



# Seeds of Life Fini ba Moris



## Savings and Loans Activities of Two Commercial Seed Producer Groups



**Ministry of Agriculture and Fisheries  
Seeds of Life / Fini ba Moris**

**June 2016**





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## **Study Report**

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## **Impact on Members' Households and Contribution to Agricultural Development**

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Photo on front cover. Monthly meeting of Savings and Loans group Naroman, Fahilebo, Liquiça, in March 2014. © Wayan Tambun

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# Abbreviations and Acronyms

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AS	Adoption survey (conducted for Seeds of Life in 2014)
CSP	Commercial Seed Producer
CSPG	Community Seed Production Group
FA	Farmer Association
HH	Household
HoH	Head of Household
MAF	Ministry of Agriculture and Fisheries
MTS	Mid-Term Survey (conducted for Seeds of Life in 2013)
NA	Not Available / Not Asked
NGO	Non-governmental organization
PPI	Progress out of Poverty Index
SEO	Suco Extension Officer
S&L	Savings and Loans
SoL	Seeds of Life

# Executive summary

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The purpose of this study is to better understand how farmers' participation in the savings and loans (S&L) groups built within Farmer Associations has impacted on their households and has contributed to agricultural development. To achieve this, 85 S&L members (including 42% women) of the Fitun Leste and Naroman Farmer Associations were interviewed in early 2014 and in mid-2015.

## General information on households and their agricultural profile

On average, households are composed of seven members and 95% of these were able to send all their children aged 8 to 17 years old to school. No significant evolution regarding the households' composition was observed between both data collections.

All, besides four respondents of the second data collection, said their families are involved in agriculture, even if only a little. But the proportion of heads of households whose main occupation is agriculture slightly decreased (from 79% to 72%), which is mainly explained by the fact that the membership of the S&L groups has expanded, and now attract a wider range of people (teachers, policemen, etc.).

84% of the respondents whose families are involved in agriculture said they sometimes sell part of their agricultural production (mainly small livestock), but only 20% of these sell products regularly (at least once a week). One of the main reasons for this is that 80% of the households involved in agriculture said they cannot access the market easily, and 75% said there are no collectors coming to buy products in their neighborhood. This reality also explains why spending money for agricultural production remains very limited (43% never make any such spending).

In conclusion, most of the farming families who are members of the S&L groups are definitely not market oriented. Most are subsistence farmers.

## Respondent's involvement in the S&L groups

Most respondents joined the S&L groups in 2013 (74%), and about half of these said they are actively involved in the Farmer Association (FA) activities.

Overall, 71% of the respondents join most or all the S&L group meetings, which is quite a lot. These meetings are more often conducted separately from the FA meetings, which means that S&L members who are also active in the FA have to attend more meetings. As a result, about half of these respondents (i.e. nine out of 21) said they would rather join only the S&L meeting. Also, 59% of the respondents said that agricultural issues are sometimes only discussed during S&L group meetings. This is understandable given that the S&L groups were primarily established to improve personal finances, and not agriculture.

Obviously the main reason respondents say they join the S&L group is to borrow money (86%). Also, "learning how to manage income" was mentioned by an increasing proportion of respondents (54% and 65% in round 1 and 2 respectively).

As for expected benefits, most respondents mentioned 'paying education costs', 'learning how to manage money' and 'dealing with emergency needs'. Only 15% of the sample mentioned agricultural benefits ('buy agricultural tools and inputs' or 'buy animals and raise them') which suggests agriculture isn't a priority for most respondents in terms of how they expect to use the loans.

## Loan distribution and use of loans

Overall, 86% of the sample received at least one loan since they first joined the S&L groups. On average, they received 1.9 loans with an average total amount of 439 USD. Loans distributed in Naroman are significantly larger than in Fitun Leste (515 USD vs. 323 USD).

Even though loans are often used for several different purposes, the first use is to pay for children's education (60% of borrowers), followed by trading (41%) which are mostly small retail shops managed by women. In third and fourth position, loans were used to improve houses, and buy items for the household (37% and 32% respectively).

Only 11% said they used part of their loans for agricultural purposes: six to buy livestock, and two for agricultural inputs/investments. When including cases where loans were used for livestock trading or production and selling of processed food (cakes for example), the proportion of borrowers who used part of their loans for agriculture-related issues increases to 16%.

53% of the round 2 respondents said they plan to request for a new loan of 550 USD on average. The way these respondents plan to use their future loans is quite similar to how earlier loans have been used

## Other saving and borrowing scheme

Only 21% of the respondents said they had been able to save money on their own in the past: mainly cash saved at home, or savings invested in animals for example. Besides this, 12% said they had joined an S&L group in the past (before joining this S&L group).

As for other ways to take out loans, only two persons said they knew about other ways to borrow money besides through S&L groups. One actually referred to an "artisan group" which he is a member of and the other respondent said he had borrowed money from someone else. No respondents said there were money lenders in their area.

Clearly, the two sucos where these two Farmer Associations are established offer very limited, not to say inexistent, services in terms of money lending. This highlights the crucial importance of the S&L activities offered by these two FAs.

## Economic profile of households

This survey revealed that a significant proportion of respondents' houses have been improved, especially for floors: 25% of cement board floors in round 1 vs. 34% in round 2.

In terms of agricultural assets, the average number of animals owned has very slightly increased (from 14 to 15 animals) as well as the number of agricultural tools (from nine to twelve tools). In round 2, 58% of the sample own drums vs. 17% in round 1. Finally, the area households cultivate remained overall the same.

On the other hand, 18% of the S&L members interviewed in round 2 reported having purchased new items (mainly household assets, ranging from cooking equipment to motorbikes) since they first joined the S&L group, but not necessarily with the money from the loan.

Similarly, 19% said they made new investments (again, not necessarily with the money from the loan). Most of these investments are for small trading businesses. Only two persons said they made agricultural investments: one to buy fruit seedlings, and another one to buy equipment to produce and sell fried bananas.

The 'Progress out of Poverty Index' was used to determine that 46% of the round 2 respondents live under the national poverty line. This poverty likelihood hasn't changed significantly between round 1 and 2 (remained at about 48% among 52 common cases), which is understandable given it is a relatively short period of time when talking about poverty reduction.

On the other hand, data on food shortage showed important progress: significantly less S&L members experienced hunger (from 69% in round 1 to 31% in round 2) and the "hungry season" itself has shortened from 4.7 months in round 1 to 2.7 months in round 2.

# 1. Purpose and methodology

## 1.1 Purpose of the survey

In May 2013, MAF-SoL facilitated the integration of savings and loans (S&L) groups within two existing Farmer Associations (FAs) with the objective of strengthening these FAs by offering financial services which require further commitment from its' members. These two FAs are the FA *Fitun Leste* in *suco* Tequinaumata (Baucau) and the FA *Naroman* in *suco* Fahilebo (Liquiça).

Figure 1 illustrates this approach: members of the FA are the foundation of the Farmer Association. Agriculture is its' main pillar, but other pillars are needed to strengthen the organization. Savings and loans is another pillar needed to strengthen the organization through financial activities. It can also provide support when the agriculture pillar is temporarily weak. For example, the group members can get loans from the group when their crops fail, so that they can still fulfil their food need. Broadening the group's scope can also make the group more dynamic than if it only focuses on agriculture. In addition to agriculture and savings and loans, some FAs have started livestock related activities as another pillar to strengthen the organization (as the FA *Naroman* and *Raimean*, in *suco* Gariuai, in Baucau).<sup>1</sup>

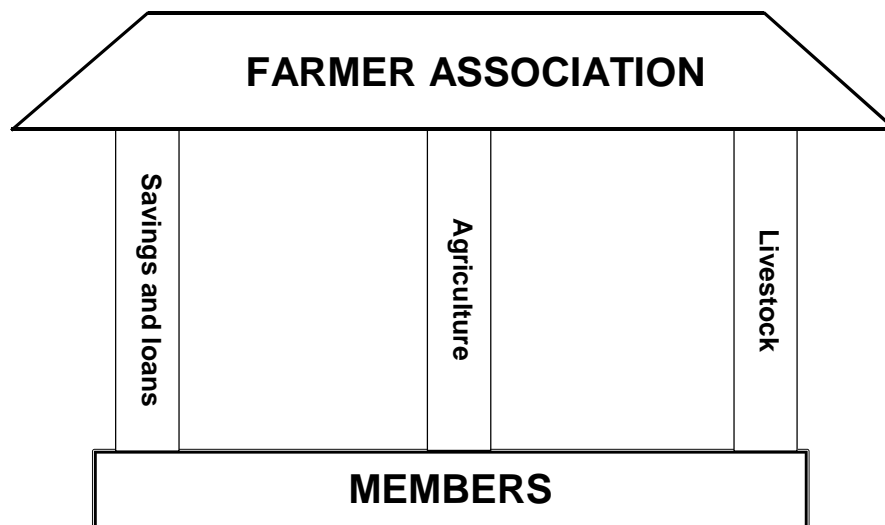


Figure 1. Foundation and pillars of a Farmer Association

As of September 2015, a total of 40 FAs integrated savings and loans activities within their organization, which represents overall 781 farmers (482 men, 299 women). Of those 40 FAs, 20 had already provided loans to their members, and the others were planning to provide loans from October onward. The total amount of money lent by 20 savings and loans groups which were surveyed in 2015 exceeded 80,000 USD.

The core objective of this survey is to better understand how farmers' participation in these S&L activities has impacted on their households. And secondly, to assess whether including S&L activities within FAs has contributed to agricultural development, and if yes, how.

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<sup>1</sup> Diagram and phrasing from Wayan Tambun, Regional Advisor for the Seeds of Life Program.

## 1.2 Methodology

To collect the information, members of the first two FAs in which S&L activities were included were interviewed twice, with an interval of one and a half years. A first round of interviews, with 61 S&L group members, were conducted in December 2013 - January 2014; that is about six months after the S&L groups were created. The second round of interviews was then conducted with 83 S&L group members in June-July 2015. The first and second round of data collections will be referred to as “round 1” and “round 2” respectively in this report. Both data collections were conducted using e-questionnaires.

The first data collection was designed as a baseline survey in which more general data was collected: household composition, education of household members, reasons for joining the S&L group, household living conditions and assets. As the money lending scheme had already started, a number of questions were also asked about possible loans they had received, the use of the money and any improvements made by the household (HH) since joining the S&L group.

The questionnaire used for the second data collection was slightly different with more questions related to how the S&L activities might have contributed to agricultural development.

## 1.3 Sample

Table 1 presents the sample size of this survey compared to the actual number of S&L group members a few months prior to both data collections. As shown here, since their creation, the S&L activities have progressively drawn more people into their groups, including people who are not members of the Farmer Associations. As a result, another 24 respondents who had not been interviewed in round 1 (most from the FA Naroman), were also interviewed in 2015 in order to provide a better picture of the situation of the group in 2015<sup>2</sup>.

Also, during the second data collection, 59 of the 61 members interviewed in round 1 were interviewed again, which enabled direct comparisons (referred as the “common sample” in this report). Only two respondents from the FA Fitun Leste were not re-interviewed.

Table 1. Sample size

	Actual # of members		# of respondents		Common sample
	in Dec 2013	in Feb 2015	in round 1 (Dec 13- Jan 14)	in round 2 (Jun-Jul 2015)	
Fitun Leste	26	28	28	27	26
Naroman	38	49	33	56	33
Total	64	78	61	83	59

Note that for five interviews of the first data collection, the S&L member himself wasn't available and therefore another person of his family was interviewed instead (spouse or child). However, because some questions relate to personal motivations to join these groups and also because membership to S&L groups is individual and not per household (several members of the same HH are allowed to become members of an S&L group), it is important that it is members themselves who are interviewed and not someone else of their family.

<sup>2</sup> Note that three among these 24 respondents were actually already members of the S&L groups at the time of round 1 but had not been interviewed at that time. They are therefore “new respondents” of the round 2 but not “new members” of the S&L groups in general.

This issue was emphasized during the second data collection and as a result, only one interview wasn't conducted with a member himself but with his daughter.

## 1.4 Overview of the S&L members interviewed

Table 2 summarizes the general profile of the S&L group members interviewed. In the FA Fitun Leste, the proportion of women members interviewed is quite low compared to the proportion of women members in the group (which is 48%), but in the FA Naroman, a proportionally higher number of women members were interviewed (35% women among all members). As a result, women members are quite well represented among this sample.

Note that none of the respondents belong to women headed households.

Table 2. Overview of S&L members interviewed

	Round 1			Round 2		
	Fitun Leste	Naroman	Total sample	Fitun Leste	Naroman	Total sample
Gender of member						
a man	64%	61%	62%	67%	54%	58%
a woman	36%	39%	38%	33%	46%	42%
Status of female member						
Married	80%	100%	93%	89%	96%	94%
Single	20%	0%	7%	11%	4%	6%
Widow, divorced	0%	0%	0%	0%	0%	0%
Age of the member						
<29	25%	18%	21%	22%	16%	18%
30-39	32%	30%	31%	30%	25%	27%
40-49	21%	24%	23%	22%	25%	24%
50-59	18%	18%	18%	22%	23%	23%
>60	4%	9%	7%	4%	11%	8%
The member is the HoH	64%	55%	59%	57%	48%	54%

More than half of the S&L group members interviewed are the head of their households. Also, in at least three cases, both husband and wife were interviewed because both were members of the S&L groups.

Finally, among the respondents of the FA in Tequinaumata, five SEOs were interviewed during both rounds of data collections (all are indeed active members of the S&L group).

## 2. General information on households

Most of the data presented in this section will be used later in the calculation of the 'Progress out of Poverty Index' (PPI), but a summary of it is presented here.

Table 3. Information on Head of Households (HoHs)

	Round 1			Round 2		
	Fitun Leste	Naroman	Total sample	Fitun Leste	Naroman	Total sample
Age of the HoH						
<29	11%	9%	10%	11%	9%	10%
30-39	40%	37%	33%	33%	21%	25%
40-49	18%	24%	21%	22%	27%	25%
50-59	29%	24%	26%	30%	23%	25%
>60	4%	15%	10%	4%	20%	15%
Main occupation of the HoH in the last 12 months						
Agriculture	61%	94%	79%	59%	79%	72%
Not working	0%	0%	0%	0%	2%	1%
Other	39%	6%	23%	41%	20%	27%
Education level of HoH						
None or pre-school or primary class 1	32%	27%	30%	30%	30%	30%
Primary school (class 2-5)	14%	15%	15%	15%	9%	11%
Primary school class 6 to pre-secondary school class 2	0	30%	16%	0	20%	13%
Pre-secondary school class 3 or more	54%	27%	39%	56%	41%	46%

In 2013-2014, the proportion of HoHs involved in agriculture was quite important. Indeed, members of the S&L activities are firstly members of Farmer Associations.

In 2015, the scope of the S&L group has grown and a lot of people who aren't much involved within the FA have joined the groups, which explains the higher proportion of HoHs involved in non-agricultural activities. Among the 22 HoHs who are not mainly working in agriculture, ten are teachers, five are SEOs, and others are policemen, security guards, running small businesses, etc.

Respondents were also asked to list all the HH members of their family, give their age, gender and schooling situation (Table 4). The average number of HH members remained very similar between both data collections. Other information collected on HH members remained also very stable.

Table 4. Household composition

	Round 1	Round 2
# of members within HH of respondents		
Average #	7.2	7.1
<5	26%	28%
6-8	43%	43%
>9	31%	29%
Gender of HH members (all members of all HHs combined)		
Male	54%	53%
Female	46%	47%
Age of HH members (all members of all HHs combined)		
<29	74%	73%
30-39	9%	9%
40-49	7%	7%
50-59	6%	6%
>60	4%	5%
Proportion of children from 8 to 17 years old going to school (all members of all HHs combined)	96%	95%

It is important to mention here that it is always very difficult to collect quality data on the number of HH members, and consequently on their age and schooling situation. This is mainly because of the difficulty for respondents to clearly tell who is part of the HH or not. Indeed, family members often come and go (e.g. go to study, or start a new family). But the commonly accepted definition of “HH members” are people who live under the same roof and share the same meals since at least six months. Moreover, some members might forget some HH members, especially in large families. As a result, answers can vary slightly from one year to the other, even though the HH stayed the same, depending on which HH member is interviewed.

## 3. Agricultural situation of S&L members

As mentioned earlier (Part 0), one of the objectives of the second round of interviews was to collect data on whether S&L activities might have contributed to agricultural development. A number of questions related to respondent's agricultural situation were therefore asked during these interviews and related results are reported in this section.

Even though 27% of the round 2 respondents said the HoH's main occupation during the past 12 months wasn't agriculture, 95% said their families were involved in agriculture, even if only a little. The other 5% (i.e. four respondents) joined the Naroman S&L group more recently (2014-2015) and are not members of the FA.

75% of the respondents whose families are involved in agriculture said all the adults of their households are working on the farm, even though they might also be doing other activities. Among the other 25%, HH members who aren't working on the farms are mainly studying (young adults under 18 years old).

In order to get some indication on how much market-oriented are these agricultural households, further information was collected.

### 3.1 S&L members and sale of agricultural products

Among the 79 respondents who said their families were involved in agriculture, 84% said they sometimes sell part of their agricultural production.

Others said they never sell agricultural products because their production is just enough to feed the family (seven cases), or because they were focused on other activities (small businesses, teaching, taking care of children) and therefore didn't have time to sell agricultural products.

Table 5 presents the types of products sold by respondents.

Table 5. Type of products sold by agricultural households

Products sold	Proportion among respondents selling agricultural products (66 cases)
Small livestock (chickens, ducks)	73%
Maize	36%
Vegetables	36%
Fruits (banana, papaya, etc.)	27%
Bigger livestock (cows, pigs, etc.)	23%
Rice	12%
Cassava	12%
Coffee	12%
Sweet Potato	8%
Peanut	2%
Other nuts (candlenut, cashew)	2%
Other	5%

The most commonly sold products are chickens, which are usually raised to be sold when the family needs money. Other products sold are maize, vegetables, fruits (which are

probably sold when there is a surplus production). Bigger livestock like cows/pigs are often sold in case a lot of money is needed (for a ceremony for example). As explained later, some S&L members also borrowed money to invest in pig fattening.

Even though most agricultural households mentioned they sometimes sell some of their production, the frequency of selling these products is still very low: more than half of these households actually sell products a few times per year only (Table 6). This highlights the fact that most S&L group members are not market-oriented, at least for their agricultural production.

Table 6. Frequency of selling agricultural products

Frequency of selling products	Proportion among respondents selling agricultural products (66 cases)
Once or a few times per week	20%
Once or a few times per month	27%
Once or a few times per year	53%

Only 20% of the households who do sell some of their agricultural products, sell products regularly (at least once per week). These families are more in the "farming business". This represents 16% of the total sample interviewed in 2015. Households who sell products more regularly mainly sell vegetables, fruits and maize.

Respondents were then asked to estimate in average, how much money they earned per month from selling these products. On average, they declared earning 60 USD per month. But it is likely that answers provided are unreliable, especially that in some cases, respondents misunderstood the question (some mentioned their salary for example instead of the income from selling agriculture products).

When excluding all the answers above 100 USD/month, this average goes down to 17 USD which is probably a more realistic estimation.

### 3.2 S&L members' access to the market

In order to understand why most of these households do not have a market-oriented agricultural production, they were also asked if they could access the market easily.

Table 7. Access to the market

Can you access the market easily?	Proportion among respondents involved in agriculture		
	Fitun Leste (27 cases)	Naroman (51 cases)	Total sample (79 cases)
No, it's too far.	78%	78%	78%
No, I don't have transportation means.	22%	35%	31%
No, the road is too bad.	19%	28%	24%
Yes, it is easy to go to the market.	22%	18%	19%
Other (no explanation)		1 case	1%
Summarized information:			
Easy access to the market	22%	18%	20%
Difficult access to the market	78%	82%	80%

As shown in Table 7, about 80% of the households involved in agriculture said they cannot access the market easily because it is too far<sup>3</sup>. Some of these farmers also added that they do not have transportation means and/or that the road to the market was too bad.

Only about 20% of the households involved in agriculture said they could access the market easily. These respondents were also among those who said they usually sell agricultural products more regularly: 83% of these sell products at least once per month vs. 39% among families who can't access market easily<sup>4</sup>.

Even though data is presented separately for the two FAs, no significant difference can be observed here between both FAs.

To illustrate these findings, maps of the location of the two FAs are presented in Figure 2.

Members of the Naroman group have three possible market points: *Bazartete*, *Liquiça* and *Railaco*. Given the proximity with the capital city, selling products in Dili is also possible going through *Railaco* and the national road in *Tibar*. On the other hand, members of the Fitun Leste group who are close to the seaside can very easily access the *Laga* market, while the bigger market is further away in *Baucau*.

In reality, these maps reveal that markets are only about two to three kilometers away from most respondents. Still, without transportation means, it remains very difficult for farmers to bring their produce to the markets regularly.

Interestingly, a positive correlation was found between the fact that families can access markets easily and the fact that the respondent is active in the FA or not: 29% of active FA members have an easy access to the market vs. 8% among others<sup>5</sup>. In other words, in this sample, S&L members who have better access to a market are more active in their S&L group (and have more money stored in the S&L).

In situations where reaching markets is difficult, selling products to an intermediary coming directly at the farm-gate is often an interesting alternative for farmers. This intermediary is often called a "collector". However, only 25% of the farming households interviewed said there are "collectors" coming to buy farmers' products in their neighborhood, and most of these are respondents who already can access markets easily by themselves. Collectors seem not to be available for the more isolated households interviewed.

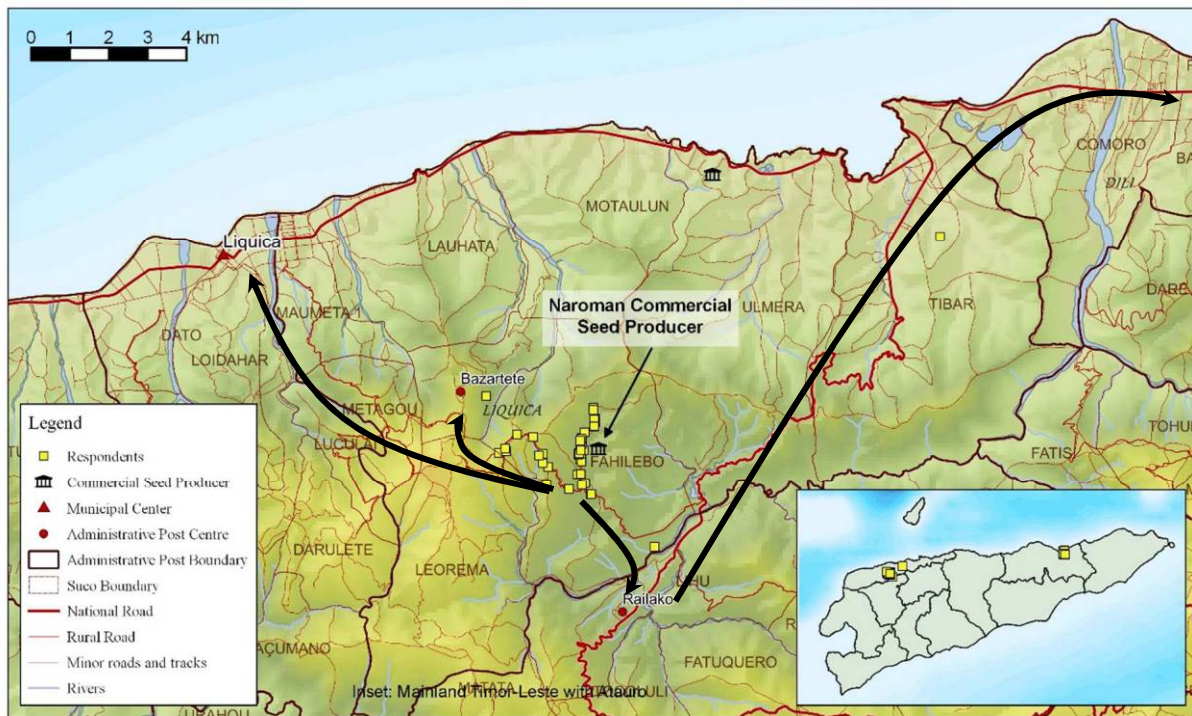
In conclusion, clearly S&L members' ability to reach markets is an important factor of how market-oriented their productions can become. Consequently, it is as well an important factor of how S&L members might decide to use their loans. In this sample, one can say that 20% of the households interviewed in both FAs (i.e. nine households in the FA Naroman and six in the FA Fitun Leste) are slightly more market oriented than others.

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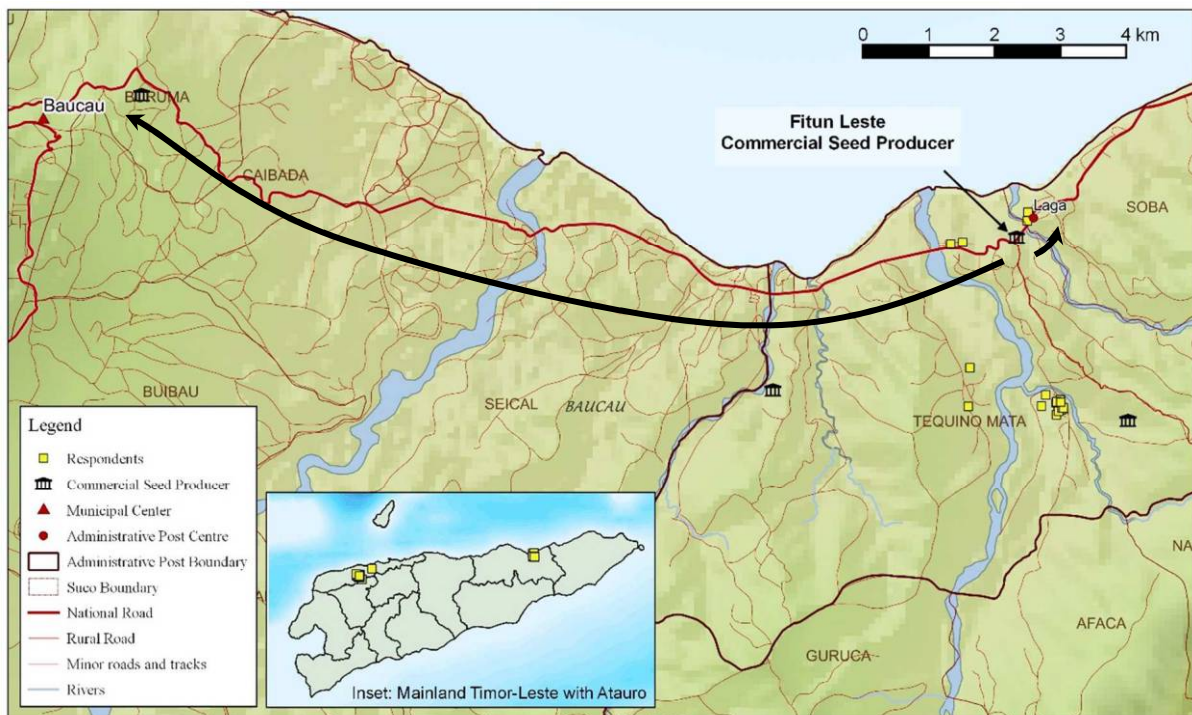
<sup>3</sup> "Far" or "too far" are obviously relative assessments, and depend on respondents' perception and motivation to access the market. The nearest market of Naroman members is in Railaco which is less than 3 km away. While the nearest market of Fitun Leste members is in Laga, which is more than 5 km. A lot of Naroman members do in fact sell their agricultural products at Railaco market.

<sup>4</sup> Result of Chi-Square test: Exact Sig. (2-sided): 0.002,  $p < .05$

<sup>5</sup> Result of Chi-Square test: Exact Sig. (2-sided): 0.024,  $p < .05$



The different ways to access markets are represented by these arrows:



Note: The Fitun Leste members who live close to the Laga market are SEOs

Figure 2. Location of the Naroman and Fitun Leste FAs and access to market<sup>6</sup>

<sup>6</sup> Maps prepared by Samuel Bacon, Cropping Systems Advisor of the Seeds of Life Program.

### 3.3 S&L members' access to agricultural inputs

Overall, the use of agricultural inputs to increase productivity is very low in Timor Leste. Still, questions related to the families' habits regarding the use of such inputs, and whether these are available or not, were asked in order to evaluate if loans might be useful to help them access these inputs.

As a result, 43% of the households who are involved in agriculture did not mention making any of the above expenses (Table 8). Two-third of those who do make some of the above expenses, mentioned only one type of spending: mainly buying improved seeds or hiring labour (often a few days only during harvest or weeding for example). It is important to mention here that FA members as well as other farmers from the suco of the FAs do not buy the improved maize seeds produced within their FA; they receive these for free. Therefore, respondents saying that they bought "improved seeds" actually referred to supposedly quality seeds of other crops purchased in the local markets.

Table 8. Spending money for agricultural inputs or services

<b>Buying products/services</b>	<b>Proportion among respondents involved in agriculture (79 cases)</b>
None	43%
Buy improved seeds	33%
Hire labour	25%
Rent tractor	15%
Buy pesticides	9%
Buy agricultural tools	4%
Buy animal food	3%
Buy fuel for pump	3%
Rent land	1%

Some of the reasons why not many expenses are made on agriculture are probably the lack of financial resources, and the fact that most Timorese farm for family consumption only, and prefer to invest in other activities to generate extra income<sup>7</sup>. Another explanation is simply that access to most agricultural inputs is still very limited. In order to assess this, respondents whose families are involved in agriculture were asked if "in a one hour travel distance from their home, can they buy improved seeds, pesticides, etc." Results are presented in Table 9.

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<sup>7</sup> For a more elaborate discussion of this point, see Tambun W., Mala J. and Ximenes A., "Savings and loans schemes. A way forward for agricultural development in rural Timor-Leste?", in Nesbitt H., Erskine W., da Cruz C.J. and Moorhead A. (eds) 2016. Food security in Timor-Leste through crop production. Proceedings of TimorAg2016, an international conference held in Dili, Timor-Leste, 13–15 April 2016. ACIAR Proceedings No. 146. Australian Centre for International Agricultural Research: Canberra. 187 pp.

Table 9. Accessibility to agricultural inputs

Inputs available in a one hour distance	Proportion answering "yes" among respondents involved in agriculture (79 cases)
None of these.	71%
Improved seeds	23%
Fuel (for a water pump or tractor for example)	11%
Pesticides	10%
Fertilizers	1%
Animal food	1%

Most respondents (71%) reported that they would not be able to buy any of the inputs listed above if they travelled only one hour. Thus, even if these farmers could afford buying such inputs (by making a loan for example), accessing these remains a major constraint.

Note that no statistical difference was observed between respondents of both FAs in regards to this question.

Inputs that are available not too far from farmers' houses are primarily improved seeds. Again, most respondents probably meant seeds purchased in the markets which can sometimes be considered "improved seeds". Other inputs that a small proportion of respondents can access "easily" are fuel and pesticides.



Figure 3. The leader of the Fitun Leste S&L explains the results during the annual shareholders' meeting of 30 April 2014

## 4. Joining the S&L groups

Before asking in detail about the loans respondents might have received, several more general questions were asked about respondents' involvement in the S&L groups: when did they first join? Why? What is their position within these groups? How often do they join group meetings? etc.

### 4.1 General information on joining the S&L groups

As mentioned earlier, membership to S&L groups attached to the Naroman and Fitun Leste FAs is open to anyone. Therefore, in order to estimate the proportion of S&L group members who are closely attached to the FA, respondents were asked "Are you actively involved in the agricultural or commercial activities of the CSP?".

As a result, 49% of the respondents only answered yes to this question. This is surprising given that these S&L groups were first based on the FA. In reality, the origin of membership of 82% of the S&L members in 2015 for these two groups are the Fitun Leste and Naroman FAs. This suggests that even though most S&L members are originally FA members, a significant proportion of these consider that it is a secondary activity.

Respondents were then asked when they first joined the S&L groups and what their positions within these groups are. Figure 4 summarizes respondents' answers.

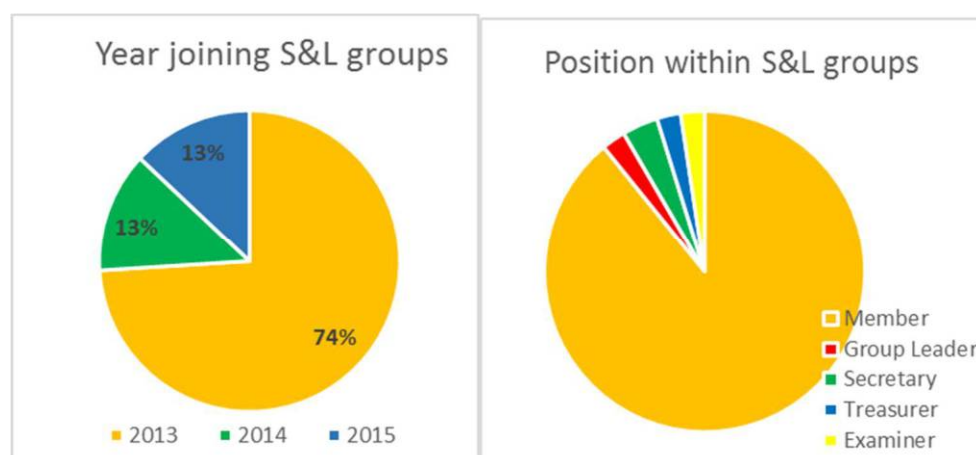


Figure 4. Year of joining S&L groups and position within S&L groups

Among those who first joined S&L groups in 2013, 57% of the respondents said they were actively involved in the FA's activities. The later members join S&L groups, the smaller this proportion becomes: 46% among the 2014 newcomers and 9% among the 2015 newcomers. These new type of members are professionals, ranging from teachers or policemen to owners of small businesses, but also housewives and students.

This dynamic clearly reflects how successful and well-known these S&L activities are in Fahilebo and Tequinaumata.

The second chart of Figure 4 also shows that the sample covered all the key positions of these groups: from the group leaders to the members.

In the S&L group of Fahilebo, the leader, secretary and treasurer said that they were not actively involved in the productive or commercial activities of the FA. This may sound surprising, but membership to S&L groups is open to anyone and all members may apply to hold leading positions (cooperative principles). Cross-checking information revealed that, in reality, this group leader is listed as a member of the Naroman FA while the secretary is the wife of a FA member. The treasurer is indeed not a member of the FA (he is a health professional at the Fahilebo Health Post).

## 4.2 Participation in group meetings

During the second round of interviews, a number of questions were asked about the S&L group's organization (meetings, topics discussed, involvement of SEOs, etc.) in order to assess how much these groups are tied to the FA and more broadly, how much they are linked to agriculture.

For the first question, about the frequency of S&L groups meetings, 98% of the respondents said members meet once per month. Two others couldn't answer this question as they were new members or rarely joined these meetings.

Then, respondents were asked how often they joined these meetings.

Table 10. Frequency of joining S&L group meetings

How often do you join these meetings?	Proportion among 83 respondents
I join all the meetings	34%
I join most of the meetings	37%
I join half of the time	24%
I join only a few meetings	5%
I never joined any meeting	0%

As shown in Table 10, 71% of the sample join most or all the S&L group meetings, which is quite significant. Others mostly join every second meetings only.

Then, respondents were asked if "these S&L group meetings are conducted at the same time as the FA meetings?" (Table 11). Eleven respondents said they did not know but, apparently, S&L group meetings are more often conducted separately from the FA meetings. This seems logical given about half of the S&L group members said they are not actively involved in the FA activities and would probably not be interested to participate in discussions about the FA when they come to join an S&L group meeting.

Table 11. Timing of S&L group meetings and FA meetings

Are S&L group meetings conducted at the same time as the FA meetings?	Proportion among 72 respondents
Yes, always	10%
Yes, sometimes	50%
Never	40%

On the other hand, conducting S&L group meetings and FA meetings separately requires for farmers who are active in both groups to join more meetings. In this line and in order to assess farmers' priorities, such respondents were asked: "If the FA meetings were not done at the same time as the S&L meetings, would you still join the FA meetings?". Obviously, this question was asked only to respondents who are actively involved in both groups and who said meetings of those two groups are sometimes/always conducted together (21 cases).

Respondents were quite divided on this question:

- 57% said they would still join the FA meetings even if it was at a different time from the S&L group meetings.
- 43% would prefer not to join the FA meetings if it wasn't to also join the S&L group meetings (probably because it takes too much time to join two different meetings).

This suggests that a significant proportion (nearly half) of the respondents who join both groups give more importance to S&L group meetings. This is probably because during these monthly S&L meetings, members may receive loans, or are required to make payments for their loans. Furthermore, this highlights how much respondents are attached to the S&L activities, but also raises the concern that progressively, FA activities might become a secondary matter for some members.

A number of other questions were then asked along the same idea.

Table 12. Discussing agricultural topics during S&L group meetings

During these S&L meetings, do you also discuss about agricultural topics?	Total sample (83 cases)	Fitun Leste (27 cases)	Naroman (56 cases)
Yes, most of the time	10%	22%	4%
Sometimes only	59%	48%	64%
Never	31%	30%	32%

According to more than half of the respondents, agricultural issues are discussed during some S&L group meetings only (

Table 12). Even though these S&L groups are one of the "pillars" of Farmer Associations, about one third of the respondents said agriculture is never raised during S&L meetings<sup>8</sup>.

<sup>8</sup> In the Fitun Leste S&L group, there are five SEOs who are members and who, at the end of each meeting, share and discuss such matters if there is new information for agriculture. In Fahilebo, the SEO has never attended the monthly meetings due to transportation problems.

This suggests that for quite a significant proportion of respondents, the S&L groups do not have much relation with agriculture and consequently, are not aimed at developing agriculture.

As expected, most of the respondents who said agricultural issues are often raised during meetings are from the Fitun Leste S&L group, where most respondents are longer-term members initially part of the FA. In Naroman, a much higher proportion of respondents interviewed were new members who said they were not actively involved in the FA.

In conclusion of this section, S&L activities are clearly successful in gathering and keeping members together through regular meetings. This, including such activities within FAs, definitely contributes to sustaining these groups.

On the other hand, it seems important to build more bridges between those two groups – the FA and the S&L group – if one wants to generate agricultural development through the S&L activities. Some of these bridges can be: systematic inclusion of agricultural topics within the S&L group meetings, active involvement of the SEO to promote the use of loans for agriculture, linkage between S&L groups and input suppliers, giving specific advantages for S&L members to access improved seeds or tools from the FA (shellers/grinders/screens, etc.), use of part of the S&L group benefits to fund some of the FA's expenses, etc.

### 4.3 Reasons to join S&L groups

All respondents were asked what the reasons were that motivated them to join the S&L groups (Table 13). Note that during the second data collection, this question was asked again to respondents who were already interviewed during round 1 in order to see if answers given would be consistent.

Table 13. Reasons to join S&L groups

Reasons	Round 1			Round 2		
	Fitun Leste (28)	Naroman (33)	Total sample (61)	Fitun Leste (27)	Naroman (56)	Total sample (83)
Provides an opportunity to borrow money easily	82%	91%	87%	100%	86%	90%
Interest rate is low <sup>9</sup>	NA	NA	NA	82%	70%	74%
Have an opportunity to learn how to manage income and to save	68%	42%	54%	93%	52%	65%
Easy to get money in emergency situation	75%	64%	69%	85%	45%	58%
Enables me to invest	43%	46%	44%	59%	27%	37%
Get a share of the profit at the end of each year	64%	46%	54%	70%	21%	37%
Other	2 cases: to act a motivator for farmers within the group	1 case: to participate in the development of my village	5%	3 cases (pay school and other)	2 cases: to act a motivator for farmers within the group	6%

<sup>9</sup> This answer was not included in the list of possible answers in round 1.

Obviously the main reason for joining the group remained the need to borrow money. In round 2, most respondents also mentioned the possibility to benefit from a low interest rate.

During the second data collection, "getting a share of the profit" was one of the least common answers. Indeed, none of the members who joined the S&L group in 2015 mentioned it and some respondents who had mentioned it in 2013-14 didn't mention it anymore in round 2. This could suggest that the shares members receive at the end of the year aren't important enough to draw new members in.

Also, interestingly, during the second data collection, new members of the Naroman group gave fewer reasons for joining S&L groups than longer term members. For these new members, the priority was really to borrow money.

When comparing answers given by respondents who joined both surveys (round 1 and round 2), it appears that only four respondents among 59 (7%) gave the same reasons as they did during the first interview.

The reason for which respondents changed the most their mind was "Enables me to invest" but no specific trend can be observed from these changes: there are as many people who didn't answer this in round 1 but then mentioned it in round 2, than the other way round.

The only reason for which a "specific trend" can be observed is "to learn how to manage income": more respondents chose this answer in round 2 even though they had not mentioned it in round 1. This could suggest that with time, S&L members appreciate more the fact that their involvement in such groups helps them understand how to manage their money.

Note that in both data collections, no correlation was observed between the reasons for which respondents decided to join the S&L groups and the gender of the member.

## 4.4 Expected benefits from joining S&L activities

In the same line, respondents were asked the following question: "What benefits do you expect to get, or have you already got, from joining the S&L activities?" (Table 14).

Table 14. Expected benefits from joining S&L groups

Benefits	Total sample (85)	Per gender		Per group		Per type of member		Average ranking score <sup>10</sup>
		Men (48)	Women (35)	Fitun Leste (29)	Naroman (56)	Active in FA (41)	Not active in FA (42)	
Pay education costs for my children	80%	77%	83%	86%	77%	85%	74%	4,7
Educates me to manage income	66%	69%	60%	72%	63%	68%	62%	2,9
I can better deal with emergency needs <sup>11</sup>	65%	69%	60%	90%	52%	71%	60%	3,5

<sup>10</sup> See Box 1 for details on the calculation of the average ranking scores.

<sup>11</sup> New respondents of the round 2 were asked to specify what kind of emergency they thought about. Many answered "paying unplanned fees for children's education". Others also mentioned illness or someone's death, a ceremony, etc. Three talked about natural disasters.

Benefits	Total sample (85)	Per gender		Per group		Per type of member		Average ranking score <sup>10</sup>
		Men (48)	Women (35)	Fitun Leste (29)	Naroman (56)	Active in FA (41)	Not active in FA (42)	
Start new micro-enterprise	42%	33%	51%	59%	34%	59%	24%	3,6
Improve the house or build a new one	38%	33%	43%	52%	30%	39%	36%	2,4
Fulfil food insufficiency	33%	31%	34%	52%	23%	39%	26%	3,0
Buy household tools or equipment	32%	33%	29%	31%	32%	29%	33%	3,0
Get share in profit at the end of the year	25%	31%	17%	41%	16%	39%	12%	1,4
Buy animals and raise them	15% (13 cases)	21%	9%	28%	9%	24%	7%	1,5
Inject capital into an existing micro-enterprise	13%	15%	11%	17%	11%	15%	12%	2,5
Free from usury practices	7%	8%	6%	14%	4%	7%	7%	2,0
Buy agricultural tools and inputs	6% (5 cases)	9%	3%	10%	4%	10%	2%	0,0
Other	4%	4%	3%	7%	2%	2%	5%	2,7

### Box 1: Calculation of average ranking scores

For several questions with multiple possible answers, respondents were asked first to list all their answers, and then to rank their answers from the most to the least important. The most important was given the score “5” and the least important was given the score “1”.

During data analysis, cases where such ranking was not done properly (e.g. not all answers given a rank or missing numbers, etc.) were deleted.

Then, for each possible answer, an “average ranking score” was calculated among respondents who selected this specific answer as shown here:

*Question: What benefits do you expect from joining the group?*

	Pay education	Start business	Buy animals	Buy food	Improve house
Respondent A	5		4		
Respondent B	5	3		4	
<del>Respondent C</del>		<del>3</del>		<del>4</del>	
Respondent D	3	2	1	4	5
Proportion answering each option	75%	75%	50%	75%	25%
Average ranking score	$(5+5+3)/3= 4.3$	$(3+2)/2= 2.5$	$(4+1)/2= 2.5$	$(4+4)/2= 4$	5

*Rankings made by respondent C were not considered in the calculation of the average ranking score.*

Since the first data collection, the most commonly shared expected benefits are still: paying education costs, learning how to manage money, and dealing with emergency needs.

About half of the respondents also have in mind more investment type of benefits (e.g. start a new micro-enterprise). Even though starting a new micro-enterprise is placed in fourth position here, it is still a high priority among respondents who answered this (second most important average ranking score).

Three benefits are more specific to S&L members who are also more active in the FA: starting a new micro-enterprise, buying/raising animals and getting a share in profit. Most of these cases are in Fitun Leste (in Naroman, a higher proportion of members who aren't very active in the FA were interviewed in round 2).

Note that even though gender disaggregated data is presented here, no correlation was observed between the expected benefits and the gender of the member.

### **Agricultural related benefits**

In the list of options to answer the question on the expected benefits from joining S&L groups, two are directly related to agriculture: "buy animals and raise them" and "buy agricultural tools and inputs" (Table 14). Overall, only 15% of the total sample interviewed (13 respondents) selected either or both of these options: eight were from Tequinaumata and five from Fahilebo. All mentioned this during the first data collection.

More specifically, five of them selected both livestock and agricultural inputs and eight only livestock. Clearly, agriculture isn't a priority for most respondents in terms of how they expect to use the loans.

It is interesting to notice that only two out of the 13 respondents who first said they wanted to join the S&L group to buy/raise livestock actually did so at the time of the second data collection. Similarly: none of the five respondents who mentioned agricultural inputs/tools did actually use the loan they received for agricultural purpose (one of them actually didn't receive a loan yet).

This suggests that it is more reliable to assess people's interest in joining S&L groups by looking at how they actually use the loan rather than through this specific question on intended use.

These answers were analyzed in the light of the information provided earlier about the agricultural situation of these families (section 3). Some statistically significant correlations were found, but are still very anecdotal given the little number of cases:

- Two out of the three persons who earlier said they usually buy agricultural tools also said they expect agricultural benefits from joining S&L groups (buying/raising animals or buying agricultural inputs).
- The only person who said he rents land for agricultural production said he also expects to benefit from the S&L group by buying/raising animals.

## 5. Loan distribution and use of loans

### 5.1 Loans received: amount borrowed, use and pay-back

#### 5.1.1 Number and size of loans

At the time of the second interview, 86% of the sample (i.e. 73 persons out of 85) received at least one loan since they first joined the S&L groups. Complete information on the number of loans and the amount borrowed by respondents is presented in Table 15.

Table 15. Details on loans received

	Data
Total number of loans per member (73 cases)	
Average	1.9
Maximum	4
Single loan size (140 loans)	
Average	229 USD
Minimum	20 USD
Maximum	2000 USD
Total amount borrowed per respondent (73 cases)	
Average	439 USD
Minimum	30 USD
Maximum	2100 USD
By gender	
Male (42 cases)	454 USD
Female (31 cases)	417 USD
By group	
Fitun Leste (29 cases)	323 USD
Naroman (44 cases)	515 USD

On average, the amount borrowed is quite significant (229 USD per loan) and S&L members who did receive loans took out about two loans per person. The respondent who borrowed 2000 USD (highest amount borrowed at once) is a veteran producing coffee in Fahilebo (member since 2013).

There is no significant difference between the amount of money borrowed by male and female members. On the other hand, loans in Naroman are much bigger than those taken in Fitun Leste. The reason for this is due to the higher compulsory savings in Fitun Leste (\$3 per member/month) than in Fitun Leste (\$1 per member/month). The higher capital of Naroman allows it to give bigger loans to its members than Fitun Leste.

Note that there is no significant difference between the average loan size among respondents who said they are active in FA activities and others (427 USD vs 477 USD respectively).

The 12 respondents (seven men, five women) who declared not having received a loan yet are all members of Naroman and joined the S&L groups only recently (2015) except three who joined the group in 2013. Their recent membership explains why they haven't received a loan yet. Moreover, one of them is a member whose wife is also part of the S&L group and has already received a loan.

Among the three members who joined the group in 2013 but haven't received a loan yet, two are respondents who changed their mind after round 2: initially in round 1, they said they had already taken a loan. As mentioned in Box 2, this information was cross-checked with the groups' data records and is apparently correct.

**Box 2: Validating data collected during round 1 on amount borrowed and use of loans**

In round 2, respondents who had already been interviewed in 2013-2014 were asked to confirm the information they gave in round 1. As a result, four respondents from Fahilebo changed the information they gave in round 1:

- Two respondents denied having received a loan at the time of round 1. Initially they said they loaned 200 and 50 USD to pay for education fees and buy products for their trading business. This information was confirmed by cross-checking with the groups' record keeping.
- Two others said the amount was smaller than what they initially said in round 1: 300 and 150 USD instead of 400 and 200 USD respectively.

Two persons also changed their mind regarding how they had used the loans: one said he finally did not buy food with the loan and another one said he didn't buy items for the house.

Only the updated information, changed or not by respondents during round 2, was considered correct during data analysis.

Cross-analysis was also conducted with the agricultural information provided earlier (section 3). The only significant relation found is quite anecdotal: on average, the amount borrowed by families who earlier said they usually buy pesticides is higher than the amount borrowed by families who do not buy pesticides: 729 USD among seven cases vs 420 USD among 62 cases respectively<sup>12</sup>.

### 5.1.2 Use of the loans

Table 16 presents the actual uses of the loans that were received. Note that during the second data collection, ranking of the answers given as explained in Box 1, was done in two ways (last two columns of Table 16): first respondents were asked to rank the different uses they made of their loans from the most to the least important; secondly, they were asked to rank these from the costliest to the cheapest. But in the end, respondents ranked their answers quite similarly, whether it was supposed to be according to the importance or the amount of money spent.

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<sup>12</sup> Result of Anova test: Sig. = 0.04,  $p < .05$

Table 16. Use of loans since the begging of borrowers' membership

Use	Proportion who mention each use:					Average ranking score		
	All (73)	Male (42)	Female (31)	Fitun Leste (29)	Naroman (44)	For loans obtained by round 1 respondents before the first interview	For loans obtained by round 2 respondents after the first interview	
							Ranking per importance	Ranking per cost
Education	60%	69%	48%	59%	61%	4,8	5.0	5.0
Trading	41%	29%	58%	35%	46%	4,7	4,5	4,6
Improve /build new house	37%	33%	42%	38%	36%	4,8	4,6	4,5
Items for the household	32%	31%	32%	31%	32%	4,3	3,9	4.0
Food consumption	18%	17%	19%	24%	14%	3,8	3,8	3,5
Health	11%	14%	7	14%	9%	4,7	4,5	4,5
Livestock	8%	7%	10%	3%	11%	5.0	4,6	4,2
Emergency	4%	2%	7%	7%	2%	3,5		
Ceremonies	1%	2%	0%	3%	0%		4.0	4.0
Agriculture investments	1%	2%	0%	0%	2%		4.0	4.0
Agriculture inputs	1%	2%	0%	0%	2%			
Other	1% <sup>13</sup>	0%	3%				5.0	5.0

As observed during the first data collection, using the loan for children's education remained the most common answer. It is also one of the answers which was given the highest ranking score (an average rank of 5 in term of importance and money spent). Interestingly, one-third of the respondents who used the loan for education used it only for that purpose (that is 21% of all borrowers). On average those S&L members loaned 167 USD.

Trading remained the second most common use of the loans since round 1: 41% of all borrowers used part or all of their loan(s) for trading. Trading has also been given high rankings both in terms of importance and money spent: 4.5 and 4.6 respectively. Most of the borrowers said they opened small shops ("kios"). One specified he buys and sells clothes. Another said that was for buying and selling chickens in the market.

As observed during the first data collection, the proportion of women using the loans for trading is significantly higher than among men. Most of the new loans obtained after round 1 and which were used for trading were used to create new businesses (only two persons mentioned they had already a business before getting the loan).

Definitely these S&L groups are very important to provide new income generation alternatives for women.

<sup>13</sup> Administration fees to go work abroad.

Improving the house is now in third position (37% of borrowers) while it was the fifth most common use in round 1 (9% out of 54 borrowers in round 1). It definitely is something important for all participants of the S&L groups, independently of whether or not they are actively involved in the FA.

"Improving houses" (37% of all borrowers) is closely followed by "buying items for the household" (32% of all borrowers) which is somewhat related, i.e. essentially improving the family's living standard. Such items are mainly furniture, electronic devices such as TVs, motorbikes, kitchen equipment.

Some cross analysis was made between the different uses people made of the loans and their access to the market (section 3.2). Interestingly, several correlations were found:

- Borrowers with easier access to the market tend to use more often their loan to improve their houses, buy household items or food, than borrowers who do not have an easy access to the market.
- On the other hand, people who can't access the market easily use more often their loan for education than others.

Definitely, the isolation of these households influences how they might use the loans.

Also, families who can access the market easily borrow significantly higher amounts than others: 599 USD vs. 393 USD among those who do not access the market easily.

Even though the data in Table 16 is segregated per suco (Fitun Leste vs. Naroman) and per gender, no significant correlation was found between the different uses members made of the loans and these two factors. New and old members also tend to use loans similarly.

### Use of loans for agricultural purpose

Three specific uses in Table 16 refer to agriculture: livestock, agriculture investments and agriculture inputs.

In round 1, only 4% of the borrowers (i.e. two persons) mentioned agricultural uses (buying livestock) but this proportion increased to 11% in round 2. Indeed, in round 2, six persons used part of their loan(s) to buy livestock, one used these to buy agricultural inputs, and another one to make agricultural investments. In this last case, the borrower specified that he bought polybags as well as wire and nails to make a fence.

All these eight respondents also spent their loans for non-agricultural purposes: mainly trading or to buy items for the HH, etc. The total amount of money they borrowed ranged from 250 to 1.300 USD, all expenses combined, which is much higher than the average loan size (229 USD).

Among the six persons who said they used the loan to buy/raise livestock, five are from Fahilebo and three are women. One of them is a woman from Fahilebo who made four loans including three loans of 150 USD, 200 USD and 250 USD that were used exclusively to buy livestock. According to the Financial Controller of the Naroman S&L group, most of these cases are in fact people who trade chickens and pigs: they buy these from local farmers and then sell them in the local markets or a bit further, as in Dili. Such trading business enabled them to save significant amounts within their group.

In other words, it is likely that the collected information through this question on the use of the loan for agricultural purposes is not always complete. When cross-checking with other sections of the survey, it appears that four other borrowers used their loans either to trade small livestock or to sell processed food (cakes and fried bananas). When including those

extra cases, the proportion of borrowers who used part of their loans for agriculture-related issues increases to 16%.

**Box 3: Agricultural uses of the loan as per groups' record keeping**

In order to give another perspective on the use of the loans for agricultural purposes, data recorded in the groups' record keeping books is also presented here.

For the period May 2013 to September 2015:

- 890 USD and 8.275 USD were used by members of the Fitun Leste and Naroman groups respectively for agricultural purposes. This represents 12% and 27% of the total amount borrowed to all members in this period.
- These agricultural purposes ranged from buying and selling agricultural products, to cake production and "agriculture" in general.

This information suggests that the Naroman S&L is clearly more agriculture-oriented, which can also be observed in Table 16, even though the difference isn't statistically significant there. Moreover, this confirms that the amount borrowed for agricultural purposes are quite large. It also confirms that many agricultural uses are in fact more related to the trading of agricultural products than to the purchase of inputs to be used in respondents' farms.

As done with other data as well, cross-analysis was conducted to see if there is any relation between the fact that loans are used for agriculture and the "agricultural profiles" of these households (section 3).

The positive correlations are summarized here:

- Among the seven persons who buy pesticides to use on their farms, 29% (two cases) said they used the loan to buy/raise livestock; while only 7% of borrowers who do not buy pesticides used their loan to buy livestock.
- Among the 13 borrowers who usually sell big animals, 23% (three cases) said they used the loan to buy/raise livestock; while only 5% of borrowers who do not sell big animals used their loan to buy livestock.
- The only person who used the loan for agricultural inputs also usually buys agricultural tools and rents a tractor. Similarly, the only person who used the loan for agricultural investments also usually buys pesticides and rents a tractor. Clearly, these two respondents (both male members of Naroman) are among the more agriculture-oriented members of the S&L groups.

### 5.1.3 Reimbursing loans

Generally, loans seem to be reimbursed without any problem. 41% of the borrowers interviewed said they had already reimbursed these by the time of the second interview. All of them said they reimbursed their loans on time but most (79%) said they had to sell "assets" to pay back these loans. Cross-checking this information revealed that respondents didn't mean "assets" but rather products from their farms or businesses. Also, none of them said they had to borrow money from somewhere else to reimburse loans taken with the S&L groups.

On the other hand, borrowers who hadn't finished paying back their loans at the time of the second interview specified they were still on time to pay these off.

## 5.2 Requests for further loans

During both data collections, respondents were asked whether they planned to ask for future loans or not, and if yes, how much would they borrow and how would they use these.

### 5.2.1 Comparing future loan plans to actual situation

Answers to questions on future loans, given by respondents during round 1, were compared with the information collected during round 2 regarding what these S&L members actually did since the last interview: did they really get a loan? how much did they borrow? and how did they use it? The main observations are presented in this section.

#### Obtaining a loan

68% of the respondents who were interviewed in round 1 and round 2 did follow their plan: they either planned to ask for a loan and did take out a loan, or they didn't plan to ask for a loan and indeed, didn't receive any.

On the other hand, one person first said he didn't plan to ask for a loan but finally took a loan by the time of round 2. And 10% (six persons) first said they were planning to ask for a new loan but finally hadn't received any new loans in round 2.

#### Amount borrowed

Comparing amounts respondents planned to borrow and amounts actually borrowed was possible for 31 cases. As a result, 23% of these got exactly the amount they were planning to request. But these 31 respondents borrowed on average about 90 USD per person more than what they initially planned to loan (from 50 USD to 300 USD for most cases).

The above information shows that the S&L groups are doing very well: more members than expected are able to take on loans and amounts borrowed are also larger than planned.

Note that there is no significant correlation between the above data and the gender of the respondent.

#### Use of the loans

In many cases, respondents did not exactly use the loans as they first said they would. The most frequent situations are presented here:

- Six persons initially said they would use the loan for trading but finally did not.
- Seven persons initially said they didn't plan to use their future loans to buy HH items and another five to pay for education but all finally did so.

Note that one person was first planning to use the loan for agricultural investments but finally did not do so (he used it to buy school uniforms).

On the other hand, ten persons said they would need the loan to pay for education fees and nine said they would spend it to improve the house and all finally did so.

### 5.2.2 Requesting for further loans in 2015-2016

This section presents the data collected in round 2 only regarding respondents' wish to request for more loans in the future.

Among all round 2 respondents, 53% said they plan to request for a new loan. Surprisingly, seven respondents who earlier declared they had not received any loan yet, said that they do not plan to request for one either. Most of these are new members and probably first would like to use the S&L groups as a saving scheme.

No significant correlation was found between respondents who plan to request for new loans and their gender, suco, or involvement in the FA.

#### Amounts to borrow

On average, respondents are planning to request about 453 USD (ranging from 100 USD to 2.000 USD). Note that this average excludes an outlier of 5.000 USD (a loan request from a female member of Naroman S&L group who plans to build a new house). Still, this average is much higher than the amount respondents were planning to request in round 1 (230 USD). This again highlights the fact that S&L groups are running well and are able to give bigger loans.

Table 17. Average loan size for future loans

	Data
Future loan size (43 cases)	
Average	453 USD
Minimum	100 USD
Maximum	2.000 USD
Per gender	
Male (26 cases)	472 USD
Female (17 cases)	424 USD
Per group	
Fitun Leste (11 cases)	389 USD
Naroman (32 cases)	475 USD

As shown in Table 17, men plan to borrow slightly larger amounts than women (as observed in round 1 as well). Also, members of the Naroman S&L group, which gave bigger loans than the Fitun Leste S&L group (Table 15), plan to request larger amounts.

#### Use of future loans

The way respondents plan to use their future loans is quite similar to how loans received have already been used. As shown in Table 18, improving or building new houses, education, trading and buying HH items (such as motorbike, furniture, etc.) remain the main expenses.

No correlation with gender was observed.

Table 18. Planned use of future loans

Use	Proportion among 44 cases	Average ranking score <sup>14</sup>
Improve /build new house	50%	4,7
Education	25%	5.0
Trading	21%	4,9
Items for the household	14%	4,5
Food consumption	2%	5.0
Agricultural investment	2%	4.0
Bought livestock	2%	5.0
Agricultural inputs	2%	5.0

In total, three respondents plan to use their future loan for agricultural purposes. One of these specified it was to build a fence ("agricultural inputs") and another one said it was to buy and sell vegetables (listed in "agricultural investment").

Note that two out of the three persons who said they plan to use their future loan for agricultural purposes had already mentioned using previous loans for agricultural investment or livestock in round 1.



Figure 5. Annual shareholder meeting of Fitun Leste on 23 May 2015

<sup>14</sup> When the number of cases is very low (one case for example for each of the agriculture-related uses), the average ranking score should not be compared other scores as it isn't representative enough.

## 6. Other saving and borrowing schemes

A number of questions were asked about other saving and borrowing schemes to assess how the Fitun Leste and Naroman S&L activities contribute and compare to the existing systems, if any.

### 6.1 Past savings

During both data collections, respondents were asked if they had already experienced saving money on their own in the past. Answers from both rounds of interviews were combined and are presented here.

Only 21% out of the 84 respondents who answered this question said they have been able to save money in the past. These savings could have taken the form of cash saved at home or cash invested in animals, for example (Table 19).

Table 19. Other type of savings

Type of savings	Proportion among 18 cases	Average ranking score
Cash	61%	5.0
Animals	50%	4,5
Other <sup>15</sup>	22%	4,75

The most common form of saving is cash saved at home, followed by animals and finally owning a small business.

Interestingly, all the persons who said they saved in the form of animals (nine cases) are actively involved in the FA. This confirms the fact that S&L group members who are actively involved in the FA are definitely more agriculture-oriented than others.

There is no significant difference between men and women or between both S&L groups.

### 6.2 Joining similar S&L groups in the past

Only 12% (i.e. ten persons) said they had joined another S&L group in the past. Clearly, such activities are new to most members of Fitun Leste and Naroman S&L groups.

Most of them joined these groups for one to two years. Only three persons joined these groups for longer periods (seven to eleven years).

Also, note that three said they continued being part of this other S&L group even after joining the Naroman and Fitun Leste S&L groups.

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<sup>15</sup> Three specified “small business” and one said “savings at the bank”.

## 6.3 Other borrowing schemes

During the second data collection, respondents were also asked if they knew of other ways to borrow money in their area (besides through the S&L groups).

Surprisingly, only two out of the 83 respondents interviewed said they knew about other ways to borrow money. But it is possible that some respondents answered “no” to this question because they thought they were asked if they had themselves borrowed money through other schemes.

Still, this result highlights the crying need for such S&L groups and explains the rising interest of non-FA members in S&L activities.

The following summarizes the information given by these two respondents on other borrowing schemes:

- The first respondent (a male member of the Fitun Leste S&L group) is in fact a member of an "*arisan*" group. Such groups are not only a borrowing scheme but rather some informal savings and loans groups where members alternatively receive a similar amount, and where the order of “beneficiaries” is established by a lucky draw.
- This respondent said he received 200 USD from the *arisan* group after having joined the FA's S&L group.
- The second respondent said he borrowed 200 USD from another person before joining the S&L group and had already finished paying back his loan (no interest paid).

Surprisingly, no cases of borrowing money through local money lenders were reported.

## 7. Economic profile of households

Questions on the families' assets and house conditions were asked during the first and second data collection in order to observe possible evolutions. Part of this data was used to calculate households' 'Progress out of Poverty Index' (PPI) score. Respondents were also specifically asked if they made new purchases or investments since they first joined the S&L groups. Lastly data on the households' food security was collected.

### 7.1 House condition

Table 20. Evolution of S&L members' houses conditions

	Total samples		Common sample (59 cases)		Other references
	Round 1 (61 cases)	Round 2 (83 cases)	Round 1	Round 2	
Size of houses <sup>16</sup>					
Average	58 m <sup>2</sup>	61 m <sup>2</sup>	59 m <sup>2</sup>	59 m <sup>2</sup>	67 m <sup>2</sup> in monitoring survey
Minimum	16 m <sup>2</sup>	16 m <sup>2</sup>	16 m <sup>2</sup>	16 m <sup>2</sup>	
Maximum	138 m <sup>2</sup>	138 m <sup>2</sup>	138 m <sup>2</sup>	138 m <sup>2</sup>	
Wall material					
Bamboo	35%	35%	36%	36%	41% in monitoring survey
Cement blocks	38%	37%	39%	41%	35% in monitoring survey
Palm fronds	22%	22%	20%	22%	16% in monitoring survey
Wood	3%	2%	3%	2%	5% in monitoring survey
Clay	2%		2%		
Metal		4%			
Roof material					
Palm leaves/grass	26%	17%	25%	22%	11% in monitoring survey
Metal	74%	83%	75%	78%	89% in monitoring survey
Floor material					
Dirt/clay	72%	54%	71%	63%	63% in PNDS baseline, 66% in monitoring survey
Cement board	25%	41%	25%	34%	32% in monitoring survey
Tiles	3%	2%	3%	3%	3% in monitoring survey
Wood/bamboo		2%			

As shown in Table 20, the construction materials of respondents' houses have changed for better/stronger materials in a number of cases, especially for the floor: 25% of cement board floors in round 1 vs. 34% in round 2.

<sup>16</sup> During the second data collection, it was assumed that house sizes had not changed and therefore the question on house size was not asked again to respondents who had already been interviewed in round 1.

## 7.2 Assets owned

In terms of livestock (Table 21), it appears that the average number of animals owned has very slightly increased between round 1 and 2: from 14 to 15 animals per household. This mainly comes from the increased number of chickens owned by nearly all households. However, a significant number of respondents own less pigs and cows in round 2, mainly because animals were sold or died due to diseases.

Interestingly, men reported owning significantly more animals than women members: 16 on average for men vs. nine for women in round 1 and 18 for men vs 11 for women in round 2.

Table 21. S&L members' livestock

	Total samples		Common sample	
	Round 1	Round 2	Round 1	Round 2
% of HH owning livestock	95%	96%	95%	95%
# of animals owned:				
Average	14	15	13,4	15,2
Minimum	2	1	2	1
Maximum	50	52	50	47
% of respondents owning each animal <sup>17</sup> / average # of animals owned <sup>18</sup> :				
Pigs	98% / 3.2	73% / 2.6	98% / 3.2	80% / 2.6
Chickens	90% / 7.8	96% / 9.4	89% / 7.8	96% / 8.8
Goat	43% / 3.2	36% / 4.4	43% / 3.3	39% / 5
Buffalo	19% / 3.9	17% / 6.6	16% / 3.2	18% / 7.7
Sheep	0% / 0	5% / 4	0% / 0	7% / 4
Horse	3% / 2	3% / 4	4% / 2	2% / 4
Cattle	34% / 3.2	42% / 2.9	36% / 3.2	37% / 2.7
Duck	2% / 2	1% / 1	2% / 2	2% / 1

A quite extensive list of several agricultural tools was read to S&L members and it appeared that all households owned at least one of these.

The average number of agricultural tools seems to have also slightly increased (Table 22): from nine to twelve tools on average per family. Many more families in particular own drums in round 2: 58% vs. 17% in round 1. Respondents of Naroman especially have reported high number of drums (especially among new members of the S&L group). These were most likely purchased from the IFAD 'Timor-Leste Maize Storage Program' to store respondents' own production as well as part of the CSP's production.

<sup>17</sup> Proportions are calculated among respondents who own at least one animal (any animal).

<sup>18</sup> The average number of animals owned is calculated among respondents who own at least one of these animals.

Table 22. S&amp;L members' agricultural tools

	Total samples		Common sample (59 cases)	
	Round 1 (61 cases)	Round 2 (83 cases)	Round 1	Round 2
# of agricultural tools owned:				
Average	9,3	12,3	9,3	12,2
Minimum	1	2	1	2
Maximum	37	37	37	37
% of respondents owning each tool / average # of tools owned <sup>19</sup> :				
Machetes	98% / 2	35% / 2.4	98% / 2	93% / 2.3
Planting sticks	93% / 2.2	93% / 2.8	93% / 2.2	93% / 2.7
Shovels	77% / 1.9	79% / 2.2	78% / 1.9	80% / 2.3
Hoes	75% / 2.1	89% / 2	76% / 2.1	91% / 2
Reaping hooks	33% / 1.7	35% / 1.8	32% / 1.7	37% / 1.9
Tarpaulins	33% / 1.3	39% / 1.6	32% / 1.3	41% / 1.7
Axes	28% / 1.2	22% / 1.3	27% / 1.1	19% / 1.2
Drums	20% / 1.3	52% / 2.8	17% / 1.3	58% / 2.4
Watering cans	16% / 2.5	20% / 1.8	17% / 2.5	20% / 2.2
Silos	8% / 1.4	13% / 1.3	7% / 1.3	12% / 1.3
Wheelbarrows	7% / 1	11% / 1	7% / 1	12% / 1
Hand operated sprayers	7% / 1.3	11% / 1.7	7% / 1.3	12% / 1.9
Corn shellers	3% / 1	2% / 1	3% / 1	3% / 1

Non-agricultural assets were also listed and respondents had to count how many of each they had (Table 23). The three most common household assets are chairs, tables and hand phones.

Note that in order to shorten the questionnaire, only items that are needed for the calculation of the PPI score were kept during the second round of interviews. Surprisingly, among the common 59 cases, slightly less respondents own cupboards, radios and TVs. The truthfulness of such information can be questioned as it is unlikely families got rid of such items while on the other hand, some are able to upgrade their houses by putting in concrete floors for example or even plan to build new houses.

<sup>19</sup> The average number of tools owned is calculated among respondents who own at least one of these tools.

Table 23. S&amp;L members' household assets

	Total samples		Common sample (59 cases)		Other references
	Round 1 (61 cases)	Round 2 (83 cases)	Round 1	Round 2	
% of respondents owning each asset / average # owned <sup>20</sup>					
Chair	98% / 6.1	NA	98% / 6.1	NA	98% in monitoring survey
Table	93% / 1.6	NA	93% / 1.6	NA	
Phone	80% / 1.3	NA	80% / 1.3	NA	70% in monitoring survey
Cupboard	67% / 1.3	57% / 1.3	68% / 1.3	59% / 1.3	
Motorbike	26% / 1.6	NA	27% / 1.6	NA	17% in monitoring survey
Radio	23% / 1.1	16% / 1	24% / 1.1	15% / 1	23% in monitoring survey
CD/Tape player	2% / 1	1% / 1	2% / 1	2% / 1	
TV	13% / 1	8% / 1	14% / 1	10% / 1	26% in monitoring survey
Refrigerator	3% / 1	NA	3% / 1	NA	4% in monitoring survey
Bicycle	2% / 1	NA	2% / 1	NA	3% in monitoring survey

Lastly, data on area cultivated was collected during both rounds of interviews, for use in the calculation of the PPI (Table 24).

Table 24. Area cultivated

	Total samples		Common sample (59 cases)	
	Round 1 (61 cases)	Round 2 (83 cases)	Round 1	Round 2
Average area cultivated	NA	0,95 ha	NA	0,94 ha
Minimum		0 ha		0,06 ha
Maximum		5 ha		5 ha
Categories of area cultivated				
No land		6%		
1 to 1,499 m <sup>2</sup>	8%	7%	8%	8%
1,500 to 2,999 m <sup>2</sup>	20%	14%	17%	17%
3,000 to 9,999m <sup>2</sup>	26%	27%	27%	27%
10,000m <sup>2</sup> or more	46%	46%	48%	48%

All the households interviewed in round 1 said their households cultivated land but precise data on the area cultivated was not collected. In round 2, five persons said they didn't own land. Four among them are members of the S&L groups since 2014-2015 and said they aren't active in the FA. They also said their families are not involved in agriculture, which suggests, once again, that S&L members who aren't actively involved in a FA are less agriculture oriented than others.

<sup>20</sup> The average number of assets owned is calculated among respondents who own at least one of these assets.

#### **Box 4: Rectifying round 1 data on areas cultivated**

The question on land size was asked differently between both rounds of interviews:

- In round 1, farmers were asked to directly identify within which range of square-meters areas their total land size corresponded to (same wording as in the original PPI questionnaire). Given farmers' limited understanding on what represents an area calculated in square meters, it is most likely that the answers given in round 1 were inaccurate.
- In round 2, enumerators facilitated this part of the interview by estimating, with the respondent, the length and width of each of the family's plots. Results of this questioning is presented in Table 24.

In order to get a feel of the evolution since round 1, a qualitative question was also asked in round 2: respondents had to tell if they thought the total area cultivated had decreased/increased/or remained the same since the last interview. Respondents' answers clearly indicate that, on average, household cultivate the same area as in round 1:

- 3% (2 cases) said they thought they cultivated less area in round 2 than they did in round 1
- 93% said they cultivated as much area in round 2 than in round 1
- 3% (2 cases) said they cultivated more land now than in round 2.

Answers from round 2 were then used to rectify the answers given during the first data collection:

- Among the respondents who said they cultivate the same area in round 2 as in round 1, only 20% had answered a matching category during round 1.
- Most respondents (58%) had actually under-estimated the land they were cultivating and 22% had over-estimated it.

Given the above findings, it was decided not to use the data on area cultivated collected during round 1. The data presented in Table 24 for round 1 is the data that was rectified thanks to the information collected during round 2.

#### **Further analysis of data on agricultural assets**

Analysis of the above data was conducted in the light of respondents' agricultural profile (see section 3). A number of positive correlations were found, especially with the round 2 data:

- Families who sell some of their agricultural products (more specifically big animals and maize) do own more tools than others: 18 tools on average among people who sell big animals vs. 12 among those who do not sell big animals, and 17 among those who sell maize vs. 11 among those who do not sell maize.
- Families who reported selling their agricultural products more frequently (that is weekly instead of monthly or even yearly) also reported owning more chickens, tools and land.
- Families who reported having an easy access to the market also reported owning more tools, especially drums.

Even though some of this information may sound anecdotal, it generally illustrates that a portion of the S&L members own more agricultural assets and are more market-oriented than others. For such farmers, being part of an S&L group is definitely an opportunity to develop further their agricultural productions.

Following these thoughts, comparisons were then conducted between the number of animals and agricultural tools owned and the use respondents made of the loans. As a result, people who used the loan to buy/raise livestock proportionally own more animals and agricultural tools than others:

- 23 animals on average among people who used the loan to buy/raise livestock vs. 15 animals among other borrowers (round 2),
- 23 agricultural tools on average among people who used the loan to buy/raise livestock vs. 12 tools among other borrowers (round 2).

This confirms that it are the families who are more involved in agriculture, and probably more market-oriented, who are more likely to use loans for agricultural purposes.

## 7.3 Improvements since first joining the S&L groups

In order to collect information that might have been missed while asking respondents to count the number of assets their families own (section 7.2), more general questions about any items the families could have bought or any new investment they could have made since they first joined the S&L group were asked. It was also specified that answers did not have to be limited to things that were purchased with the money of the loans in order to ensure respondents would think of all the possible purchases.

### 7.3.1 Buying new items since joining the S&L groups

Overall, 18% of the S&L members interviewed in round 2 reported having purchased new items since they first joined the S&L groups. Note that about half of these had already bought new items at the time of the first data collection.

18% seems rather low for a two years' period but given that this question is quite open and general, it is likely that many respondents forgot to mention they also had purchased new items.

During the first data collection, items bought were mainly construction material ("*60 metal sheets*", "*40 cement sacs*", etc.) but also clothes.

During the second data collection, most respondents said they bought kitchen equipment (fridge, plates, forks/spoons, glasses, etc.) and furniture such as chairs, cupboards. Two persons even bought a motorbike.

None of the items mentioned were related to agriculture.

### 7.3.2 Making new investments since joining the S&L groups

19% out of 84 respondents said they made new investments since they first joined the S&L activities (again, not necessarily with the money from the loan). About two-third of these investments had already been made at the time of the first data collection.

Half of these S&L members specified that the investments made were for small businesses (mainly small shops/"kios", a "fried banana business", trading of clothes, fuel).

Another respondent said he bought fruit tree seedlings in order to sell fruits in the future.

It is likely that the other half also invested in similar businesses even though they forgot to specify what they meant by “investment”. Indeed most of them had earlier mentioned that they used the loan for trading (both new and old businesses).

Interestingly, respondents who are actively involved in the FA have more frequently reported making investments than others: 27% vs 10% among respondents who aren’t actively involved in the FA.

In conclusion, among 84 respondents and since they first joined the S&L group, one person said he made agricultural-related investments (fruit seedlings) and another one invested in a food-processing business (fried bananas)<sup>21</sup>. But again, it is possible that more similar cases were not reported during the interviews<sup>22</sup>.

## 7.4 Progress out of Poverty Index (PPI)

The calculation of the PPI<sup>23</sup> relies on answers given to ten specific questions that were asked during the survey (Table 25). In order to calculate a PPI score for the household, answers for each of these ten questions should be available.

Table 25. Standard set of PPI questions for Timor Leste

PPI questions
1. How many members does the household have?
2. Are all household members ages 8 to 17 currently attending school?
3. What is the highest level and class that the male head/spouse has completed in school?
4. What was the main occupation of the male head/spouse in the past 12 months?
5. What is the major construction material of the external walls?
6. What is the primary material of the floor?
7. What is the primary material of the roof?
8. Does the household own any televisions, tape players/CD players, or radios?
9. How many clothes cupboards does the household own?
10. How many square-meters of land does the household cultivate (or has or controls, even if the land does not belong to the household) that is for annual crops or fallow, tree crops, pasture, plantation, grassland, or garden/garden plot?

In round 1, only 35 respondents (out of 61 interviewed) answered all ten questions. In order to have more complete data, enumerators who went back to interview S&L members for the second time also took this opportunity to complete missing answers from the first data collection. As a result, PPI scores for round 1 could be calculated for 58 out of 61 S&L members interviewed. And for round 2, PPI scores could be calculated for 76 out of 83 S&L members interviewed. This allowed direct comparison of PPI scores for 52 cases in total.

<sup>21</sup> In Naroman, some women are actively in cake production.

<sup>22</sup> In Naroman, some women are also active in buying and selling agricultural products. There were also some women who bought and sold clothes at three places in the suco.

<sup>23</sup> For more info on the PPI, visit [www.progressoutofpoverty.org](http://www.progressoutofpoverty.org).

### 7.4.1 Poverty likelihood among the total sample

PPI scores were directly converted into poverty likelihoods using “look-up tables” established by the Grameen foundation. The proportion of respondents living under three different poverty lines could then be calculated (Table 26).

Table 26. Poverty likelihoods among total sample

Proportions of respondents living...	Total samples		Common sample (52 cases)	
	Round 1 (58 cases)	Round 2 (76 cases)	Round 1	Round 2
...with less than 1,25\$/day	33%	28%	31%	31%
...with less than 2,5\$/day	79%	77%	79%	78%
...under the national poverty line	49%	46%	48%	49%

The PPI scores of the S&L members interviewed hasn't changed significantly between round 1 and 2. Overall, the situation stayed the same after one and a half year of involvement in these S&L groups, which is understandable given it is a relatively short period of time.

When looking at the data more in detail, it appears that the questions which played the biggest role in reducing the total poverty likelihood are the questions on the number of HH members (has slightly decreased) and on the roof material (improved for two HHs). On the other hand, the questions that were most influential in increasing the poverty likelihood are the questions on HH assets (six families do not own TV or radios anymore) and on the schooling situation of HH members aged 8 to 17 years old. Note that besides the question on the roof material, which can be directly observed by the enumerator during the interview, the other data might be questionable (see sections 2 and 7.2).

Also, it is important to point out that the PPI shouldn't be considered as the only measurement of progress in these households. Among other findings of this survey, the upgrading of houses' conditions, the investment in several small businesses, the purchase of motorbikes and simply the fact that all borrowers were able to pay back their loans are very positive indicators of the families' increased wealth.

### 7.4.2 Poverty likelihood among specific groups

In order to assess if some specific criteria might have an influence on households' poverty likelihood, the above data was segregated per group, gender, etc. Results are presented in Table 27

Table 27. Proportion of S&L members living under the national poverty line per criteria

		Round 1 (58 cases)	Round 2 (76 cases)
Per group			
	Fitun Leste	51%	54%
	Naroman	47%	42%
Per gender			
	Male member	51%	49%
	Female member	47%	42%
Per HoH occupation			
	Agriculture	55%	54%
	Other	28%	27%
Per farming HH			
	HHs involved in farming	48%	48%
	HHs not involved in farming		8%
Per use of loan			
	Loan used for agricultural purposes	48%	50%
	Loan NOT used for agricultural purposes	49%	47%

No significant difference between the proportions of respondents living under the national poverty line in Fitun Leste and in Naroman can be observed (Anova test). Similarly, there is no significant difference between women and men members of these groups, or between members who used their loans for agriculture or not.

However, S&L members whose HoHs are mainly involved in agriculture are significantly more likely to live under the national poverty line than others. Also, households involved in agriculture are more likely than others to live under the national poverty line: the four S&L members interviewed in round 2 who said their families weren't involved in agriculture have very high PPI scores (upper quartile).

In other words, farming households are more likely to be poor than HHs where members have non-agricultural activities (teachers, extensionists, policemen, etc.). For these farming families, having the possibility to borrow money through such S&L groups is a real benefit. Further analysis showed that these poorer farmers tend to more often use their loans to pay for education fees: 54% of those who did so are likely to live under the national poverty line vs. 7% of others.

On the other hand, wealthier S&L members tend to use their loan to improve their houses: only 35% of the round 2 respondents who used their loan for their houses are likely to live under the national poverty line vs. 54% for others. These families are also among those who have an easier access to the market.

### 7.4.3 Poverty likelihood and loan size

Analysis of the PPI scores in the light of the amount S&L members borrowed was conducted here. Figure 6 presents the average amount borrowed per S&L member per PPI score.

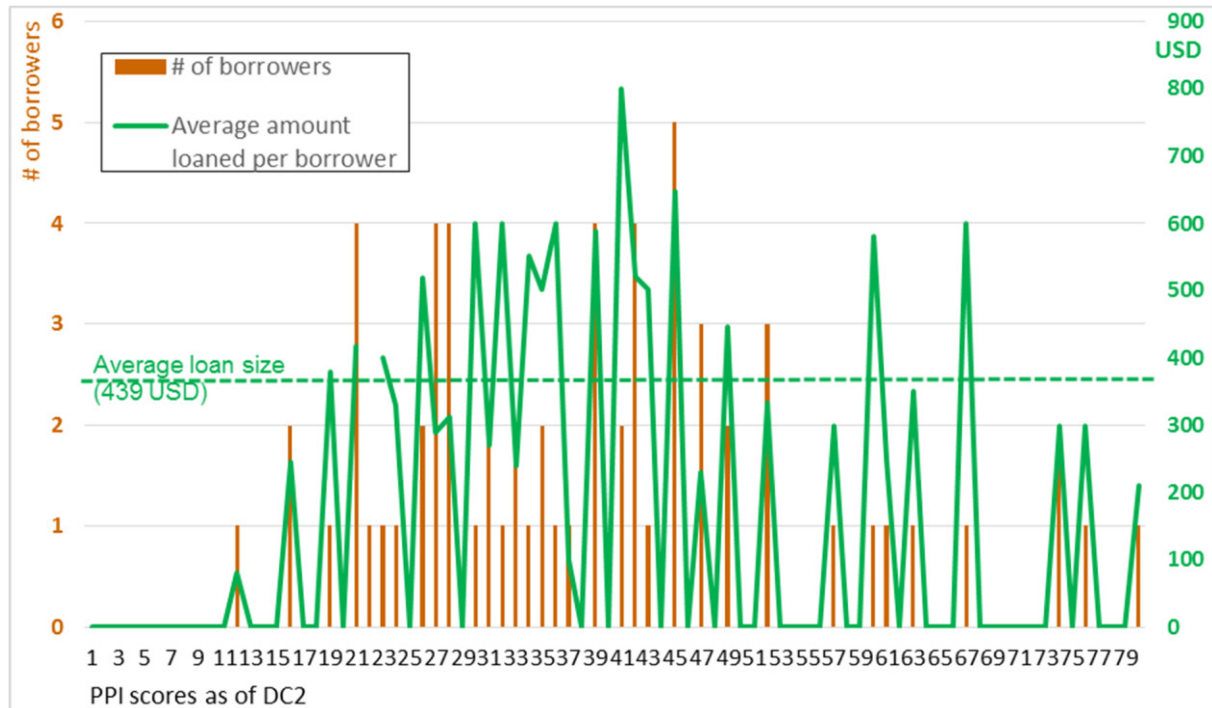


Figure 6. Average loan size by PPI score<sup>24</sup>

The general trend is for families with average PPI scores to loan the higher amounts. S&L members with very low PPI scores (so who are more likely to be poor) usually borrow smaller amounts. However, S&L members who are slightly wealthier than average (PPI scores above 50) do not necessarily borrow higher amounts.

This is confirmed by Figure 7 which is more concise.

<sup>24</sup> In order to make the graph more readable, one extreme case was excluded from the chart, that is the S&L member who borrowed overall 2100 USD (veteran) and with a PPI score of 22.

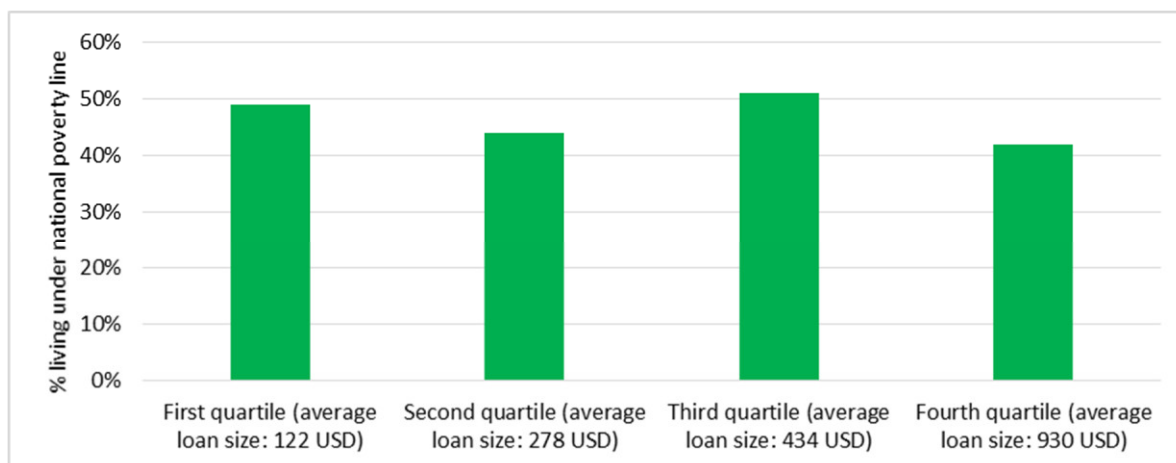


Figure 7. Proportion of HHs living under the national poverty line per quartile of loan size

Indeed, there seems to be no correlation between the total amount people borrow and the likelihood these people live under the national poverty line.

## 7.5 Household food self-sufficiency

Respondents were finally asked: "Were there months, in the past 12 months, in which there was not enough food (self-grown, borrowed or bought) to meet the household's needs?"

As shown in Figure 8, food shortage was mainly reported at the end of the dry season/beginning of rainy season, from December to February.

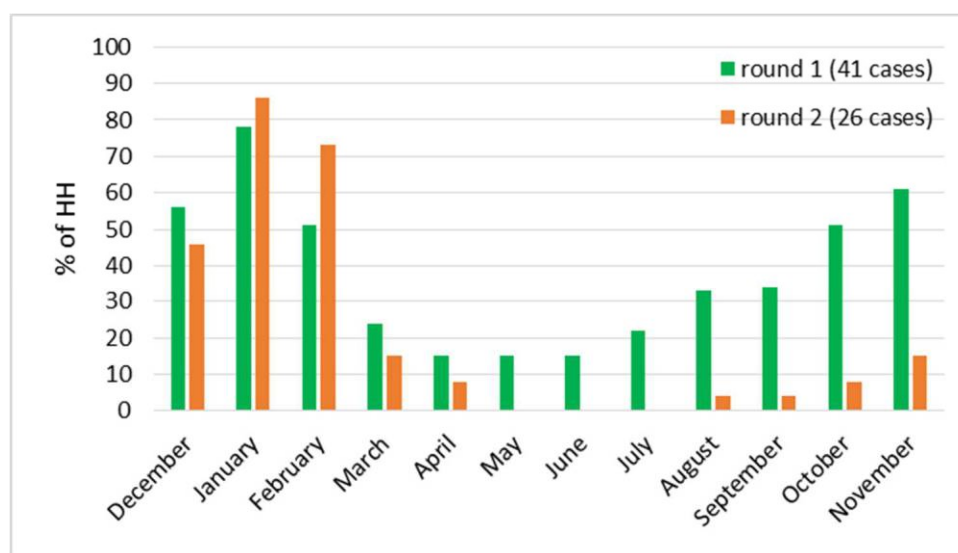


Figure 8. Proportion of respondents reporting food shortage per month<sup>25</sup>

<sup>25</sup> Proportions of respondents are calculated among HHs who experience at least one month of food shortage.

The summarized data is presented in Table 28.

Table 28. Food self-sufficiency

	Total samples				Common sample			Reference <sup>26</sup>
	Round 1		Round 2		# cases	Round 1	Round 2	
	# cases	Data	# cases	Data	# cases	Round 1	Round 2	
% who said they experienced months with not enough food	60	68%	83	31%	58	69%	31%	82%
Average # of months of food shortage among HHs experiencing at least 1 month food shortage	41	4,5	26	2,6	15	4,7	2,7	3,6

Very clearly, the food security situation of these families has greatly improved since the first data collection: more than half of the HHs who experienced hunger in 2013 did not do so in 2014-2015 (i.e. 25 out of 40 families experiencing hunger in 2013). And even among families who still experience hunger, the length of this "hungry period" is now on average two months shorter.

Only three cases of families who did not experience hunger in round 1 said they experienced hunger in round 2.

Cross-analysis was conducted with data on the agricultural profile of S&L members. What appears is that:

- Families who can access the market easily often experience shorter food shortage periods: 1.6 months on average vs. 3.6 months among other respondents<sup>27</sup>. This is in line with previous findings. Indeed, families with better access to the market seem to be slightly wealthier (even though no significant correlation was found with the PPI): they sell agricultural products more often, use their loans to improve their houses and borrow higher amounts.
- S&L members who are actively involved in either of the FA often experience longer food shortage periods than others: 1.1 months vs. 0.5 months among others<sup>28</sup>. This might be related to the fact that those S&L members are among the more agriculture oriented and slightly poorer members of these groups.

Note that the durations of food shortage reported here include cases when respondents reported 0 months of food shortage.

The food shortage data was also analyzed in the light of how S&L members use their loans. No correlation was found with agricultural uses of the loans but rather with more "critical purposes": health and emergencies. Indeed, S&L members who use their loans for emergencies or health expenses usually experience longer food-shortage periods than others. They are definitely among the more vulnerable S&L members.

<sup>26</sup> Reference data was taken from Sol's 2014 Adoption Survey which included a total of 702 respondents.

<sup>27</sup> Result of Anova test: Sig. = 0.03, p<.05702 respondents interviewed across the country.

<sup>28</sup> Result of Anova test: Sig. = 0.04, p<.05

Surprisingly, no correlation was found between the food shortage data and the PPI score.



Figure 9. The Treasurer of the Naroman S&L presents the profit sharing calculation

## 8. Conclusions

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### Impact on S&L member's households

It is important to remind here that the time between the two rounds of data collection for this survey was relatively short: about one and half years, starting from December 2013 until early 2015. Thus, impact on households can only be limited, but the trends that are exposed through this survey (for such matter as food sufficiency, investment, housing, ability to send the kids to the school, addressing emergency needs, etc.) are likely to be indicative of further changes in peoples' households.

Firstly, in terms of the HHs composition, data remained very stable: on average seven HH members, with about 95% of the families being able to send all the children aged 8 to 17 years old to school. Note that paying for educations fees was the most common use of the loan (60%).

Secondly, in terms of the families' assets, some positive evolutions were observed:

- Families' houses have improved: a significant proportion of respondents have upgraded their houses' walls, floors and roofs. Some are even planning to build new houses.
- The average number of animals owned has very slightly increased as well as the number of agricultural tools. For example in round 2, 58% of the sample own drums vs. 17% in round 1. On the other hand, the area households cultivate remained overall the same.
- Even though the reported number of TVs and radios seems to have decreased<sup>29</sup>, a significant proportion of respondents (32%) said they used part of their loans to acquire new items for their HHs, including bigger assets such as motorbikes.
- About 40% of the respondents used their loans for trading activities (mainly small retail shops managed by women). Clearly, this is a very positive achievement of the S&L groups.

On the other hand, the average Progress out of Poverty Index scores remained very stable between round 1 and 2 which suggests that there hasn't been yet a real impact on poverty reduction. Again, the short period of time between both data collections mainly explains this result.

Finally, the data on food shortage collected here revealed that the food security situation of these families has greatly improved between both data collections: the proportion of HHs who experienced hunger decreased from 69% to 31% and the average food shortage period went down from 4.7 months to 2.7 months on average<sup>30</sup>.

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<sup>29</sup> TVs, radios and CD readers are the only house assets for which updated data was collected in round 2.

<sup>30</sup> Calculated among HHs who experience at least one month of food shortage.

## Use of loans and agricultural profile of S&L members

As mentioned above, the most common use of the loan is to pay education fees, followed by trading, and improving the house or buying assets for the household.

The proportion of respondents who used loans for agricultural production remains quite low: 11% of all borrowers used their loan to buy livestock or agricultural inputs. It goes up to 16% when including borrowers who trade livestock in markets or produce and sell processed food. Note that on the other hand, data collected by the SoL Advisor directly in charge of this program reflected that 28% of the total amount borrowed starting from the groups' creation until September 2015 was spent for agricultural purposes<sup>31</sup>.

A number of factors explain this situation. Firstly, even though most S&L members said their families are involved in agriculture and sell part of their agricultural productions, the frequency of these sales is still very low (a few times per year). Also, the use of agricultural inputs is still very low, which doesn't justify borrowing money for such spending. And lastly, 80% of the respondents can't access the market easily. As a result, most S&L group members do not have a market-oriented agricultural production and probably do not see agriculture as an interesting income generating activity<sup>32</sup>.

However, the survey also showed that a small portion of the S&L members own more agricultural assets and are more market-oriented than others. For such farmers, being part of an S&L group is definitely an opportunity to develop further their agricultural production.

## Strengthening the link between S&L groups and agriculture

The two S&L groups studied in this survey are very successful as they draw an increasing number of members and therefore, are able to distribute significantly bigger loans over time. Moreover, such borrowing schemes are still very rare in the rural areas, which highlights the crying need for such S&L groups and explains the rising interest of new members, including those who aren't closely tied to an FA.

Quite often, these new members do not have the same agricultural background as the more active FA members: the head of household holds a salaried position (teacher, police, etc.), a few of them do not cultivate land and they also seem to be less market oriented (more difficult access to the market and less investments made).

If these new type of members contribute to foster the groups' growth and bring new development perspectives, it is also possible that this situation will have an impact on the way S&L groups function and organize meetings. For example, S&L meetings are often conducted separately from FA meetings, agricultural issues are rather rarely discussed<sup>33</sup>, and a part of the S&L members would rather join only S&L meetings than FA meetings.

Therefore, if these S&L groups are also seen as a way to contribute to agricultural development, it seems important to ensure that their activities still keep a close linkage to the

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<sup>31</sup> Tambun W., Mala J. and Ximenes A., "Savings and loans schemes. A way forward for agricultural development in rural Timor-Leste?", in Nesbitt H., Erskine W., da Cruz C.J. and Moorhead A. (eds) 2016. Food security in Timor-Leste through crop production. Proceedings of TimorAg2016, an international conference held in Dili, Timor-Leste, 13–15 April 2016. ACIAR Proceedings No. 146. Australian Centre for International Agricultural Research: Canberra. 187 pp.

<sup>32</sup> The challenges for investing in agriculture in Timor-Leste are also addressed in the paper mentioned in the footnote above.

<sup>33</sup> In Fitun Leste, the S&L members who are also SEOs do discuss agricultural issues, if there are developments to report. In Naroman, where the SEO does not take part in S&L activities, agricultural issues are rarely discussed.

FA. Some initiatives along these lines could be: the systematic inclusion of agricultural topics within the S&L group meetings, an active involvement of SEOs to promote the use of loans for agriculture, linking S&L groups to agricultural input suppliers, giving specific advantages for S&L members to access improved seeds or tools from the FA (shellers/grinders/screens, etc.), use of part of the S&L groups' benefits to fund some of the FA's expenses, etc.



Figure 10. A Naroman S&L member receives her share of the profit, June 2015

# Appendix I: Data cleaning

Section	Specific question	Problem encountered	Action taken	Number of cases this happened
HH composition	Number of HH members	Incoherent data on # of HH members	Corrected # after checking with enumerator	7 cases (HH ID 2, 6, 13, 32, 36, 45, 79)
	Number of additional HH members in round 2	Inconsistent with other information provided on HH composition	Corrected # after checking with enumerator	6 cases (HH ID 8, 28, 32, 44, 45, 48)
	Respondent's age	Incoherent age (3 years old)	Changed to 30 after checking with enumerator.	1 case (HH ID 18)
Agricultural profile of S&L members	Income earned from selling agricultural products	Monthly income generated seems very high (\$200)	Deleted this data because \$200 was in fact the monthly salary of the respondent	1 case (HH ID 47)
Joining S&L groups	Ranking of the benefits expected from joining S&L groups	Incoherent ranking	Rectified after checking with enumerator: rank 3 changed to 4	1 case (HH ID 62)
Receiving loans	Number of loans taken	One respondent said he received 6 loans (too much)	Changed to 1 loan after checking with enumerator.	1 case (HH ID 2)
	Ranking of use of loans	Incoherent ranking	Rectified data after checking with enumerator	6 cases (HH ID 5, 14, 15, 19, 28, 29)
	Requesting new loan	Respondent says he wants to request a new loan but then doesn't say for what in the following question.	Changed to "respondent does not plan to request for a loan" after checking with enumerator	1 case (HH ID 17)
Economic profile of HHs	Number of plots cultivated	Inconsistent data	Rectified: changed from 2 to 1 plot.	1 case (HH ID 73)
	Size of plots	Size of plots cultivated unusually large	Rectified after checking with enumerators:	11 cases (HH ID1, 11, 18, 23, 25, 31, 32, 65, 69, 71, 73)

Section	Specific question	Problem encountered	Action taken	Number of cases this happened
	# of TVs owned	Respondent owns 8 TVs (too big)	Checked with enumerator: 0 TVs owned.	2 cases (HH ID 23, 28)
	# of agricultural tools	Respondent owns 8 drying areas, oxcarts, etc. (too big)	Checked with enumerator: all are due to wrong clicking on the tab (replaced all 8 by 0)	2 cases (HH ID 3, 28)
	Buying new items	Respondent bought 150 cupboards	Replaced by 999 after checking with enumerator	1 case (HH ID 60)