
	enough labour to clear and prepare the land. However, with the fast cycle of the
	vegetables and the cash it brings in, it will motivate the farmers to practice it in their land.
School Kitchen	The sustainability of the School Kitchen Gardens relies on other factors. In the cases of
Garden	EBF Almanas Rai and EBF 75, it depends on the water supply and the fencing of the
	gardens. At EBF 75 in Uma Tolu, the school KG activity stopped because of the fences
	were damaged by animals and theft. The water pump was broken as well, that the water
	did not run. They could not continue the activity because of that.
	At EBF Aimanas Rai in Luca, the KG is still ongoing. The benefit of the KG is not only the
	additional vegetable consumption provided to the school students as a part of the school
	feeding program, but also for educational purpose. Kitchen Garden is one of the subjects
	taught under "Artiskultura (Arts & Culture)". Because it helped students to learn, the
	school expressed that they would continue it during the FGD with the teachers.
CA	The practice of CA has the potential, but it needs more intensive accompaniment and
	mentoring. The traditional practice that has been inherited for generations will not be
	easily replaced by a new method. It does not mean that people cannot or will not learn the
	new methods. They will if they find them useful and profitable, but it takes time.
	Just as one of the community members says in the FGD in Luca: "Fatuk Bele Sai Rai"
	(Rock can turn into soil). For such change, it takes time.
CLTS	The pre-requisites of CLTS are close and safe access to water and toilets. Only then, the
	hygiene campaign will work. The success of the CLTS is because it is also supported by
	the government to encourage latrines construction and the incentive given to the
	communities who built latrine in the form of water.
	Without the water, CLTS does not work. At EBF 75 for example, the toilets do not work
	because the water pump was broken. It is true that the latrines at the school were not
	given by the LOSA project, but it reaffirms the importance of bundling the latrines and the
	water program in areas where clean water still an issue.
	The latrines at home have become the pride of the owners, as mentioned during the
	FGDs in Uma Tolu. They were proud when the relatives stayed at their homes because
	they did not have to tell them to go to the bush for defecating.
Hygiene	The hygiene promotion and healthy lifestyles campaign at communities and at school
Promotion	were done in collaboration with the local Health Post and District Health Service. When
	ADRA leaves, both institutions will continue doing that as it is a part of their service.

	The IEC materials can be disseminated widely at schools, health posts, beyond those who joined the demo visits. At school and health posts, they can be used for training/teaching materials that last longer than project period. The hygiene promotion at school should also be accompanied by access to clean latrines and to water. At both schools where the FGDs took place, the latrines and the water for toilets were not accessible to students. Therefore, although students knew when and how to wash their hands, they had no access to clean water and been able to practice the handwashing at				
	schools.				
Nutrition	The major stakeholders of the nutrition promotion are: the community including school				
Promotion	students, the cooking group at school teeding program, the Health Post & District Health				
	Service. Every month the DHS and the Health Post conduct regular nutrition campaign.				
	I ne school cooking group is also invited and trained by them, but they have no authority				
	For future reference, it will be more effective if there is a hermonication on the activities of				
	the stakeholders with the same concerne				
	Degardless the promotion, the students at school gave the reason why they did not				
	regardless the promotion, the students at school gave the reason why they did hot				
	mothers who were in the female ECD argued that the cattle and the chicken were for sale				
	to get more money. It is not for consumption A senarate advocacy campaign is needed				
	for the mothers if ADRA consider to do a similar activity				
VSLA	When the VSLA group started 5-6 months before LOSA project ended. The loan had not				
	started by then as they were waiting until one year before the members could start				
	taking loans. The mechanism is tested when the loan is starting to be given out and it will				
	need accompaniment. Fortunately, ADRA's next project "FarMar" will continue the				
	accompaniment to the VSLA groups established by LOSA project and will expand.				

Table 13: Sustainability of LOSA Project Component

VII. LESSONS LEARNED

- The project had too many activities with limited project staff and resources. The result could have been more
 effective if the program was more focused on a cluster of thematic activities that are interconnected, than
 several groups of activities. It would make capacity building to the technical to be more focused as well. For
 example, in focusing only on the agricultural activities such as conservation agriculture and kitchen garden,
 more promotion of the conservation agricultural practices could have been done to increase the CA practice.
- The strategy used by Uma Tolu Chefe Suko was very effective in motivating community members to build their own latrines. He required community members to build their latrines first, before they could benefit from the water system. Thus, communities were motivated to finish their latrines, as they needed water for consumption, hygiene purpose, and for their gardens.
- 3. The design of the VSLA depended on one staff. When the staff left the organisation, ADRA had to find another expert to facilitate the communities to form the saving and loan groups. An expert in OXFAM saving scheme was hired to facilitate the groups using the OXFAM scheme which was stricter and required a lengthy process for the group to be formed. The later scheme required a two-day training, and at least 15 members to form a group. One group in Luca was not formed after completing the training because there were no enough members. When the person who mastered VSLA was rehired, LOSA could form VSLA groups.
- 4. The VSLA groups should have been established at least 2 years before the project ended, as it took one year for the VSLA members to be able to take loans, and another year to prove whether the group members were faithful in doing the repayment.

5. During the FGDs at the two schools, students were asked to identify what their daily intake consisted of: carbohydrates, vegetables, plant-based protein and animal-based protein (meat). They should tell whether they consumed each type of food everyday/often or rarely.

Types of Food	EBF 75-Uma Tolu (20 students)		EBF Aimanas Rai – Luca (26 students)	
	Daily/Often	Rarely	Daily/Often	Rarely
Carbohydrates	19	1	25	1
Vegetables	19	1	19	7
Plant-based Protein	9	11	9	17
Animal-based Protein	1	19	4	22

Table 15: FGD Results with School Students

When we asked them why they did not consume animal-based protein more often, it was because it was not served at home. Those who claimed to consume animal-based protein said that they drank milk. One student said that she ate meat often at home because at home, she had fridge and thus the family could store the meat.

After we had the first FGD at the EBF 75 with the students, we had the FGD with the women in Luca and a small talk with women in Uma Tolu. We asked why they did not cook the chicken to their children, as they had many of them. The women answered firmly, "No, they are for sale." We asked further why then they did not serve the eggs to the children, as animal-based protein was good for the children's growth. Again, they said, "The eggs are for hatching and then for sale." The bigger animal was even out of question, as they were raised for cultural purposes such as for wedding or funeral ceremony or contribution for cultural events. The women said that the cultural costs were expensive for them. They were expected to contribute between \$80-100 for cultural ceremonies such as funeral and weddings. Regardless the nutrition promotion and campaign, children will not have access to more quality food, because of the priority on meeting the cultural costs was placed higher than the children's healthy growth.

VIII. CONCLUSIONS

1. Project Accomplishment

The project has accomplished some of the outcomes and outputs. It also achieves some of the goal. Water is the biggest success of the project, as it has brought other possibilities to the communities. With the improved access to water, communities' hygienic latrines became functional, farmers could grow vegetables. With the latrines and access to water, the toilet habits have changed, and the community have cleaned the bushes as they do not need them anymore for defecation. There is a bundling effect and also a ripple effect:



Chart 7: Project Component Bundling Effect

It is important to find a component like "water" in a project: something that is valued in the community to be able to use as an incentive and at the same time open other opportunities for communities' well-being.

2. Effectiveness

The project could have been more effective with more focused outputs and activities. With only 9 staff, from project management to field facilitators, the staff were overstretched. Efforts could be more focused on how to promote CA to other more community members. More staff could have been allocated to socialize the project activities and explained the benefits of doing conservation agriculture, than on spending on hygiene nutrition and campaign. Having said that, it does not mean that the hygiene and nutrition promotions were not important, but it could be done in another project with similar focus.

Women could have been targeted better with women facilitators and with training for women. The ability to identify how women had been disadvantaged in the project activities would happen when the facilitators were more experienced in community facilitation. Based on the KII with the staff, both field staff and the manager, and the information from the QPR, the staff only received community mobilisation training before they started the work. The additional capacity building in community facilitation or communicating with communities could have enhanced their ability to facilitate the communities better.

3. Sustainability

Community members will continue using the latrines and benefit from the water system. Therefore, they will maintain them. The Kitchen Garden and Learning Centre at the communities will be sustained, at least by the LC leaders/committee. Some of the members will grow Kitchen Garden as it provides a good financial incentive. The nutrition and hygiene promotion will be continued by the DHS and the local health post, so they will continue, but it does not mean that it will change the habit of the nutrition consumption, limited by

what is served on the table. The personal hygiene can be practiced at home with available latrines and running water, but cannot be practiced at school when the toilets are closed and water is not accessible for students. The school kitchen garden will continue as long as they have the water and the fencing is repaired. The VSLA and CA will need more time to see whether they will continue or not.

4. Participation of Women and Vulnerable Groups

There are more vulnerable individuals in the communities, based on the community mapping. Targeting them may require more efforts and it includes asking them directly to assess their needs and interests, as well as challenges. It also required more skilled facilitators to be able to engaged the vulnerable groups, especially people with disability and elderlies. Separating men and women groups will encourage women to attend and participate.

5. Environment Conservation

The practice of burning in clearing the land was still practiced, although FFS participants also applied CA methods. Clearing the land by burning was faster and less labour intensive than cutting the trees or pulling grass and return them to the ground as mulches. The practice of burning in clearing the land not only created pollution but also killed the microbes in the soil that were good for crops.

IX. RECOMMENDATIONS

- 1. At the beginning of the project, socialisation can be more extensive, by engaging the local leaders and creating local champions as peer educators. Thus, ADRA do not have to place development facilitators at the village. Firstly, it will burden the District Facilitator as they live with communities and there may be questions from them, day in, day out. If they are not well capacitated, it will create a reputational risk for ADRA.
- 2. For conservation agriculture adoption, rather than setting up an LC or demo plots in the non-LCs, the groups can work collectively in the land preparation for their members. Thus, the demo plots would be available in each member's garden rather than in the dedicated plot at one's place only. By doing so, more community members will be able to see, and thus it will promote more the CA practice and the kitchen gardens. It will be reach out more people. With the current LC model, all members worked on one LC demo plot, and then they shared the harvests. After the LC contract expired, each member must work own their own garden. If each member has their own demo plot, a mechanism of collaboration to prepare each member's garden can be established by the group members. It will also promote the member collaboration.
- 3. The promotion of the conservation agriculture and kitchen garden can be done more extensively. The IEC materials should have not only been distributed only to the participants of FFS and those who visited the demo plots, but could have been placed at the school libraries. If communities have community champions, the materials can be placed at the champions houses or at Chefe Aldeias' homes. During community meetings, CA methods can be discussed.
- 4. The latrines construction was successful because of the support from the DHS and local government. Bundling the latrine construction with the water system was also a good strategy that can be copied for future programming. It is important to find what is valuable for the community members to be used as an incentive.
- 5. The VSLA groups may benefit women more if there are separate groups for them. The participants of the women FGDs often misperceived that the membership was for the whole family. Therefore, when the husband was already a member, the women did not join. They may come to meetings to represent the husband when the husband was unable to attend. However, as the meetings were mostly dominated by men, most women may be too overwhelmed to speak up in the meeting. Thus, women missed the opportunities for training and build their capacity.

- 6. Women participation will be higher if there are separate groups between men and women or separate trainings for men and for women. By doing so, both men and women have the same opportunities for capacity building and women will not be discouraged at the start. They may be shy in the mixed group, but in the women group they will have more courage to speak up.
- 7. The right capacity building and exposures for project staff are important so that they can address issues posed by the communities. With wider knowledge on CA, the agricultural staff will be able to answer better to communities on what they should do when they find increasing population of snails due to mulching. In the next similar project, the staff doing technical accompaniment for VSLA groups at communities need to be equipped with community mediation skills, especially when the loans are starting to be given. The field staff can also engage vulnerable groups more, should they be given additional capacity building in engaging vulnerable groups.

REFERENCE:

Knowler, D. & Bradshaw, Ben. (2007). Farmers' Adoption of Conservation Agriculture: A Review and Synthesis of Recent Research. Food Policy. 32. 25-48. 10.1016/j.foodpol.2006.01.003.

ANNEXES:

- 1. End Line Report-LOSA
- 2. Case Story: Fatuk Bele Sai Rai