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Results of Selection of Target Villages for Micro-Projects

2011/01/15 (Version.3)
JICA Project Team

1. Introduction

The Project for Community-Based Sustainable Natural Resource Management (CB-NRM) (hereinafter referred to as "the Project") plans to implement micro-projects in six (6) villages of the project area to promote the natural resource management at the community level as well as to develop the capacity of counterpart personnel for the implementation and management of the CB-NRM activities through on-the-job-training.

The six villages shall be selected from the priority sub-watersheds, namely the Noru sub-watershed in Laclo and the Bemos sub-watershed in Comoro, as stipulated in the Minutes of Meetings signed by JICA and MAF on December 09, 2009. To this end, the JICA Project Team (hereinafter referred to as "the Team") evaluated all villages located in the priority sub-watersheds on the basis of evaluation criteria that the Team set and provisionally selected the target villages as described below.

2. Villages Located in the Target Sub-watersheds

The priority sub-watersheds overlap their catchments with a total of 12 villages, five villages in Bemos and seven villages in Noru, respectively.

Target Sub-watershed	Villages located in the Sub-watersheds
Bemos Sub-watershed	Dare, Cotolau, Talitu, Tohumeta, Madabeno
Noru Sub-watershed	Faturasa, Fadabloco, Fahisoi (Liquidoe), Fahisoi (Remexio), Hautoho, Maumeta

3. Selection of Target Villages for the Micro Projects

Among the above-listed villages, JICA HQ decided to select Suco Tohumeta and Faturasa where former JICA Study had implemented the pilot projects as the target villages. Hence, the rest of the villages were evaluated to select four (4) villages or two (2) villages each from the priority sub-watersheds.

3.1 Basic Concepts to Selection of Target Villages

In order to select the target villages, the JICA Project Team set up evaluation criteria on the base of the following concepts:

- Maximize the effectiveness of CB-NRM activities at both village and sub-watershed levels;
- Remove any foreseeable problems prior to starting the project activities on a village level;
- Ensure the sustainability of the CB-NRM activities even in the post-project period; and
- Maintain and enhance, when feasible, the efficiency of the project activities.

3.2 Criteria for Evaluation of Target Villages

In accordance with the basic concepts mentioned in Section 3.1, the Team set the following criteria for the evaluation of the potential villages.

Criteria	Indicator
1. Geographical contiguity	A village adjacent to Suco Tohumeta and Faturasa is prioritized. The connectivity of three villages in the priority sub-watershed is also prioritized, so that the target villages in each sub-watershed cab be contiguous.
2. Manageability of micro projects	There should be no difficulty expected in managing/operating a micro project in a village. Hence, a village which has an internal conflict between/among communities or any physical disadvantages should be given less priority.
3. Acceptability of the projects by the communities	The Team judged that local communities in a village that has several opportunities to earn cash income will not be interested in CB-NRM. Hence, the more opportunities to generate income a village has, the less priority a village is given.
4. Accessibility to the micro-project area	A village should be accessible from Dili or Aileu through the year.

3.3 Evaluation of the Target Villages

The results of the evaluation of the potential villages are as follows:

a. Bemos Sub-watershed

Village	Results of Evaluation
1. Dare	- The village is contiguous to Suco Tohumeta. - The solidarity of the village seems not so strong. - The village seems to have rather various opportunities to earn cash income, such as tourism. - The village is accessible from Dili throughout the year.
2. Madabeno	- The village is contiguous to Suco Tohumeta. - There seems no concern foreseen at present. - Agriculture and forest resources (including NTFP) are still major sources of income for local communities in the village. - The village is accessible from Dili and Aileu throughout the year.
2. Cotolau	- The village is located in proximity to Suco Tohumeta. - The Bemos river runs through in the middle of the village, so that it might not be easy to operate the project activities at aldeia level simultaneously. - The part of the village next to Dare might have rather various opportunities to generate income like Dare. - The village is accessible from Dili and Aileu throughout the year.
4. Talitu	- The village is located in the outer edge of the sub-watershed. - There seems no concern foreseen at present. - Agriculture and forest resources (including NTFP) seem to be still major sources of income for local communities in the village. - The village is accessible from Dili and Aileu throughout the year.

The Team judges that Suco Madabeno and Talitu be prioritized and selected as the target villages because their acceptability and manageability seem to be rather higher than those of Suco Dare and Cotulao. Although Suco Talitu is not contiguous to neither Suco Tohumeta nor Suco Madabeno, Suco Talito is considered important from the view point of watershed management of the Bemos River since it is located in the upper part of the sub-watershed.

b. Noru Sub-watershed

Village	Results of Evaluation
1. Fadabloco	- The village is contiguous to Suco Faturasa. - There seems no concern foreseen at present. - Agriculture and NTFP are major source of income in the village.

	- The village is accessible from Dili and Aileu throughout the year.
2. Fahisoi (Remexio)	- The village is located bit farm from Suco Faurasa, but next to Suco Fadabloco. - The other conditions are the same as Fadabloco.
3. Fahisoi (Liquidoe)	- The village is located bit far from Faturasa. - The other conditions are the same as Fadabloco.
4. Hautoho	- The village is located in proximity to Suco Faturasa and next to Suco Fadabloco. - The other conditions are the same as Fadabloco.
5. Maumeta	- The village is located bit far from Faturasa. - The other conditions are the same as Fadabloco.

The Team evaluates that the five villages have a similar nature except the geographic contiguity, and therefore, judges that Suco Fadabloco and Suco Hautoh be prioritized because they are located in proximity to Suco Faturasa.

4. Proposed Target Villages

As described in the former section, the Team proposes that the following sucos be selected as the target villages for participatory land use planning and micro projects of the Project.

Bemos Sub-watershed : Suco Tohuemta, Suco Talitu and Suco Madabeno

Noru Sub-watershed: Suco Faturasa, Suco Fadabloco and Suco Hautoho

Japan International Cooperation Agency (JICA)

Ministry of Agriculture and Fisheries (MAF)
Government of the Democratic Republic of Timor-Leste

The Project for Community-Based Sustainable Natural Resource Management

Village and Resource Profiles of the Target Villages (Sucos Madabeno, Talitu, Tohumeta, Faturasa, Fadabloco and Hautoho)

November 2013

NIPPON KOEI CO., LTD.

Village and Resource Profiles of the Target Villages
(Sucos Madabeno, Talitu, Tohumeta, Faturasa, Fadabloco and Hautoho)

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In order to grasp the socio-economic condition as well as use of natural resources in the six (6) target villages of the implementation of the micro programs, namely, Sucos Madabeno, Talitu, Tohumeta, Faturasa, Fadabloco and Hautoho, the Baseline Survey and Participatory Rural Appraisal (PRA) was conducted in 2011. The survey revealed profiles of village and resource use as described in the following sections.

2 Village Profiles

The results of Baseline Survey presented general features of the target villages, which is shown in **Appendix-1** and summarized in the fact sheets as given in **Table 1**. This chapter highlights its results as shown below.

2.1 General Features of the Households

The following table shows major features of the households (HHs) in the target villages.

Major features of the households in the target villages

Items	Bemos sub-watershed			Noru sub-watershed		
	Madabeno	**Talitu**	**Tohumeta**	**Faturasa**	**Fadabloco**	**Hautoho**
a. Language	Tetun and Mambae	Tetun and Mambae	Tetun and Mambae	Tetun and Mambae, some Tetun only	Tetun and Mambae	Tetun and Mambae
b. Settlement years	Before 1975/1975-1999	1975-1979/ Before 1975	Before 1975/1999-2002	Before 1975/1975-1999	Before 1975/ 1975-1999	Before 1975/ 1975-1999
c. No. of HH members	7 .0 persons	7.1 persons	7.4 persons	7.1 persons	7.3 persons	6.9 persons
d. Average age of HH members	18.5 years old	21.7 years old	17.7 years old	19.7 years old	28.4 years old	21.0 years old
e. No. of HH members under working age (14-65 yrs)	5.7 person	5.5 person	4.0 person	3.0 person	4.6 person	3.8 persons
f. Features of head of HH	- Occupation: farmer - Education: No graduated from primary school - Organization: no member	- Occupation: farmer - Education: No graduated from primary school - Organization: no member	- Occupation: farmer - Education: No graduated from primary school - Organization: no member	- Occupation: farmer - Education: No graduated from primary school - Organization: farmers group	- Occupation: farmer - Education: No graduated from primary school - Organization: no member	- Occupation: farmer - Education: No graduated from primary school - Organization: no member
g. Other HH members	- Occupation: student (42.6 %), farmer (19.5%) - Education: No graduated from primary school (37.3%), active in primary school (29.0%), - Organization: no member (94.4%)	- Occupation: student (50.8%), farmer (16.4%) - Education: no graduated from primary school (31.1 %), active in primary school (27.9%) - Organization: no members (81.7%)	- Occupation: student (45.3%), farmer (22.9%) - Education: no graduated from primary school (35.2 %), active in primary school (31.5%) - Organization: no members (98.7%)	- Occupation: student (38.8%), farmer (30.9%) - Education: no graduated from primary school (52.5 %), primary school graduated (30.9%) - Organization: no members (81.7%)	- Occupation: student (45.7%), farmer (38.0%) - Education: no graduated from primary school (47.3 %), primary school graduated (29.4%) - Organization: no members (94.4%)	- Occupation: student (46.6%), farmer (31.3%) - Education: no graduated from primary school (48.9 %), primary school graduated (28.4%) - Organization: no members (95.4%)
h. Absences* (% to total HH)	2.5 %	2.1 %	14.8 %	20.1 %	22.3 %	8.5 %

Note*: Absence rate indicates the portion of the members living in other place more than 3 months per year.

Most of the HHs in the target villages is composed of around seven (7) members including 3-5 members under working age and settled in the respective village in the Portuguese or Indonesian occupation era.

The villages located in Noru sub-watershed, namely, Faturasa, Fadabloco and Hautoho show higher engagement of household members in farming activities than those in Bemos sub-watershed, i.e., Madabeno, Talitu and Tohumeta, possibly due to the limitation of other livelihood options. It also may relate to the relatively high absence rate of household members of Faturasa and Fadabloco, who could go outside the villages to seek the working opportunities.

2.2 Condition for Basic Human Needs

Conditions of the basic human needs in the target villages are summarized as follows.

Major features of basic human needs in the target villages

Items	Bemos sub-watershed			Noru sub-watershed		
	Madabeno	**Talitu**	**Tohumeta**	**Faturasa**	**Fadabloco**	**Hautoho**
a. Water Sources and accessibility (time to go)	- Dry season (D): Piped gravity water (27 min) - Rainy season (R): Piped gravity water (14 min)	- Dry season (D): Piped gravity water and spring (14 min) - Rainy season (R): Piped gravity water and spring (10 min)	- Dry season (D): Piped gravity water (6 min) - Rainy season (R): Piped gravity water (6 min)	- Dry season (D): Spring s (22 min) - Rainy season (R): Springs (20 min)	- Dry season (D): Spring s and wells (53 min) - Rainy season (R):Springs and wells (39 min)	- Dry season (D): Piped gravity water, springs and wells (34min) - Rainy season (R):Piped gravity water, springs and wells (28 min)
b. Water sufficiency	D: Sufficient (78%), R: Sufficient (65%)	D: Sufficient (80%) R: Sufficient (72%)	D: Sufficient (88%) R: Sufficient (92%)	D: Sufficient (70%), R: Sufficient (78%)	D: Sufficient (52%), R: Sufficient (83%)	D: Sufficient (58%), R: Sufficient (78%)
c. Water quality	D: Clean (95%) R: Clean (65%)	D: Clean (93%) R: Clean (71%)	D: Clean (100%) R: Clean (66%)	D: Clean (95%) R: Clean (85%)	D: Clean (82%) R: Clean (73%)	D: Clean (88%) R: Clean (70%)
d. Food shortage Period	Oct-Feb	Oct-Feb	Dec-Feb	Nov-Feb	Oct-Feb	Nov-Jan
e. Frequency of meals (times/day)	Normal (N): 2.9 Food shortage (FS): 2.1	Normal (N): 2.8 Food shortage (FS): 1.9	Normal (N): 3.0 Food shortage (FS): 2.2	Normal (N): 2.9 Food shortage (FS): 1.9	Normal (N): 2.9 Food shortage (FS): 2.0	Normal (N): 3.0 Food shortage (FS): 2.3
f. Frequency of consumption of major meals (times/day)	(N→FS) Rice: 2.7→1.5 Corn:0.9→0.6 Beans:0.5→0.3 Cassava: 0.8→0.8 Kontas: 0.6→0.6 Banana:0.6→0.6	(N→FS) Rice: 2.2→1.2 Corn:0.8→0.4 Beans:0.6→0.4 Cassava:0.7→0.7 Kontas:0.6→0.6 Banana:0.6→0.5	(N→FS) Rice: 2.4→1.5 Corn:0.8→0.6 Beans:0.4→0.3 Cassava: 0.5→0.5 Kontas: 0.4→0.4 Banana:0.5→0.4	(N→FS) Rice: 1.8→1.0 Corn:0.8→0.7 Beans:0.7→0.5 Cassava: 0.6→0.5 Kontas:0.6→0.5 Banana:0.6→0.6	(N→FS) Rice: 1.8→1.0 Corn:1.0→0.7 Beans:0.7→0.5 Cassava: 1.0→0.8 Kontas: 0.7→0.6 Banana:0.8→0.7	(N→FS) Rice: 2.3→2.0 Corn:1.1→0.8 Beans:0.6→0.4 Cassava: 0.8→0.8 Kontas: 0.4→0.4 Banana:1.4→1.1
g. Major disease	- Children: Malaria and cold - Adults: Cold, malaria and diarrhea	- Children: Cold, malaria and diarrhea - Adults: Malaria, cold and diarrhea	- Children: Cold and malaria - Adults: Cold and malaria	- Children: Cold, malaria and diarrhea - Adults: Cold and malaria	- Children: Cold, malaria and diarrhea - Adults: Cold and malaria	- Children: Malaria and cold - Adults: Malaria and cold

The target villages except Faturasa and Fadabloco have accessibility to the piped gravity water, while natural spring is the most important water sources in the aforementioned two villages. Besides, HHs in Fadabloco and Hautoho are likely to have difficulties in securing water in terms of accessibility to the water sources and its sufficiency especially in the dry seasons. Besides, the water quality tends to be lower in the rainy seasons in all the villages.

With regards to the food availability, the food shortage season starts between October and December and ends in January or February in the next year. Among major food items, rice, corn and beans tend to decline its frequency of consumption in food shortage seasons while the root crops such as cassava and kontas, and banana shows rather stable availability throughout a year. Generally, the villages which are relatively close to Dili show higher frequency of consumption of rice, possibly due to more opportunity of income generating to afford to purchase it.

As for health condition, cold, malaria and diarrhea are major diseases which infect both adults and children in the villages.

2.3 Land Use

Following table shows estimation of the current use of the land owned by HHs in the target villages.

Current use of the land owned and used by HH in the target villages

Items	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
	Holding area/ HH	Own rate*[1]	Holding area/ HH	Own rate*[1]	Holding area/ HH	Own rate*[1]	Holding area/ HH	Own rate*[1]	Holding area/ HH	Own rate*[1]	Holding area/ HH	Own rate*[1]
Cultivated												
Home garden	0.1 ha	100.0 %	0.1 ha	93.3 %	0.3 ha	100.0 %	0.3 ha	95.0 %	0.02ha	78.3 %	0.01ha	96.7 %
Fixed Upland w/o soil conservation	0.5 ha	65.0%	1.2 ha	75.0 %	0.5 ha	45.0 %	1.5 ha	83.3 %	1.7 ha	91.7 %	0.7 ha	61.7 %
Fixed Upland with soil conservation	0.2 ha	3.3%	0.0 ha	1.7 %	0.0 ha	1.7 %	0.5 ha	25.0 %	0.2 ha	15.0 %	0.2 ha	15.0 %
Coffee Plantation	1.4 ha	83.3%	1.7 ha	91.7 %	0.5 ha	40.0 %	0.7 ha	71.7 %	1.5 ha	86.7 %	1.4 ha	83.3 %
Shifting Cultivation	0.4 ha	73.3%	1.5 ha	66.7 %	1.1 ha	86.7 %	0.03 ha	1.7 %	n/a*[2]	-	n/a*[2]	-
Un-cultivated												
Fallow area for shifting	1.2 ha	68.3%	1.0 ha	63.3 %	1.8 ha	65.0 %	0.01 ha	1.7 %	0.3 ha	16.7 %	0.01 ha	1.7 %
Forest	1.2 ha	28.3%	0.2 ha	28.3 %	0.2 ha	20.0 %	1.1 ha	55.0 %	0.5 ha	26.7 %	0.3 ha	20.0 %
Grazing area	0.8 ha	20.0%	0.1 ha	28.3 %	0.3 ha	21.7 %	1.7 ha	81.7 %	0.8 ha	45.0 %	0.7 ha	41.7 %
Total	**5.8 ha**		**5.8ha**		**4.4 ha**		**5.9 ha**		**5.1 ha**		**3.3 ha**	

Note*: 1: Own rate indicates the proportion of the households who own the land of relevant land use.
2: data not available.

The total size of the land owned by household in the target villages ranges from around 3 to 6 ha. Almost all of households some plots of home garden with 0.01 ha to 0.3 ha each in addition to fixed upland farming. Application of soil conservation measures to the upland farms is likely to be limited in most of the villages, especially in those in Bemos sub-watershed.

As for coffee plantation, most of the households in the villages except Tohumeta has plots of plantation with the area around 0.7 to1.7 ha each.

In general, around one-fourth of HHs in the target villages own the forest with the area of 0.3 to 1.2 ha, while half of HHs in Faturasa own forest of 1.1 ha.

Besides, communal area is found only in Fadabloco among the target villages and currently used by 1.7 % of HHs in Fadabloco for the purpose of vegetable farming. Every time when community intends to use the area, s/he needs to ask the church for the permission on land use.

2.4 Shifting Cultivation Practices

Major features of shifting cultivation practice in the target villages are shown in the following table.

Major features of shifting cultivation practices in the target villages

Items	Bemos sub-watershed						Noru sub-watershed	
	Madabeno		Talitu		Tohumeta		Faturasa	
Advantages of Shifting cultivation	1st: High production 2nd:Stable production		1st: High production 2nd:Stable production		1st: High production 2nd:Stable production		1st: High production 2nd:Stable production	
Disadvantages	1st:Landslides 2nd :Expansion of forest fires		1st: No idea 2nd:Less inputs		1st: Deforestation 2nd:Landslides		1st: Soil erosion 2nd:Expansion of forest fires	
Period of using area before shifting	1.8 years		1.9 years		1.9 years		2 years	
Use of the same site after fallowing the area	Yes (62%)		Yes (79%)		Yes (65%)		No (100 %)	
Sign for reusing the area/ necessary period to show the sign	Cassavas left in the farm grow well/. 2.2 years		Weed and trees grow enough/ 4.3 years		Weed and trees grow enough/ 2.6 years		n/a*	
Constraints in SC	Limited farm tools		Limited labor		Limited labor		Limited labor	
Shifting Cultivation (SC)	**Ratio**	**Reason**	**Ratio**	**Reason**	**Ratio**	**Reason**	**Ratio**	**Reason**
Willingness to continue SC	Yes (67 %)	High production	Yes (60 %)	Good production	Yes (76 %)	Good production	Yes (100%)	Increase production
Willingness to expand SC	No (65 %)	Lack of land	No (67 %)	Lack of labor	No (75%)	Lack of labor	No (100%)	Lack of labor
Willingness to expand fixed farming	No (88 %)	Lack of labor	No (93 %)	Lack of labor	No (70 %)	Lack of labor	No (100%)	Lack of labor

Note: Data was not available for Fadabloco and Hautoho.

*n/a: data is not available

Generally, the HHs of target villages except Fadabloco and Hautoho where the data was not available use the area of shifting cultivation for about two (2) years before moving to the other places. After 2-4 years of its abandonment, they return to the same plot after confirmation of possible recovery of the soil fertility based on the growth of plants in the area.

Most of HHs conducting shifting cultivation considers its advantage as high and stable crop production, which could encourage them to continue the practices. However, few HHs shows their willingness to expand the area for shifting cultivation due to limitation of land and labor. Lack of labor is also one of major constraints for expanding fixed farming area in their own land.

2.5 Livelihood and Income/Expenditure Level

2.5.1 Income and Expenditure Level

Following table shows the status of annual income and expenditure of HHs in the target villages.

Average income and expenditure in the target villages

Income	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%
Agriculture	306.8	36%	348.8	28%	197.5	10%	195.4	24%	446.8	47%	294.3	39%
Livestock	17.5	2%	46.6	4%	172.9	9%	292.7	35%	100.4	11%	170.8	22%
Firewood & timber	13.1	2%	6.9	1%	0	0%	0	0%	0	0%	0	0%
NTFP	1.3	0%	34.8	3%	16.8	1%	36.9	4%	3.4	0%	1.1	0%

Income	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%	Amount (USD/ year)	%
Others	508.4	60%	801.5	65%	1,517.9	80%	304.0	37%	403.0	42%	294.0	39%
Total	845.8	100%	1,238.6	100%	1,905.2	100 %	829.0	100 %	953.5	100%	760.3	100%
Expen-diture	**Amount (USD /year)**	**%**	**Amount (USD /year)**	**%**	**Amount (USD /year)**	**%**	**Amount (USD /year)**	**%**	**Amount (USD /year)**	**%**	**Amount (USD /year)**	**%**
Foods	218.5	59%	352.1	63%	469.2	63%	246.3	52%	227.5	40%	179.6	43%
Health	16.1	4%	9.4	2%	8.6	1%	4.9	1%	5.6	1%	13.4	3%
Education	24.0	7%	54.0	10%	83.7	11%	51.5	11%	78.0	14%	32.5	8%
Clothes	66.8	18%	77.0	14%	88.0	12%	105.3	22%	109.3	19%	92.4	22%
Firewood/ kerosene/ electricity	43.5	12%	64.6	12%	57.5	8%	22.5	5%	21.2	4%	8.9	2%
Social activities	n/a*	-	n/a*	-	34.9	5%	46.2	10%	124.0	22%	12.4	3%
Total	368.9	100%	557.1	100%	741.9	100 %	476.7	100 %	565.6	100%	78.6	19%

Note* n/a: data not available

Annual income of HHs in the target villages ranges between 760 and 1,900 USD and generally those in Bemos sub-watershed is higher than Noru sub-watershed, which may be resulted from accessibility to Dili to have more opportunity of income generating.
In general, the target villages of Noru sub-watershed show more dependency on agriculture and livestock produce as source of income comparing to those of Bemos sub-watershed.
Meanwhile, annual expenditure of HHs is from 417 to 741 USD, which is mainly composed of foods, clothes and education.

2.5.2 Agriculture

Major features of the crops produced in the target villages are summarized below.

Major features of agricultural activities in the target villages

Aspect	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
Crops	**Ratio of HHs produce**	**Yield/ Gross Cropped area**	**Ratio of HHs produce**	**Yield/ Gross Cropped area**	**Ratio of HHs produce**	**Yield/ Gross Cropped area**	**Ratio of HHs produce**	**Yield/ Gross Cropped area**	**Ratio of HHs produce**	**Yield/ Gross Cropped area**	**Ratio of HHs produce**	**Yield/ Gross Cropped area**
Maize	95%	0.4ton/ha 0.5 ha	65 %	0.2ton/ha 0.5 ha	97 %	0.1ton/ha 0.8 ha	100 %	0.5ton/ha 1.0 ha	100 %	0.5ton/ ha 1.0 ha	98 %	0.5ton/ ha 1.0 ha
Cassava	85%	0.3ton/ha 0.9 ha	82 %	0.4ton/ha 0.6 ha	97 %	0.4ton/ha 0.8 ha	100 %	0.5ton/ha 1.0 ha	99 %	0.4ton. ha 1.0 ha	100 %	0.6ton/ ha 1.1 ha
Sweet potato	88%	0.3ton/ha 0.5 ha	62 %	0.3ton/ha 0.5 ha	90 %	0.1ton/ha 0.8 ha	95 %	0.4ton/ha 1.0 ha	95 %	0.3ton/ ha 0.9 ha	93 %	0.5 ton/ha 1.1 ha
Beans	10%	0.3ton/ha 0.1 ha	5 %	0.1ton/ha 0.1 ha	8 %	0.1 ton/ha 0.2 ha	n/a	n/a	30 %	0.1ton/ ha 0.3 ha	32 %	0.1ton/ ha 0.4 ha
Others	Taro 35%	0.2ton/ha 0.2 ha	Taro 47 %	0.4ton/ha 0.2 ha	Leaf vegetables 28 %	0.2 ton/ha 0.2 ha	Groundnuts: 70 %	0.1ton/ha 1.0 ha	Groundnuts: 23 %	37kg/ha 0.2 ha	Groundnuts: 35 %	0.3ton/ ha 0.2 ha
Coffee (Arabica)	78%	0.4ton/ha 0.6 ha	93 %	0.2 ton/ha 1.3 ha	36 %	0.1ton/ha 0.3 ha	70 %	0.2ton/ha 0.6 ha	85 %	0.2ton/ ha 0.9 ha	83 %	0.2ton/ ha 0.9 ha

Aspect	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
Crops	**Ratio of HHs produce**	**Product -ion/HH**	**Ratio of HHs produce**	**Product - ion/HH**	**Ratio of HHs produce**	**Produc -tion/ HH**	**Ratio of HHs produce**	**Product-ion/ HH**	**Ratio of HHs produc e**	**Produc -tion/ HH**	**Ratio of HHs produce**	**Produc -tion/ HH**
Fruits(Citrus, Mango, Banana , Others)	C: 27% M: 78% B: 77%	C: 20 kg M:52 kg B: 10 kg	C: 17% M: 58% B: 58% O (clove) : 20 %	C: 6 kg M: 9 kg B: 26 kg O :17 kg	C: 23% M: 85% B: 87% O(coconuts) : 65 %	C: 7 kg M:152 kg B: 189 kg O : 15 kg	C: 52% M: 90% B: 98%	C: 76 kg M:314 kg B: 50 kg	C: 80% M: 93% B: 95%	C: 0.1ton M:0.3ton B: 0.1ton	C: 95% M: 92% B: 83%	C:0.2ton M:0.1ton B: 61kg
Others												
Seeds	Type : Local Availability : Sufficient-still available		Type : Local Availability : Sufficient-still available		Type : Local Availability : Sufficient-Lack of seeds (esp. maize and peanuts)		Type : Local and some improve (maize) Availability Sufficient-Lack of seeds (esp. cassava and sweet potato)		Type : Local Availaiblity : Sufficient-still available		Type : Local Availability : Sufficient-still available	
Fertilizers	No fertilizers		No fertilizers		Some use organic fertilizer.		Most use organic fertlizer (grass, leaves and animal dung)		Most use organic fertilizer		Some use organic fertilizer	
Crop damage	Animal, pest, rain and wind		Animal, rain, pest and wind		Animal, pest, rain and wind		Pest, animal, drought, rain and wind		Pest, rain, wind, animal and drought		Pest, rain, animal and wind	
Post-harvesting	Put above the fire (maize)		Put above the fire (maize)		Put above the fire (maize) and in jerry can (vegetable)		Put above the fire (maize) and in farm (cassava and sweet potato)		Put above the fire (maize) and in farm (cassava and sweet potato)		Put above the fire (maize) and in farm (cassava and sweet potato)	
Marketing	Food crops : Almost no sale Coffee : Parchment for CCT Fruits : Sale in the community/Dili/Sub-district bazzar		Food crops :Some sell at Dili or Sub-district bazzar Coffee : Parchment for CCT Fruits : Sale inDili/Sub-district bazzar Clove : Sale to tradersf from Dili		Food crops : Some sell in Dili Coffee : Parchment for CCT/sold in Dili Fruits : Sale in Dili/Sub-district bazzar Leaf vegetables : Sale in Dili		Food crops : Some sell in sub-district bazzar/Dili or to the traders from Dili Coffee : Parchment for CCT/sold in sub-district bazzar Fruits : Sale in Dili/sub-district bazzar (in case of citrus, sale to traders from Dili)		Food crops : Some sell in Dili/sub-district bazzar Coffee : Parchment for CCT/sold in Dili Fruits : Sale in Dili/sub-district bazzar/community		Food crops : Some sell in Dili/sub-district bazzar Coffee : Parchment sold to CCT/in Dili Fruits : Sale in Dili/sub-district bazzar (in case of orange, sale to traders from Dili)	

Note: n/a: data not available

Besides Talitu, almost all the households in the target villages produce maize, cassava and sweet potato. Groundnut is also major crop in the target villages of Noru-watershed as well as Taro in Madabeno and Talitu. In general, production of these crops is low due to the damages caused by animal, pest, rain, drought and wind. In addition, leaf vegetables are also produced by one-fourth of households in Tohumeta.

Almost all the households are using local variety of seeds for cropping. Some of households are applying vegetative materials, such as grass and leaves, and animal dung to improve soil condition at the farm.

The techniques used for post-harvesting in the target villages are still primitive, such as putting seeds of maize above the fire in the houses and leaving runners of cassava and sweet potato in the farm, which may affect the quality of seeds and result in its lost during post-harvesting period.

As for the marketing, selling farm commodities is limited except for coffee, leaf vegetables, clove and fruits. Coffee is sold mainly to CCT.

2.5.3 Livestock Management

The following table summarized major features of raising livestock in the target villages.

Major and average features of livestock in the target villages

	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
Animals	**% of HHs owning**	**No. of Head**	**% of HHs owning**	**No. of Head**	**% of HHs owning**	**No. of Head**	**% of HHs owning**	**No. of Head**	**% of HHs owning**	**No. of Head**	**% of HHs owning**	**No. of Head**
Cattle	40 %	0.7	15 %	0.6	25 %	0.8	45 %	1.7	33 %	1.1	22 %	0.9
Buffalo	3 %	0.2	15 %	0.3	10 %	0.2	35 %	1.2	10 %	0.2	12 %	0.2
Goat	60 %	2.3	47 %	1.4	55 %	2.5	70 %	3.4	73 %	2.8	52 %	2.7
Horse	17 %	0.2	7 %	0.1	12 %	0.2	52 %	1.2	37 %	0.6	38 %	0.7
Pig	70 %	1.7	77 %	2.5	88 %	2.9	100 %	2.9	95 %	3.1	93 %	2.6
Chicken	78 %	3.7	78 %	4.6	92 %	9.5	95 %	9.5	90 %	8.3	77 %	6.1
Grazing	**Place**	**Time to go**	**Place**	**Time to go**	**Place**	**Time to go**	**Place**	**Time to go**	**Place**	**Time to go**	**Place**	**Time to go**
Cattle	Almost half kept in stall and some doing grazing in forest/grass land	50 min	Forest/Grass land/Fallow land	50 min	Almost half kept in stall and others doing grazing in forest/grass land	30 min	One-third kept in stall and others doing grazing in forest and grassland	1.7 hrs	Forest/grass land/ fallow land	1.5 hrs	Half kept in stall and others doing grazing in forest	1.1 hrs
Buffalo	Half kept in stall and some conduct grazing in fallow area	40 min	Forest/Grass land	40 min	One-third kept in stall and others doing grazing in grass land and forest	50 min	Forest/Grassland	2.8 hrs	Grass land/fallow land/forest	1.1 hrs	Forest/grass land/fallo ff land	50 min
Goat	Half kept in stall and some conduct grazing in forest	40 min	One-third kept in stall and others conduct grazing in grass land/forest	30 min	Almost half kept in stall and others doing grazing in grassland and forest	30 min	One-third kept in stall and others doing grazing in grass land and forest	1.4 hrs	Around half kept in stall and others doing grazing in grass land	50 min	Half kept in stall and others doing grazing in forest	40 min
Horse	Almost half kept in stall and some conduct grazing in forest	30 min	Half kept in stall and others conduct free grazing in forest/grass land	40 min	Most kept in stall and others doing grazing in grass land	30 min	About half kept in stall and others doing grazing in forest	1.8 hrs	One-third kept in stall and others doing grazing in grass land	1.2 hrs	Half kept in stall and others doing grazing in forest	50 min
Consumption (eating and loss)	Almost no consumption and loss except the loss of chicken due to disease and few consumption of goat, pig and chicken		Some lost chicken, pig and goat because of robbery and sickness. Some chicken, goat, pig and cattle are also consumed and sold.		Some lost, consumed and sold chicken, cattle, goat and pig. Major causes of the reason of lost are diseases, disaster and robbery.		Some lost, consumed and sold chicken, buffalo, goat, horse, pig and chicken. Major causes of losses are diseases and robbery.		Some lost, consumed and sold cattle, goat, pig and chicken.		Some lost, consumed and sold cattle, goat, pig and chicken.	
Marketing	Few sale cattle and goat in Dili		Some sale cattle and few sales goat, pig and chihcken.		Half of households sale cattle and some sale goat, buffalo and chicken		Half of HHs sale cattle and chicken, while some sale buffalo, goat, horse and pig		Around half sale chicken while some also sale cattle, goat, horse and pig,		Around half sale cattle while some sale also buffalo, goat, horse, pig and chickens	

The number of households who own livestock as well as the number of livestock owned is higher in the target villages located in Noru sub-watershed, especially Faturasa than those in Bemos sub-watershed. In short, livestock are considered more important in such villages.

With regard to the mode of animal rearing, some HHs control animals, such as cattle, goat and horse while others practice grazing animals in the forest and grass land.

2.5.4 Firewood, Timber and NTFPs

Major features of collection of firewood and timber in the target villages are summarized below.

Major features of collection of firewood and timbers in the target villages

Aspect	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
	Fire wood	Timber	Fire wood	Timber	Fire wood	Timber	Fire wood	Timber	Fire wood	Timbers	Fire wood	Timber
% of HHs collecting	100%	47%	100 %	12%	100 %	7 %	100%	95%	100%	98%	100 %	100 %
Species	Eucalyptus Urophylla (Ai ru)& Falcata	Ai ru	Ai ru & Falcata	Ai ru	Ai ru & Falcata	Ai ru	Eucalyptus Alba(Ai bubur) & Ai ru		Ai bubur & Falcata	Ai bubur, Ai ru & Falcata	Ai bubur &Casuarina (Ai kakeu)	Ai bubur, Ai ru& Ai kakeu
Time to go	1 hr	1.5 hrs	1 hr	1.5 hrs	45 min	38 min	1 hr	1.5 hrs	1.3 hrs	1.8 hrs	1 hr	1.2 hrs
Place	Own land		Land owned by other villagers	Own land	Own land		Land owned by other villagers /Own land		Land owned by other villagers /Own land		Own land	
Frequency of collection	4 times/ week	2 times /month	4 times/ week	2 times/ month	2 times/ week	4 times/month	3 times/ week	5 times/ month	3 times/ week	7 times/ month	3 times/ week	4 times/month
No. of bundles or poles /visit	2.5 bundles /visit	n/a*	2.5 bundles /visit	10 poles/ visit (max)	2.3 bundles/visit	n/a	3.6 bundles /visit	5.8 poles /visit	2.9 bundles/visit	5.8 poles /visit	4.4 bundles /visit	7.4 poles/visit
Marketing	No sale	Almost no sale	Almost no sale	No sale	No sale		No sale		No sale		No sale	

Note* n/a: data not available

Collection of firewood for consumption is a common practice in the households in the target villages. Likewise, timber harvesting for the construction of house has been practiced almost all households in the target villages of Noru sub-watershed, while such practice is rather limited in those of Bemos sub-watershed.

Major species used as firewood and timber are Eucalyptus Urophilla (Ai ru in Tetun), Eucalyptus Alba (Ai bubur), Falcata and Casuarina (Ai kakeu).

The following table also clarifies major features of collection of NTFP in the target villages.

Major features of collection of NTFPs in target villages

Aspect	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu		Tohumeta		Faturasa		Fadabloco		Hautoho	
	Bamboo	Honey	Tua Mutin*[2]	Bamboo	Tua Mutin	Nil	Bamboo	Honey	Bamboo	Honey	Bamboo	Honey
% of HHs collecting	13%	2%	17%	10%	5 %	Nil	70 %	67 %	78 %	13 %	32 %	5 %
Time to reach the site	5.6 hrs	4 hrs	1.4 hrs	1.6 hrs	1.8 hrs	Nil	1.6 hrs	2.1 hrs	2.1 hrs	2.8 hrs	2.1 hrs	2.8 hrs
Place	Own land	Own land	Own land	Own land	Other suco members	Nil	Other suco members	Own/other suco members	Own/other suco members		Own land	

Aspect	Bemos sub-watershed						Noru sub-watershed					
	Madabeno		Talitu				Madabeno		Talitu			
	Bamboo	Honey	Tua Mutin*[2]	Bamboo	Tua Mutin	Nil	Bamboo	Honey	Bamboo	Honey	Bamboo	Honey
Production sold/HH	1.3 kg	0 kg	19 kg	0 kg	7.2 kg	Nil	75 kg	29 kg	0kg	3.5 kg	0.9 kg	0 kg
Marketing	Some sell bamboo in Dili		All HHs which produce tua mutin sell it mainly in Dili.		All HHs which produce tua mutin sell it mainly in Dili		Few HHs sell Bamboo in Dili Most of HHs which produce honey sell it mainly in Dili		Most HHs which produce honey sell it mainly in Dili		Some HH who produce bamboo sell them in Dili	

Note* 1:data not available, 2: Tua Mutin: traditional palm wine

In general, bamboo, honey and tua mutin are main NTFPs produced in the target villages. The target villages in Bemos sub-watershed, especially Tohumeta, are likely to have less practice in NTFP production, comparing to those in Noru sub-watershed. It is possibly due to limitation of available natural resources in the locality or more opportunity of income generating because of its accessibility to Dili.

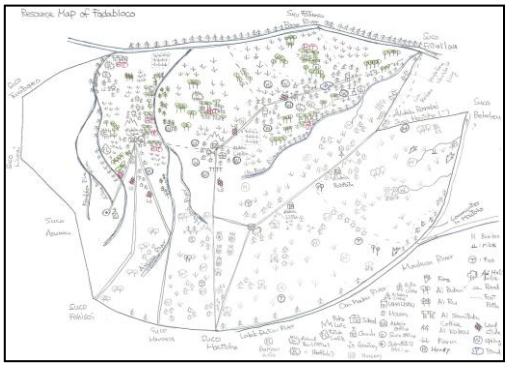
3 Resource Use Profile

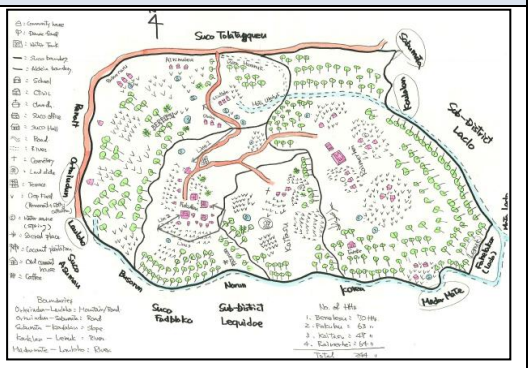
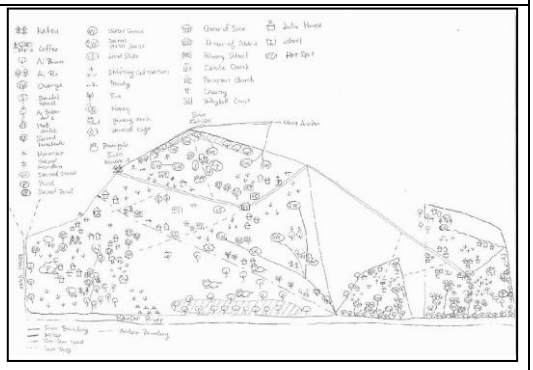
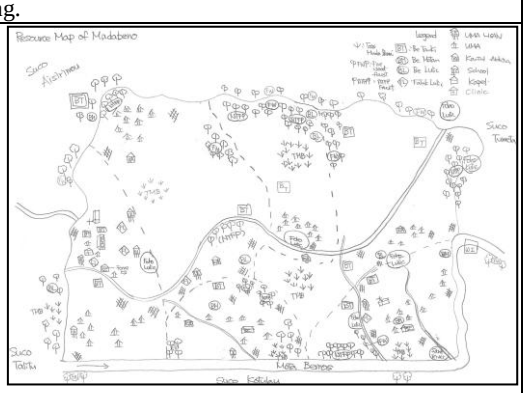
PRA revealed the main features of use of natural resources in the target villages as presented in **Appendix-2** and summarized in the following sections.

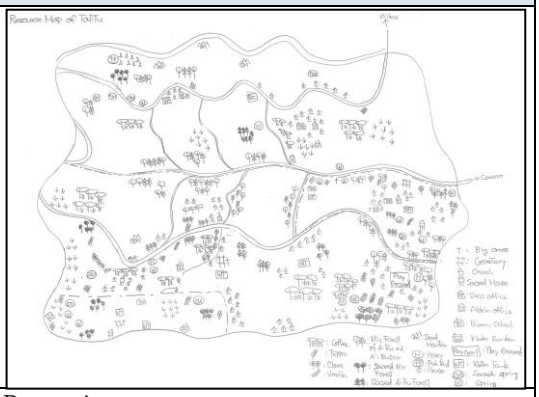
3.1 Land Use Characteristics

The land use characteristics in the target villages were identified through the discussions made in resource mapping and filed observations in transect walking in PRA. Major findings are highlighted below.

Land Use Characteristics of the Target Village

Suco	Major Characteristics
Fadabloco	a. The village is situated between Suco Faturasa and Hautoho. b. Many houses are located on the ridges of hills where the roads run through. c. Natural forests of Eucalyptus Europhia (Ai Ru) and Eucalyptus Alba (Ai Bubur), permanent farms, and coffee plantations are mainly observed in the hilltop, while the hillside and the bottom of hill are used for shifting cultivation, coffee plantation, and animal grazing. d. Eucalyptus Alba (Ai Bubur) is the major tree species prevailing in the village. Albisia (Ai Samutuku) and Casuarina (Ai Kakeu) are also found in the valleys in the village with coffee trees.  e. Honey and tua can be collected in coffee plantations, especially those with Albisia. f. Eucalyptus Alba (Ai Bubur) forests stand in a rather drying condition, and therefore, it is prone to forest fire. g. The communities use the gentle to steep sloping areas for agricultural purposes, such as permanent farms, shifting cultivation farms, coffee plantations, and animal grazing. h. Free animal grazing is the common practice in rearing large livestock animals, although there are several animal pens or fenced areas set up by the communities. i. Gully erosion and land slides are commonly observed in the hilltop as well as hillside. j. There is a paddy field along the river. k. Aldeia Releu is isolated from other aldieas by the river. According to the participants from aldeia Lieu, they need to walk for 3~4 hours to get to the suco office from aldeia Releu. k. There is an area owned and used by households in Suco Hautoho in the village. Besides, there are also some families from Suco Hautoho living in the village.
Faturasa	a. The village is bordered on the north and south by Suco Tolataqueu and Suco Fadabloco, and on the east

Suco	Major Characteristics
	and west by Sub-district Laclo and Suco Asumau, respectively. b. Houses are mainly located on the ridges of hills in the area, especially along the main roads. c. Natural forests of Eucalyptus Alba (Ai bubur) are extended in the foot of slopes and along the rivers, especially the Laclo and Uhululi river. d. Some coffee plantations are found along valleys in the village. e. There are gully erosions found in the village, especially in Aldeia Kaisasu and along the main road passing through the village. f. Animal grazing is practiced mainly in the natural forests. 
Hautoho	a. The village is bordered on the north and south by Suco Fahisoi and Sub-district Liquidoe, and on the east and west by Suco Fadabloco and Suco Maumeta, respectively. b. Accordingly, there are two detached areas, which constitute Aldeia Remehei, in the territory of Suco Fadabloco. c. Houses are mainly located on the ridges of hills in the area, especially those that the main road passes through. d. Natural forests of Eucalyptus Alba (Ai Bubur) mainly spread in the foot of hills, especially along the Mausa river, while farms for shifting cultivation are widely distributed in the hillsides in the village.  e. Some citrus and Casuarina trees with or without coffee trees are also found in the areas for shifting cultivation. Accordingly, there used to be coffee trees planted with Casuarina trees, but coffee planted far from water sources died down, and therefore, the areas are used only for crop production. f. The existing coffee plantations are mainly found in the valleys in the village. g. Natural forests are generally used for animal grazing.
Madabeno	a. The village is bordered by Suco Aisrimori, Talitu, Kotolau, and Tohumeta. b. The part of the village (the area between the Bemos river and national road) is located in the catchment of the Bemos river. c. The households in the village seem to rather disperse in the village. d. Coffee plantations with Albisia (Ai Samutulu) widely stretch from the hilltop to hillside in the village, especially in Aldieas Remapati and Bilumahato. e. Natural forests are rather limited in the village. The major species found in natural forests are Eucalyptus Alba (Ai Bubur) and Europhia (Ai Ru). In particular, Eucalyptus Europhia is dominant in the catchment of the Bemos river.  f. Non-timber forest products (e.g., root crops, wild crops, tua, and honey) and firewood are harvested in natural forests and coffee plantations. g. Areas for shifting cultivation are found in the hillsides, especially in the areas between Aldeias Bilumahato and Lissimori.
Talitu	a. The village is broadly composed of three parts, i) the northern hill from the national road which contains the territories of Aldeia Talitu and Casa Manatutu, ii) the catchment of the Bemos river (right and left banks of the river) which contains the territories of Aldiea Quelau and Fatukhun, and iii) the southern slope from the national road which is the part of Aldeia Fatukhun. b. Many communities in the village reside along the national road. c. Coffee plantations mixed with clove trees extensively cover the hillsides in Aldeia Talitu and Quelau, while the same is rarely found in Aldeia Casa Manatutu and Fatukhun. d. Houses, permanent farms, and Eucalyptus Europhia (Ai Ru) forests prevail in the hilltops in the catchment of the Bemos river.

Suco	Major Characteristics
	e. Natural forests (Eucalyptus Europhia and and Alba), animal grazing, and shifting cultivation are the dominant land uses in Aldeia Fatukhun, while natural forests (Eucalyptus Alba) and shifting cultivation are the major ones in Aldeial Casa Manatutu. f. There are fishponds and paddy fields along the river in aldeia Fatukhun. e. There are several sacred forests in addition to other types of sacred place (e.g., sacred stones, sacred springs, sacred mountains, and sacred houses) in the village. 
Tohumeta	a. The village is located within the catchment of the Bemos river. b. Communities live along the manin road passing through the village. In the Portuguese times, they lived near their farms, but they were forced to stay along the main road by the Indonesian government. c. Natural forests of Eucalyptus Alba (Ai Bubur) are mainly distributed along the Bemos river, especially in the right bank of the river, while those of Eucalyptus Europhia (Ai Ru) are mainly found in the upper parts of the hills in the village. d. Areas for shifting cultivation are widely distributed in the village. Maize, cassava, taro, and beans are the major crops planted under the shifting cultivation system. e. Many communities have permanent farms and vegetable gardens near houses. f. Fruits (Jackfruit, banana, and papaya) and other industrial plants (coconut, tua metan, bamboo, and betal nut) grow around water sources. g. There are many water springs which are used for watering vegetables an other domestic purposes in the village. There is also the existing piped watering system constructed by NGO. h. Communities use natural forests of Eucalyptus Alba for firewood collection and animal grazing.

Source: JICA Project Team (2011)

3.2 Historical Changes of Natural Resources and Agricultural Products

The current conditions and historical changes of natural resources as well as agricultural products in the target villages were confirmed through the session of "trend analysis" in the target villages. Some remarkable changes and features in the target villages are summarized below.

Historical Changes of Natural Resources and Agricultural Products in the Target Villages

Suco	Seasonal Changes
Fadabloco	a. The yield of maize has declined as the soil fertility in the farm has become low, while those of other crops, such as sweet potato and cassava, have been unchanged since 1975. b. In the Portuguese era, few people raised buffalo. In the Indonesian times, many households were able to have cattle with the assistance of the government. After independence, the number of cattle has declined due to a lack of feed and wide expansion of Chromolaena odorata in the grazing area. c. The participants believed that the forest cover in the village has gradually increased owing to the government support (e.g., provision of seedlings) and favorite climatic conditions since 2002. d. Forest fires have constantly occurred in the village, although there has been no drastic increase of forest fire in and after the Indonesian era.
Faturasa	a. The average yield of maize in the Indonesian times was estimated at about half as the same in the Portuguese era. It is speculated that improper application or overdose of chemical fertilizer might be one of the causes of low productivity. The yield of maize has gradually increased since 2001. b. Honey production used to be high until 1999, but it had drastically declined due to the leaf disease of host trees (Eucalyptus Alba). Accordingly, the production has recovered recently, but the volume of collection has been still low owing to the fear of accident. c. Deforestation or forest degradation had progressed between 1975 and 2007 due to the high incidence of forest fires and expansion of shifting cultivation farms. Since the village regulations were in place in 2008, the existing forests have been gradually recovering. d. Likewise, there used to be many forest fires before 2007, especially in the Indonesian times (1975-1999). There has been no forest fire from 2008. e. The communities have faced the significant post harvest loss of maize due to weevil since 1999.
Hautoho	a. The production of maize has declined due to the civil war in the Indonesian times, especially from 1975 to 1978, and crop damage caused by strong winds and rodent. In 2011, the communities were not able to plant maize due to long rain.

Suco	Seasonal Changes
	b. The production of sweet potato has increased since 1999 owing to favorable market conditions. However, the production has declined from 2009 to 2011 due to the pro-longed rainy season. c. The production of cassava has been kept high since the Portuguese times. b. The community started planting coffee in the Indonesian times using wildlings in the existing coffee plantations. The production of coffee was very low in 2011 owing to long rains. c. The production of vegetables also started in the Indonesian times, and vegetable farms have been gradually expanded in the village, especially in the areas close to the water sources. Recently, more households have engaged in vegetables as they were not able to produce maize in 2010. d. In the Portuguese times, the villages was fully covered with forests. Deforestation started in the Indonesian time due to the frequent forest fires caused by the military operations, but the deforestation rate has declined since 2002 as the incidence of forest fires has been reduced. e. There were wild fires caused by unknown people even in the Portuguese times. The participants feel that the frequency of forest fires has been reduced since independence.
Madabeno	a. The production of maize has decreased due to the decline of soil fertility, fluctuated/unstable rainfall patterns, and domestic turmoil in the country. However, the yields of other croups, such as cassava, sweet potato, and taro have been unchanged since 1975. b. The communities used to harvest honey in the Portuguese era, but the collection of honey is not popular in the village at present since they have other sources of income and the collection of honey is considered dangerous. c. The village used to be covered with a full of natural forests in the Portuguese era. Deforestation had progressed from 1975 due to the following reasons: i) forests were burned by the Indonesian army to fight against the resistant guerrillas; ii) local communities committed illegal logging; and iii) local communities also burned forests for hunting. However, the tendency of deforestation has declined after the deployment of forest guards in 2008. d. There used to be few forest fires in the Portuguese era as Tara Bandu was effective. The incidence of forest fires had drastically increased in the Indonesian times by the intervention of the Indonesian army. Accordingly, the occurrence of forest fire in the village has declined since the revival of Tara Bandu in 2010.
Talitu	a. The production of upland crops (e.g., maize and cassava) has declined since 1975. The reasons behind the decrease of maize production are the decline of soil fertility in the farms, the conversion of upland farms to coffee and clove plantations, and a shortage of laborers for cropping. c. On the other hand, the production of clove has increased especially in aldeia Talitu and Quelau from the Indonesian times thanks to the agricultural extension services of the Indonesian government. Pepper and vanilla plantations has also expanded since the independence with the technical and material assistance from NBCA/CCT. d. The communities in aldeia Talitu and Quelau purchase the staple crops in the market using the earnings generated from cash crops, namely coffee, clove, pepper, and vanilla. e. As the plantations of coffee and clove have expanded, the areas covered with natural forests have been reduced gradually. Illegal logging and forest fires especially in the Indonesian times also accelerated the deforestation. f. Accordingly, there was no wild/forest fire in the Portuguese era owing to the strict control by the local authority. The incidence of wild fires was quite high in the Indonesian times, but it has declined from 2002. The communities have consciously protected their plantation from any damage.
Tohumeta	a. The production of maize and cassava has decreased since 2002 as the villagers started working for government projects, while that of vegetable has increased owing to the assistance from the government and NGOs since the Indonesian times. b. The production of mango has gradually increased owing to the increase of mango trees with the technical assistance from the Indonesian government and self-effort made by the communities. c. Forest covered almost all the areas of the village in the Portuguese time. Deforestation has progressed since the Indonesian times due to the increase of population and incidence of wild fires. The participants pointed out that a number of seedlings were planted in 2008 and 2009 with the assistance of the NGO and JICA. d. The incidence of wild fire in the Portuguese times was almost nil due to the strong enforcement of Tara Bandu regulations. The communities started freely burning the areas for clearing their farms and hunting wild animals in the Indonesian times. as the Indonesian army burned forests in the village for operations. e. The available of water sources has been kept high since the Portuguese times.

Source: JICA Project Team (2011)

3.3 Seasonal Changes in Agricultural and Socio-Economic Activities

Seasonal changes in agricultural, cultural and socio-economic activities in the target villages, which were identified in the session of "seasonal calendar" in PRA are summarized below.

Seasonal Changes in Agricultural, Cultural and Socio-economic Activities in the Target Villages

Suco	Seasonal Changes
Fadabloco	a. Cutting/slashing trees and grasses starts in July and August, and the field is burned in September. b. May and June are the peak harvest season of coffee, while four months from May to August are the harvest season of citrus. c. A shortage of food is the main concern for the communities in December and January, while the water shortage is their another concern in August and September. d. The village is prone to wild fires in August and September.
Faturasa	a. Cutting and slashing grasses and trees are conducted in July and August, followed by burning in September and October. After planting of seeds of annual crops in November and December, crops except sweet potato are harvested in February and March. Sweet potato is harvested in May and other biennial tubers (cassava and taro) are from August to October. b. Harvesting season of coffee is between June and August, while that of citrus is May and June. c. Honey is collected in May and June, while tua mutin can be harvested throughout a year. d. Communities in the village face a shortage of food from November to February until they can harvest maize in March. In particular, January is the leanest month among four months of the food shortage period. e. On the other hand, it is hard for the communities to get drinking and domestic water between August and October, especially in October.
Hautoho	a. Land preparation is conducted between July and October, and among others, burning the area starts in August and continues until October. In general, food crops as well as other crops (3.g., pineapple and orange) are planted in October and November. b. The harvest seasons of the major crops produced in the village are: i) March and April for Maize, ii) May-July for Pigeon pea, iii) August and September for tube crops, iv) May-July for Orange, and v) all the year for pineapple. c. Honey is collected mainly in May and June, while there is no specific season for collection of Tua Mutin. d. Three months from November to January is considered as the food shortage season, while a shortage of water starts in August and lasts until October.
Madabeno	a. Farms for shifting cultivation are burned in September and October, and then, annual crops are planted in November and December in general. b. Coffee is harvested from May to September, while vegetables are produced between September and November. c. The communities face a shortage of food from December to February and a shortage of water from August to October, respectively. d. The village is prone to fires from July to October.
Talitu	a. Cutting/slashing grasses for shifting cultivation starts in June and the same areas are burned in September and October. Planting of annual crops starts in November. b. Coffee is harvested for two months in June and July. c. The communities face a shortage of food between December and March, while the scarcity of water supply is a big concern between August and November. d. The village is prone to fires from August to November.
Tohumeta	a. Land preparation is done from July to October, namely cutting/slashing grasses in July and August and burning in September and October. b. Seeding of upland crops is the main activity in November and December, while the harvest seasons of the crops varies with types of crop, such as maize in April and May, sweet potato in May and June, and peanut in May. c. Coffee is harvested for two (2) to three (3) months from June to August. d. The communities grow and produce vegetables from June to September.

Source: JICA Project Team (2011)

3.4 Prevailing Farming and Land Management Practices

Prevailing farming practices and customary norms on land use in the villages were confirmed through the separate group discussions by male and female participants. Some highlights in the discussions are also summarized below.

Prevailing Farming Practices and Land Management System in the Target Villages

Suco	Prevailing farming practices
Fadabloco	**Prevailing farming practices** a. The shifting cultivation that the communities currently practice is not literally the same as they used to do before. They set aside several plots for farming and use one of them for producing annual crops in a rotating manner. b. Maize, cassava, sweet potato, taro, yam, beans, and banana are the major crops planted under the shifting cultivation system. After harvesting of annual crops in the first year, the farm is left fallow and used for

Suco	Prevailing farming practices
	production of biennial crops, such as cassava and banana. c. The advantage of the shifting cultivation system is to be able to recover the soil fertility in the farms, while the disadvantages are that: i) the location of the farms are far from the houses; ii) land preparation is time-consuming and laborious; and iii) burning the area might cause a wild fire. d. Accordingly, one household has one (1) to seven (7) plot/s for shifting cultivation and the average size of one plot ranges from 0.5 to 1.0 ha/plot. **Current land management system** a. There is no landless or tenant household in the village. Every household owns their lands. b. There is no government land in the village, but each aldeia sets a certain area apart from private lands to produce offering to church. c. No land in the village can be sold to anyone. d. Anyone, even a person outside the village, can use or rent part of the land in the village with permission of an owner of the land, but only for production of annual crops. e. The land is inherited along the male line. f. A family that own 5-7 ha is considered as a large land owner, while a family that has 0.5 – 1.0 ha is categorized as a small land owner. g. There is no written regulation on the use of land in the village.
Faturasa	**Prevailing farming practices** a. Many households are currently practicing a shifting cultivation system, which uses several plots for producing annual and biennial crops in a rotating manner. Accordingly, no one open or clear forests for farming at present. b. There are two types of farming system in the village, namely i) short-term shifting cultivation system and ii) fixed/permanent farming. c. Under the shifting cultivation system, annual crops (e.g., maize, cassava, sweet potato, beans, etc.) and biennial crops (e.g., cassava and banana) are simultaneously planted in the same plot. After harvesting annual crops, the communities leave the farm fallow and harvest the biennial crops from time to time. d. The advantages of the shifting cultivation system are: i) high productivity owing to high soil fertility in the first year and ii) rather low labor requirement in land preparation as compared to that for the improved permanent farming (such as terrace making). On the other hand, the disadvantages are: i) less production in the second year due to soil erosion, ii) frequent crop damage by animals/rodent, and iii) high potentiality for forest fires. **Current land management system** a. Most of the lands in the village are owned by Uma Lisans (heads of kinship groups/clan families). One Uma Lisan exists in each aldeia. However, there is no landless household. c. Many households used to use the lands owned by the head of kinship groups without charge, but they can grow only annual crops. d. In 2010, the heads of kinship groups recognized the land use rights of the tenant farmers. At present, the tenants can plant perennial crops/trees in the lands and use the same lands for free for several generations/forever, although the land ownership of the lands still remain at the land owners. e. As a result, one household own two to several plots for shifting cultivation at present.
Houtoho	**Prevailing farming practices** a. Many communities in the village except those living in Aldeia Rebutu practice a shifting cultivation system which uses several fixed plots for producing upland crops in a rotating manner. b. Communities in Aldeia Rebutu currently use only one or two plots for producing upland crops due to the limitation of farmland. Hence, they practice a fixed farming system in a way. c. Several crops, such as maize, cassava, taro, kontas, beans (pigeon pea, koto moruk, and rehe) are generally grown under shifting cultivation, while only maize and red beans are grown in permanent farms. d. Advantages of shifting cultivation are to: i) make the abandoned areas fertile; ii) secure stable production; iii) utilize slope areas for crop production; iv) keep some food crops in the fallow lands; and v) be able to harvest farm crops in the farms when preparing the same lands. Its disadvantages are the facts that: i) it requires hard works in its operations; ii) there is a need to plant leguminous crops to make soil fertile; iii) surface soils in the farms are washed away during the raining season; iv) the plots for shifting cultivation are far from their houses; and v) crops grown in the plots are often damaged by animals. e. The average size of the plot is about 1 ha/plot and the average number of plots is three (3) plots/family raging from one (1) to five (5) plots/family in Aldeia Remehei and Aibutihun. f. The average size of the permanent farm in Aldeia Rebutu is one (1) ha or more. f. One plot is used for farming for a maximum of two (2) years.The fallow period is three (3) to four (4) years on average, although it depends on the number of plots owned by a household. **Current land management system** a. All the lands in the village used to be owned by 11 heads of kinship groups (uma lisans), namely three in Aldeia Aibutihun, seven in Remehei, and one in Rebutu. b. At present, all the communities in the village hold their own lands, as the heads of kinship groups had distributed their lands to the members of the respective groups before.

Suco	Prevailing farming practices
	c. The areas remaining as Eucalyptus forests in Aldeia Aibutihun is still owned by one leader in the aldeia. In such an area, anyone can cut trees for house construction with permission from Chef de Suco and Chef de Aldeia, but no one can use the same for farming without permission from the owner (the leader of kinship group). d. No government land exists in the village, but there is a land managed and used by Church. The area is considered as a common land that can be used for production of offerings to church and as a temporary farm for those who need to produce food crops. e. The lands in the village cannot be rent to any communities except family members to prevent any issues/disputes over land. f. Only annual crops or short-terms crops can be grown in the rented land.
Madabeno	**Prevailing farming practices** a. Communities practice a shifting cultivation system using two to several plots for production of upland crops with a certain fallow period in a rotating manner. b. In addition to farms for shifting cultivation, they also have permanent farms. c. The average size of a plot for shifting cultivation ranges 0.5 to 1.0 ha/plot, while that for permanent farm is 0.2 to 0.4 ha/plot. d. The major farming practices under both systems are similar, namely i) slashing (including cutting trees for shifting cultivation), ii) burning the slashed stuff in the field, iii) planting, iv) weeding, and v) harvesting. e. When the height of the weed covering the plot becomes more than 2 meters in the fallow period, the area can be reused for farming. f. Disadvantages of shifting cultivation are the possibilities of causing: i) deforestation, ii) decrease of big trees, iii) shortage of water, iv) landslide, v) forest fire, and vi) increase of crop damage by rodent, while the same of permanent farming is the low crop yield. **Current land management system** a. All the households in the village own enough farmlands for farming. There is no landless household in the village. b. There is no government land or communal land in the village. All the lands in the village belong to either households or kinship groups in the village. c. A family that faces a shortage of food can use a land owned by someone with permission of an owner of the land, but only for production of annual crops. d. The land is inherited along the male line. e. The village developed the village regulations in writing with a Tara Bandu ceremony in 2010.
Talitu	**Prevailing farming practices** a. Like in the other target villages, communities do not literally practice the swidden farming, but practice a shifting cultivation system using several fixed plots for farming in a rotating manner. b. Under the current farming system, several crops, such as maize, cassava, beans, taro, banana, etc., are simultaneously planed in the same plot in the first year. The area is laid fallow for several years after harvesting annual crops. c. One household owns two (2) to five (5) plots for shifting cultivation on average. The size of the plot is estimated at 0.4 ha/plot to 1.6 ha/plot. d. Disadvantages of shifting cultivation are that: i) it requires more laborers for land preparation than the permanent farming does; ii) it may cause a shortage of water, landslide, soil erosion, and forest fire; iii) crops in the farms are susceptible to crop damage by rodent; and iv) the farms are far from the residential areas and it usually takes one to four hours from a house to the farm. e. Disadvantages of permanent farming are i) low fertility and ii) difficulty in controlling weeds. f. High yields of crops in the first year and easiness in weed control are the major advantages of shifting cultivation, while easy access to farms is the advantage of permanent farming. **Current land management system** a. Most of the households in the village have their own lands. b. Some households rent farms from other households to produce staple crops, such as maize and cassava. However, they are not allowed to plant perennial crops and trees in the rented lands. In general, a tenant can use the same land from one to five years. c. No government land exists in the village, but there is a communal land in Aldeia Talitu. Such a land are used by households who need to produce their food crops. d. Although Tara Bandu (the customary norms) has not been revived yet, the village has traditional rules on the use of natural resources including land.
Tohumeta	**Prevailing farming practices** a. Shifting cultivation is the prevailing farming sytem in the village. However, the areas for shifting cultivation have gradually decreased. It has been difficult for communities to secure laborers needed for management of shifting cultivation farms as their children go to school in the daytime. b. Several fixed plots are used for cropping in a rotating manner under the shifting cultivation system. c. Communities have two types of farm, i) area for shifting cultivation and ii) fixed farm/home garden. The former is located far from their houses, while the latter is usually developed in the vicinity of their houses.

Suco	Prevailing farming practices
	d. Maize, cassava, and banana are the major crops planted under the shifting cultivation system, while several crops (e.g., maize, cassava, taro, sweet potato, and kontas) are planted in the fixed farms. e. Disadvantages of shifting cultivation are: i) high likelihood of crop damage caused by rodent and monkey; ii) likelihood of occurrence of forest/wild fires; iii) high labor requirement in the operations; and iv) likelihood of soil erosion/landslide. f. Communities feel that it would be difficult to continue shifting cultivation, but they also believe that they need to continue it for securing daily food as well as their lands. **Current land management system** a. Every household in the village has its own lands for farming (shifting cultivation and permanent farming) and houses. There is no landless in the village. b. Communities can use someone's land only for production of short-term crops, such as cassava, maize, and sweet potato, with permission of an owner of the land. But planting of trees and perennial crops are not allowed in such a land. c. Traditionally, a father of bride can offer his land to a groom who comes from other villages but stay in the village. The ownership of such a land still remain at the bridge's parent but the new couple can use the land for surviving. d. The land is inherited in the male line. e. One household holds four (4) plots for farming on average.

Source: JICA Project Team (2011)

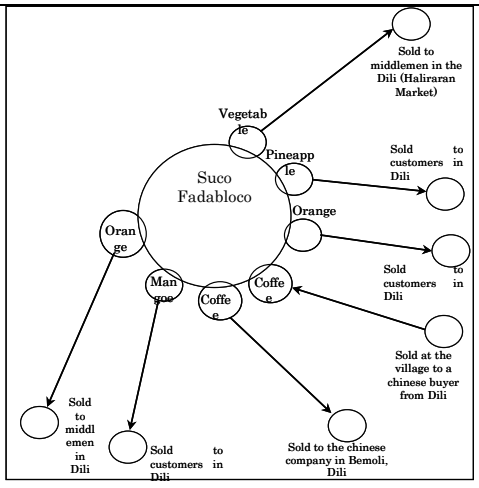
3.5 Major Potential Natural Resources for Livelihood Improvement

The major agricultural products and natural resources relevant to livelihoods of local communities and their marketing conditions in the respective target villages are summarized as follows.

Marketing Conditions of the Major Commodities in the Target Villages

a. Fadabloco

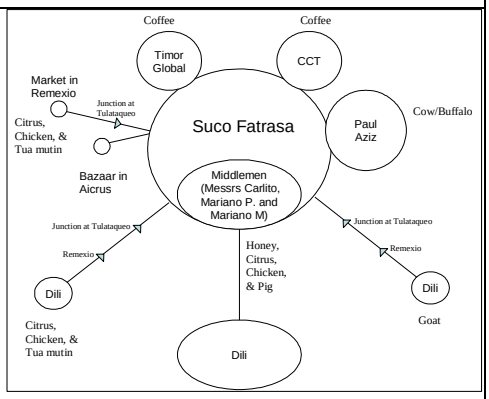
Topics	Descriptions
List of important products/resources	➢ Had identified a number of agricultural products and natural resources available in the village, male and female community members selected the following resources/products as important ones for their livelihoods. <table><tr><td>Group</td><td>Priorities (in the order of priority from highest to lowest)</td></tr><tr><td>Male</td><td>1. Coffee, 2. Vegetables, 3. Orange, 4. Mango, 5. Pineapple</td></tr><tr><td>Female</td><td>1. Tua, 2. Vegetables, 3. Chicken, 4. Pig, 5. Coffee, Orange, and Pineapple</td></tr></table>➢ The male participants considered the total sale as the most important factor, while the stable and long-period cash flow seemed to be the most important factor for the female participants.
Market Conditions of the Major Products	➢ Coffee is mainly sold to a Chinese middleman at US$ 0.25/kg in cherry or US$ 1.25/kg in parchment. Vegetables are sold to the middlemen at US$ 0.5/bundle in Hariraran market in Dili, while Orange, Mango, and Pineapple are sold at US$ 1.0/bundle or piece in the markets in Dili. ➢ The communities have two ways to carry the products/commodities to Dili, namely: 1. One hour walking to Remexio and taking the public transportation to Dili (@ US$ 1/person/one-way trip) 2. Two hours walking to Liquidoe and taking the public transportation to dili (@ US$ 2.5/person/one-way trip with additional charge for the products)



Market Flows of the Products in Fadabloco

b. Faturasa

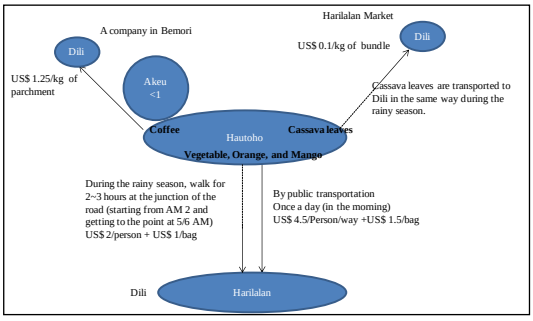
Topics	Descriptions
List of important products/resources	➢ Both male and female community members identified a number of agricultural products and natural resources available in the village. Among others, the following resources were selected as important ones. Group: Male — 1. Coffee, 2. Cattle, 3. Pig, 4. Chicken, 5. Citrus Group: Female — 1. Water, 2. Land, 3. Cassava, 4. Maize, 5. Tree ➢ Male members consider the marketability as well as price of the products as the crucial factors in judging the importance of the products, while the relevance to their lives is the essential factor for female members.
Market Conditions of the Major Products	➢ Coffee is sold to either Timor Global or CCT. ➢ Honey, chicken, and pig are sold to the middlemen living in the village. ➢ Likewise, citrus is mainly sold to the middlemen living in the village. Some are also sold at the bazaar/market in Aicrus and Remexio. ➢ Cattle and buffalo are sold to the slaughterer (Mr. Paul Aziz).



Market Flows of the Products in Faturasa

c. Hautoho

Topics	Descriptions
List of important products/resources	➢ The five most important resources/products were identified by male and female community members among a number of agricultural products and natural resources available in the village. Group: Male — 1. Cassava, 2. Maize, 3. Orange, 4. Coffee, 5. Pig Group: Female — 1. Vegetables, 2. Cassava, 3. Coffee, 4. Citrus, 5. Mango ➢ The male members gave higher priority to food crops, while the female members considered the marketability and length of growth period of the crops as important factors for their judgment.
Market Conditions of the Major Products	➢ The products except coffee are sold at the Harilalan market in Dili. ➢ The transportation of farm products from the village to Dili costs US$ 4.5/way for a person and US$ 1.5/way for one bag. ➢ Coffee is mainly sold to the buyer (named Akeu) who visits the village during the harvest season. There are some communities who bring and sell coffee to a company in Dili. ➢ The major problems/concerns on marketing are: i) poor road condition; ii) lack of public transportation services; iii) lack of bargaining power; and iv) existence of many competitors in the market.



Market Flows of the Products in Hautoho

d. Madabeno

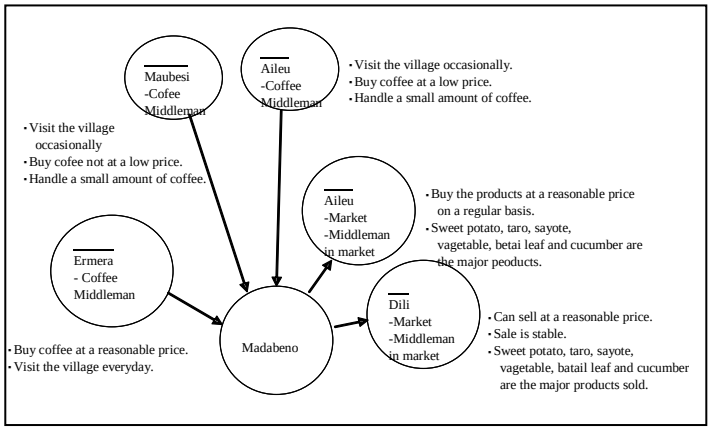
Topics	Descriptions
List of important products/resources	➢ The following are the most important agricultural products and natural resources selected by male and female community members among those available in the village.

Group	Priorities (in the order of priority from highest to lowest)
Male	1. Coffee, 2. Maize, 3. Cassava, 4. Sweet Potato, 5. Tua Mutin
Female	1. Maze, 2. Cassava, 3. Sweet potato, 4. Coffee, 5. Vegetables

➢ Marketability of the products/resources is the most important factor for the male participants to prioritize the important products/resources.

➢ The female participants gave priority to food crops than cash crops. Among others, maize was ranked as the most important crop as it was the main staple crop.

Topics	Descriptions
Market Conditions of the Major Products	➢ Coffee is sold to middlemen at the village in the form of either cherry or parchment. The farmgate prices of cherry and parchment in 2010 are US$ 0.3/kg and US$ 1.5/kg, respectively. ➢ Agricultural crops, such as sweet potato, cassava, vegetables, taro, sayote, and cucumber, are sold at the roadside stand or in Halilaran/Taibesi markets in Dili. ➢ Tua and betal leaves are sold in the market in Aileu. ➢ The transportation cost is rather expensive. One way trip to Dili or Aileu from Madabeno by mini truck costs US$ 1.5/person and US$ 0.5/sack in 2010.



Market Flows of the Products in Madabeno

e. Talitu

Topics	Descriptions
List of important products/resources	➢ Among 12 agricultural products and three natural resources identified as available resources in the village, communities selected the following agricultural products as the five most important ones.

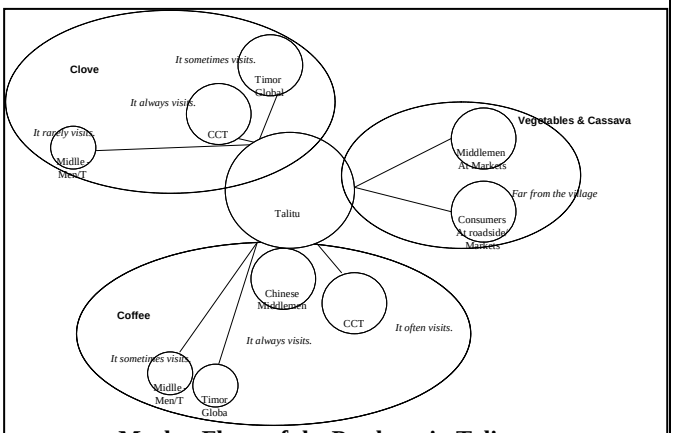
Priorities (in the order of priority from highest to lowest)
1. Cassava (as a key staple crop), 2. Maize (as a key staple crop), 3. Coffee (as a main source of income), 4. Vegetables (as a short-term crop), 5. Clove (as another source of income)

Market Conditions of the Major Products

➢ The marketing conditions of the major crops are summarized below.

Products	Items	Outlines
Coffee	Outlets	CCT, Timor Global, Middlemen
	Place of sale	Each aldeia (at the main road)
	Price (2010)	US$ 0.25/kg (cherry) and UUS$ 1.25/kg (parchment)
	Hauling method	On foot / Human power to the main road
Clove	Outlets	CCT, Timor Global, Middlemen
	Place of sale	Dili (CCT and Timor Global) and village
	Price (2010)	US$ 5/kg (@ CCT) and UUS$ 4.5/kg (@ Timor Global)
	Hauling method	Public transportation to Dili
Vegetables	Outlets	Middlemen and consumers
	Place of sale	At the main road and markets in Dili
	Hauling method	Public transportation and/or on foot to Dili
Cassava	Outlets	Middlemen and consumers
	Place of sale	Markets in Dili
	Price (2010)	US$ 5/sack at markets in Dili
	Hauling method	Public transportation and/or on foot to Dili

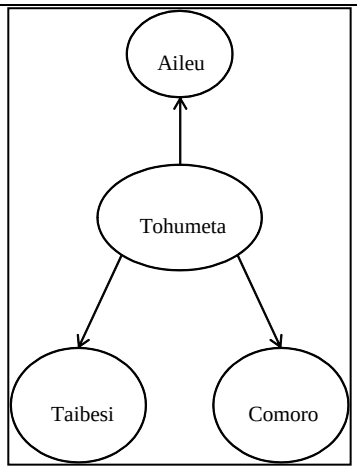
Topics	Descriptions
	➢ The marketing flows of the above-listed products are shown below.



Market Flows of the Products in Talitu

f. Tohumeta

Topics	Descriptions
List of important products/resources	➢ A total of 12 natural resources and agricultural products were identified as important resources. Among others, cassava, banana, and timber were selected as the most important ones followed by vegetables and fruits based on the evaluation in terms of production, frequency of marketing, time needed, and labor requirement. ➢ The communities evaluated that cassava, banana, and timber were highly produced in the village, and could be easily sold at the market.
Market Conditions of the Major Products	➢ Cassava is mainly brought to and sold in Taibesi market. The price of fresh cassava was US$ 0.5/bunch in 2007, while that of dried cassava was US$ 0.25/bunch in the same year. Since there is no specific buyer who comes to the village to buy it, the communities need to bring the product to the market. ➢ Banana is sold at Comoro and Taibesi markets. The communities carry bunches of banana putting them in sacks. The price of banana was US$ 0.25~0.5/bunch in 2007. In general, they consider that the price of banana is low due to low quality. ➢ Vegetables are also sold in Comoro and Taibesi markets. The ommunities hang and carry vegetables (50~70 bunches/person) to the markets. The price of vegetables ranged from US$ 0.1 ~ 0.4/bunch in 2007. They have some contacts among the buyers in the markets. ➢ Communities also bring their products to Aileu market, but the frequency is not as high as they bring them to those in Dili. In general, the selling prices in Aileu are cheaper than those in Dili.

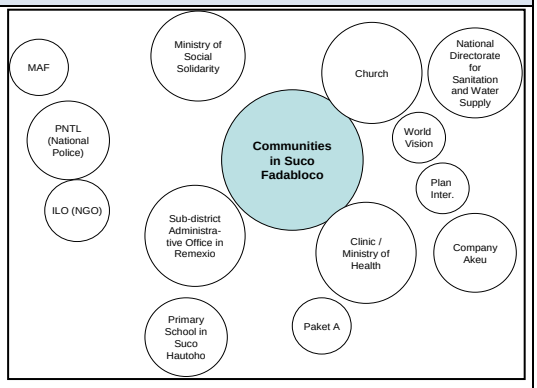
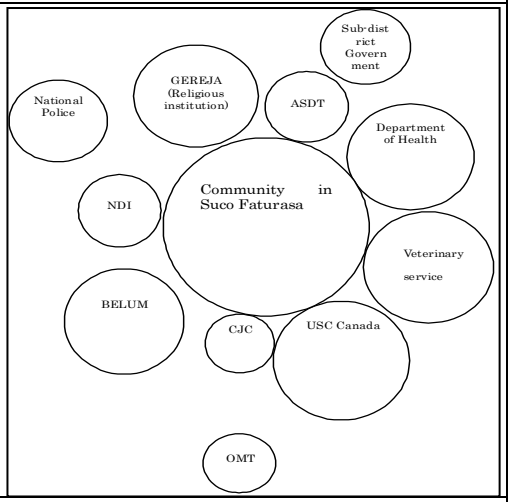
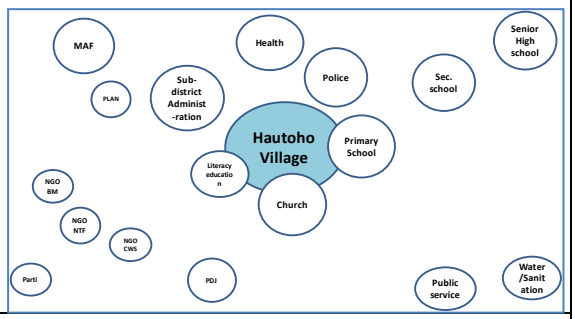
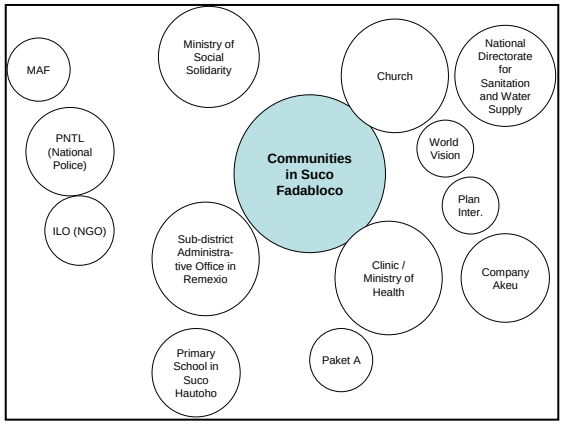


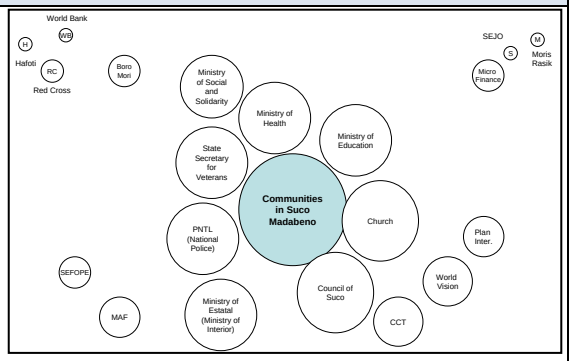
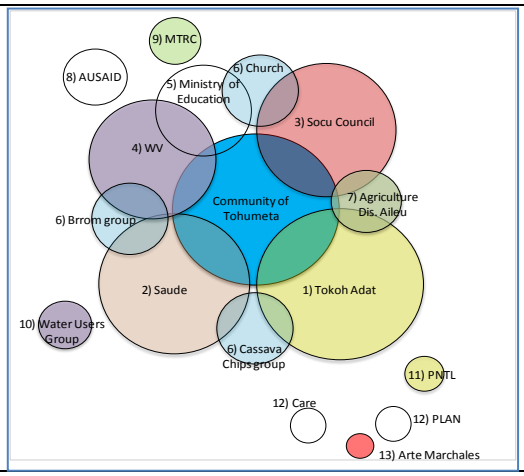
Market Flows of the Products

Source: JICA Project Team (2011)

3.6 Institutions/Organizations working for/relating to the Target Villages

Village institutions and organizations working for the target villages were identified through the venn diagram method. The method also revealed the importance of the institutions/organizations as well as the proximity from the village or accessibility to the institutions as summarized below.

Suco	Relevant institutions/organizations
Fadabloco	➢ Church, Sub-district Administrative Office in Remexio, and Clinic are considered important and close to the village. ➢ The Ministry of Social Solidarity and National Directorate for Sanitation and Water Suppy are also considered important but the accessibility to them are considered rather farer. ➢ A private company or middleman named Akeu is also regarded as an important organization/person since it has bought coffee and supported the communities by fixing the road and providing rice to some households in the village. 
Faturasa	➢ USC Canada Timor-Leste (NGO), Department of Health (Clinic), Veterinary service (a village volunteer) and Church are considered important as well as easy to access in 2007. ➢ Belum was also considered important and the proximity to such an organization was rather close at the time of the survey in 2007. ➢ Besides, the National Police and Sub-district Administrative Office are important for the lives of the communities, but they are considered far from the village. 
Hautoho	➢ Church and primary school are the most important and closest organizations to the community. ➢ Government organizations, such as MAF, Ministry of Health, Water and Sanitation are considered also important but the service coverage does not seem sufficient. ➢ Although several NGOs, such as Plan, Boro-Mori, NFT and CWS have been implementing the activities in the area of education, sanitation and agriculture in the community, their support seems to be limited. 
Madabeno	➢ Suco Council and Church are the most important and closet organizations for the village. ➢ The government organizations, namely the Ministry of Health (clinic), State Secretary for Veterans, PNTL, Ministry of Administration, Interior and Territory, Ministry of Social Solidarity, are also considered important since these organizations supported the communities in the village. ➢ There are some NGOs (e.g., World Vision, Plan International, and other local NGos) working in the village, but the support from those organizations seems to be limited. 

Suco	Relevant institutions/organizations
Talitu	➢ The communities consider that key government organizations (i.e, the Ministry of Social Solidarity, Ministry of Education, Ministry of Health, Ministry of Agriculture and Fisheries, Ministry of Administration, Interior and Territory, National Directorate for Sanitation and Water Supply) are easy to access but their supports/services given to the village are limited. ➢ On the other hand, they seem to appreciate the supports given by the NGOs, such as Plan International, HAFOTI, and Bili Maharu. But their support is not permanent or continuous. 
Tohumeta	➢ Tokoh Adat (elder's group), Ministry of Health (mobile clinic) and Suco Council are considered as key important organizations in the community. Among them, Tokoh Adat functions as decision maker in solving internal conflicts in the village. ➢ World Vision has assisted the community in the area of education, health and agriculture. ➢ Government organizations, such as Ministry of Education, Ministry of Social Solidarity and MAF are considered important but their involvement in the development of the community seem to be still limited. 

3.7 Natural Resource Management in the Target Villages

Customary and/or current rules on natural resource management in the target villages, which were discussed in the plenary discussions on the same topic in PRA are summarized below.

Customary Rules on Natural Resource Management in the Target Villages

Suco	Prevailing farming practices
Fadabloco	**Customary Rules on Natural Resource Management** a. In the Portuguese era, Tara Bandu was effective in regulating the use of natural resources by local communities in the village. Tara Bandu prevented local people from cutting trees illegally and entering the someone's area without permission. b. The regulations of Tara Bandu were not written and inherited orally. c. The regulations/rules implemented in the Portuguese era were not implemented in the Indonesian times. Many local communities cut trees and burn forests since the Indonesian army did the same. d. Most of the communities have forgotten the rules of Tara Bandu. e. The village leaders have advised the communities to observe the government regulations, but many of them have not followed the regulations. **Village Structure on Natural Resource Management** a. In the Portuguese era, Uma Lisan (a head of kinship group/clan) was responsible for management of natural resources in the respective territories. b. In the Indonesian times, Kepala Desa (Chief of Village) had the overall responsibility for natural resource management in the village. c. Chef de Suco with the support from Chefs de Aldeia takes the leading role in natural resource management in the village at present. **Intention to Develop the Village Regulations** a. Chef de Suco stated that the village should develop its own regulations in writing to control natural resources in the village. Other communities in the village agreed with his idea of developing the village regulations through a series of dialogues among the communities in the village.

Suco	Prevailing farming practices
Faturasa	**Customary Rules on Natural Resource Management** a. Tara Bandu was effective in protecting forests and other natural resources in the Portuguese era, but it was disregarded in the Indonesian times. b. The reasons why Tara Bandu was effective in the Portuguese era are that: i) the government enforced the law strictly and ii) there was community police in the village. c. On the other hand, the reasons why Tara Bandu was not effective in the Indonesian times are that: i) the law enforcement of the government was weak, ii) the Indonesian army burned forests to fight against querrillas, iii) there was no community police, iv) people did not make firebreak lines when burning the fields, and v) burning became a common practice for grazing. d. Since the revival of Tara Bandu with the formulation of the village regulations in 2008, there has been no forest fire or illegal cutting. The incidence of crop damage caused by animals has also declined. **Village Structure on Natural Resource Management** a. The suco council has responsibility to implement the village regulations. Any issues shall be first discussed and settled at aldeia level. In case the issue can not be solved at the aldeia level, it shall be handled at suco level. **Intention to Develop the Village Regulations** a. The village leaders stated that they intended to revise the regulations by adding the articles concerning i) the cost sharing for arbitration and ii) the right to kill an animal that enters a farm and damages crops in a farm.
Hautoho	**Customary Rules on Natural Resource Management** a. In the Portuguese times, there were few villagers who stayed away from the village and were not aware of Tara Bandu regulations. Hence, there had been sometimes wild fires in the village. b. Tara Bandu regulations in the Portuguese times were not written and a kind of oral tradition in the village. c. There was only one Cablonda (suco police) in the village, who was responsible for enforcement of the regulations; it was difficult to control all the activities of local communities in three aldeias. d. Tara Bandu regulations were not effective during the Indonesian occupation. Instead, there were some notices given by the Indonesian government on the prohibition of illegal cutting and wild fire . e. The notices were also not effective in protecting forests as the Indonesian army burned the areas to capture guerrillas and many local communities also committed illegal activities during the times. f. Currently, there is no Tara Bandu refulations in the village. g. The village leaders have kept informing local communities of the government regulations every month in the general meetings of suco, however some communities do not follow the orders of the leaders. **Any existing cases in which those rules were implemented** a. In 2002, there was a big wild fire that ended up in burning many farms and houses in Aldeia Remehei. A ceremony was held to remind local communities of the necessity to take precautions against fires. b. A case of crop damage caused by animals is to be solved by the mutual discussion between the relevant parties with the presence of the village leaders. c. The village leaders have not imposed any penalty on persons committed illegal cutting or any activities causing a wild fire so far. They have just given warnings to those who committed the illegal activities. **Intention to Develop the Village Regulations** a. The participants as well as Chefe de Suco showed their willingness to develop their own village regulations to manage their lands and forests wisely and sustainably.
Madabeno	**Customary Rules on Natural Resource Management** a. Tara Bandu in the Portuguese era was very strong and everyone in the village observed its rules. In fact, anyone who violated the rules was strictly punished or fined. b. The effectiveness of Tara Bandu became very weak in the Indonesian times since the communities were not allowed to gather for a meeting and many Uma Lisans were destroyed/burned by the Indonesian army. c. At the same time, the communities considered that they could cut and burn trees, even sacred ones, as the Indonesian army did the same. d. After the independence, the communities realized that they needed to revive the customary rules and therefore developed the Tara Bandu regulations in writing in 2010. e. Since the village regulations were developed without sufficient consultations with local communities and dissemination of the village regulations was also insufficient, the enforcement of the regulations is still limited. **Village Structure on Natural Resource Management** a. The suco council is responsible for implementation of the Tara Bandu regulations. The tasks of the council are to: i) prevent a dispute over land and other natural resources, ii) protect natural resources from illegal exploitation, and iii) solve any issues and disputes in the village. b. In case a dispute occurs in the village, the issue shall be handled by Lianain in aldeia. If the issue can not be solved, the council takes over it.

Suco	Prevailing farming practices
Talitu	**Customary Rules on Natural Resource Management** a. Tara Bandu in the Portuguese era was strong enough to regulate the activities of the communities in the village. The strong law enforcement of the government enhanced the effectiveness of Tara Bandu. b. Tara Bandu banned: i) cutting trees illegally, ii) doing any activities causing forest fires, iii) stealing agricultural products from the farms and iv) harvesting agricultural, forestry and fishery resources before the harvesting seasons. c. Although Tara Bandu was effective in the Indonesian era, its effectiveness was not as strong as it was in the Portuguese era. d. The Indonesian army burned forests to fight against guerrillas disregarding the Tara Bandu regulations. It caused the weakening of the effectiveness of Tara Bandu among the communities. e. Accordingly, Tara Bandu still exists in the minds of the communities in the village, but its effectiveness is still weak. f. The village leaders have advised the communities to observe the rules of Tara Bandu, but many of them have not followed. **Village Structure on Natural Resource Management** a. In the Portuguese era, Liurai (local ruling family or local king) managed and solved the issues in the village. b. Kepala Desa (Chief of Village) was responsible for all the administrative matters in the village in the Indonesian times. c. At present, the suco council headed by Chef de Suco has responsibility to protect natural resources and solve / mediate any issues in the village.
Tohumeta	**Customary Rules on Natural Resource Management** a. Tara Bandu was effective in the Portuguese era in terms of prohibition of entering others' lands, wild fires, illegal cutting and free grazing. b. In the Indonesian times, Tara Bandu was not effective any longer, but there were the government regulations on illegal cutting and free grazing. Local communities generally obeyed the government regulations owing to the presence of the military in the village. c. Communities who were not familiar with Tara Bandu as well as the regulations given by the Indonesian government committed the illegal activities between 2002 and 2007. d. The village regulations were in place in 2008, but there have been some illegalities found in the village. The regulations seem to have not been properly enforced. Accordingly. no fine or penalty has been imposed on any violations so far. e. Communities in the neighboring villages are not aware of the village regulations of Tohumeta. **Village Structure on Natural Resource Management** a. Leader of Uma Lisan is responsible for solving i) domestic troubles, ii) land disputes, and iii) issues/problems between families. Chefe de Aldeia is responsible for solving the issues/problems in Aldeia level and those which cannot be solved by the Leader of Uma Lisan. Chefe de Suco has the responsibility for solving any issues in Suco as well as those which cannot be solved by Chefe de Aldeia. b. The suco committee for the village regulations still functions at present and hold a meeting every 3 months. **Intention to Develop the Village Regulations** a. The village regulations need to be reinforced to make them more effective and enforceable.

Source: JICA Project Team (2011)

Table

Appendix-1

Results of Baseline Survey

in the Target Villages

Appendix-2

Results of PRA in the Target Villages

Table-1 (1) Fact sheet on socio-economic and agriculture situations in Suco Madabeno

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Laulara Sub-district
(2) Number of sub-villages (aldeias)*1	6 sub-villages (Aldeia Manehalo, Lismori, Bilumahatu, Desmananhata, Remapati and Manufoni)
(3) Total area*1 (sq km)	11.54
(4) Total population*1 (person)	1,473
(5) Total number of household (HH) s*1	327
(6) Major languages	Tetun and Mambae
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (48.3%), 1975-1999 (31.7%), 1999-2002 (8.3 %), 2002-2010 (8.3 %), After 2010 (1.7 %)
(2) Number of HH members (person)	7.0
(3) Average age of HH members (years old)	18.5
(4) Number of members under working age (14-65 years old) (person)	5.7
(5) Features of head of HHs	・Occupation: farmer (71.7%) ・Education: No graduated from primary school (56.7%) ・Organization: Group of traditional leaders (3.3%), Village committee (3.3%), Religious organization (5.0%), Farmers Group (6.7%), No member (73.3%)
(6) Food shortage Period	October - February
(7) Frequency of meals (times/day)	・Normal (N): 2.9 ・Food shortage (FS): 2.1
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 2.7→1.5, Corn:0.9→0.6, Beans:0.5→0.3, Cassava: 0.8 →0.8, Kontas: 0.6→0.6, Banana:0.6→0.6
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 5.7 ・Home garden: 0.1, Fixed upland without soil conservation: 0.5, Fixed upland with soil conservation: 0.2, Shifting cultivation: 0.4, Coffee plantation: 1.4, Fallow area for shifting cultivation: 1.2, Forest: 1.2, Grazing place: 0.8
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 100%, Fixed upland without soil conservation: 65 %, Fixed upland with soil conservation: 3.3%, Shifting cultivation: 73.3 %, Coffee plantation: 83.3 %, Fallow area for shifting cultivation: 68.3 %, Forest: 28.3 %, Grazing place: 20.0 %
(3) Shifting cultivation practices – Period of using area before shifting (years)	1.8
(4) Shifting cultivation practices – Fallow period (years)	2.2
(5) Shifting cultivation practices – use of the same site after fallowing the area	Yes (85 %)

Table-1 (1) Fact sheet on socio-economic and agriculture situations in Suco Madabeno

Items (unit)	Data
4. Livelihood and income/expenditure	
4.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 845.8 ・Breakdown: Selling maize: 11.5, Selling tubers 47.5, Selling coffee 219.4, Selling fruits: 28.4, Selling livestock products: 17.5, Selling timber: 11.8, Selling NTFP: 1.3, Salary from permanent job: 281.0, Wage from temporary job: 55.3, Private business: 61.6, Remittance from family members: 68.7 and Others(e.g., subsidies): 41.8.
(2) Annual expenditure (USD/HH)	・Total expenditure: 368.9 ・Breakdown: Food: 218.5, Health: 16.1, Education: 24.04, Clothes: 66.8, Firewood or other fuels: 43.5
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 33.9 ・Breakdown: Livestock: 0.8, Housing(improvement/repair): 14.7, Household appliance: 16.8, Private business: 1.6
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 95% and No planting: 5 %), Cassava (Mono: 1.7 %, Mix: 83.3% and No planting 8.3 %), Sweet potato (Mono: 1.7 %, Mix: 86.7 % and No planting: 1.7 %), Taro (Mix: 35%), Coffee (Arabica: Mix: 6.7%, Separated: 71.7%),
(2) Major fruits (% of HHs planting)	Mango (78%) and Banana (77%)
(3) Gross cropped area (ha/HH)	Maize: 0.5, Cassava: 0.9, Sweet potato: 0.5, Taro: 0.2, Coffee (Arabica): 0.6
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 47.8 kg/ha, Cassava: 0.8 bunches/ha, Sweet potato: 9.2 bunches/ha, Taro 27.1 kg/ha, Coffee (Arabica) 488.2 trees/HH, Mango 6.7 trees/HH, Banana 10.7 trees/HH
(5) Seeds (type, availability and source)	・Type: Local variety ・Volume: Sufficient/not sufficient but still available. ・Seed source: Most of seeds used is derived from their own reserves, except those of cassava procured outside their village.
(6) Fertilizers/Insecticide	No organic/chemical fertilizers, insecticides and fungicides are applied.
(7) Major causes of crop damages	Animals, pest, heavy rain and wind
(8) Yield of major crops (kg/ha)	Maize: 369.3, Cassava: 274.1, Sweet potato 337.4, Taro: 166.5, Coffee (Arabica): 569.7
(9) Mode of post-harvesting	Put above the fire for maize
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 6.6, Cassava: 3.2 Sweet potato: 4.0, Taro: 5.8, Coffee (Arabica): 0.1, Mango: 16.5, Banana: 11.3
(11) HHs selling crops (% of HHs selling)	Maize: 16 %, Cassava: 16 %, Sweet potato: 15 %, Taro 19%, Coffee (Arabica): 92 %, Mango: 47 %, Banana: 59 %

Table-1 (1) Fact sheet on socio-economic and agriculture situations in Suco Madabeno

Items (unit)	Data
(12) Unit price of major crops (USD/kg) (2011)	Maize: 0.5, Cassava: 0.1, Sweet Potato: 0.1, Taro: 0.1, Coffee (Arabica): 0.9, Mango: 1.0, Banana: 1.2
(13) Annual sales of major crops (USD/HH) (2011)	Maize: 11.5, Cassava: 8.5, Sweet potato 16.7, Taro: 2.3, Coffee (Arabica): 219.7, Mango 20.6, Banana: 5.7
(14) Major markets for selling crops	・Coffee: Mostly taken to CCT collection point ・Fruits: Sold in the community and/or taken to Dili or sub/district bazaar ・Others: Taken to Dili or sub/district bazaar
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 0.7, Buffalo: 0.2, Goat: 2.3, Horse: 0.2, Pig: 1.7, Chicken: 3.7
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Kept in stall (55%), Forest (20%), ・Goat: Kept in stall (50%), Grass land (32%)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Kept in stall (58%), Forest (21%), ・Goat: Kept in stall (50%), Grass land (27%)
(4) HHs selling livestock (% of HHs selling)	Cattle: 4.2 %, Goat: 2.8 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 250 USD/head, Buffalo: 250 USD/head, Goat 25 USD/head
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 8.3 USD/HH, Buffalo: 8.3 USD/HH, Goat: 0.8 USD/HH
(7) Major markets for selling livestock	Taken to Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai ru (51 %), Ai samtuku (21 %), Ai bubur (13 %), Casuarina (11%), Others (4%)
(2) Time to collection site for firewood (minutes)	54.2
(3) Frequency of firewood collection (times/week)	3.6
(4) Major timber species (%)	Ai ru (100 %)
(5) Frequency of timber harvesting (times/month)	1.9
(6) HHs selling timber (% of HHs selling)	5.0
(7) Annual sales of timber (USD/HH)	11.8 USD/HH
(8) Major markets for selling timber	Sold in community as well as to traders coming to the village
4.5. NTFP	
(1) Major NTFPs (% of HHs producing)	Bamboo (13 %), Honey (2 %)
(2) Harvest season of NTFP	Bamboo: May to Aug, Honey: Feb to Apr
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Bamboo (25 %), Honey (0%)
(4) Annual sales of NTFP (USD/HH) (2011)	1.3 USD/HH
(5) Major markets for selling timber	Taken to Dili

Note*1: Progress Report (1), JICA Project Team, 2011

Table- 1 (2) Fact sheet on socio-economic and agriculture situations in Suco Talitu

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Laulara Sub-district
(2) Number of sub-villages (aldeias)*1	4 sub-villages (Aldeia Talitu, Casa Manatutu, Quelae and Fatukhun)
(3) Total area*1 (sq km)	22.82
(4) Total population*1 (person)	1,122
(5) Total number of household (HH) s*1	199
(6) Major languages	Tetun and Mambae
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (26.7 %), 1975-1999 (40.0 %), 1999-2002 (15.0 %), 2002-2010 (8.3 %), After 2010 (8.3 %)
(2) Number of HH members (person)	7.1
(3) Average age of HH members (years old)	21.7
(4) Number of members under working age (14-65 years old) (person)	5.5
(5) Features of head of HHs	・Occupation: farmer (65.0%), no job (16.7 %), salary worker (15.0 %), ・Education: No graduated from primary school (68.3 %), Graduated from high school (11.7 %) ・Organization: Group of traditional leaders (8.3%), Village committee (5.0%), Women's union (3.3%), No member (81.7%)
(6) Food shortage Period	October - February
(7) Frequency of meals (times/day)	・Normal (N): 2.8 ・Food shortage (FS): 1.9
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 2.2→1.2, Corn:0.8→0.4, Beans:0.6→0.4, Cassava: 0.7→0.7, Kontas: 0.6→0.6, Banana:0.6→0.5
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 4.9 ・Home garden: 0.1, Fixed upland without soil conservation: 1.2, Shifting cultivation: 0.7, Coffee plantation: 1.7, Fallow area for shifting cultivation: 1.0, Forest: 0.2, Grazing place: 0.1
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 93.3%, Fixed upland without soil conservation: 75.0 %, Shifting cultivation: 66.7 %, Coffee plantation: 91.7 %, Fallow area for shifting cultivation: 63.3 %, Forest: 28.3 %, Grazing place: 28.3 %
(3) Shifting cultivation practices – Period of using area before shifting (years)	1.9
(4) Shifting cultivation practices – Fallow period (years)	2.7
(5) Shifting cultivation practices – use of the same site after fallowing the area	Yes (83 %)

Table- 1 (2) Fact sheet on socio-economic and agriculture situations in Suco Talitu

Items (unit)	Data
4. Livelihood and income/expenditure	
.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 1238.6 ・Breakdown: Selling tubers 25.0, Selling coffee 217.5, Selling fruits/tree crops: 106.3, Selling livestock products: 46.6, Selling NTFP: 34.8, Selling handicraft/cottage industries products: 40.0, Salary from permanent job: 600.5, Wage from temporary job: 39.8, Private business: 51.2, Remittance from families: 51.2 and Others(e.g., subsidies): 18.8.
(2) Annual expenditure (USD/HH)	・Total expenditure: 557.1 ・Breakdown: Food: 352.1, Health: 9.4, Education: 54.0, Clothes: 77.0, Firewood or other fuels: 64.6
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 34.7 ・Breakdown: Farm machinery/tools 0.4, Housing(improvement/repair): 17.8, Household appliance: 15.8, Private business: 0.7
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 65% and No planting: 33.3 %), Cassava (Mono: 3.3 %, Mix: 78.3% and No planting 18.3 %), Sweet potato (Mix: 61.7 % and No planting: 38.3 %), Taro (Mix: 46.7%, No plant: 45.0 %), Coffee (Arabica: Mix: 1.7%, Separated: 91.7%),
(2) Major fruits/tree crops (% of HHs planting)	Mango (58.3 %), Banana (58.3 %), Clove (20.0 %)
(3) Gross cropped area (ha/HH)	Maize: 0.5, Cassava: 0.6, Sweet potato: 0.5, Taro: 0.2, Coffee (Arabica): 1.3
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 26.1 kg/ha, Cassava: 11.4 bunches/ha, Sweet potato: 6.3 bunches/ha, Taro: 33.3 kg/ha, Coffee (Arabica): 1,220.5 trees/HH, Mango: 7.2 trees/HH, Banana: 17.8 trees/HH, Clove: 6.2 trees/HH
(5) Seeds (type, availability and source)	・Type: Local variety ・Volume: Sufficient/not sufficient but still available. ・Seed source: Most of seeds used is derived from their own reserves, except some of maize seeds delivered by government.
(6) Fertilizers/Insecticide	No organic/chemical fertilizers, insecticides and fungicides are applied.
(7) Major causes of crop damages	Animals, heavy rain, pest and wind
(8) Yield of major crops (kg/ha)	Maize: 239.9, Cassava: 377.7, Sweet potato 314.3, Taro: 57.4, Coffee (Arabica): 224.3
(9) Mode of post-harvesting	Put above the fire for maize
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 4.2, Cassava: 3.7 Sweet potato: 2.3, Taro: 10.3, Coffee (Arabica): 0.0, Mango: 14.0, Banana: 21.4, Clove: 5.7
(11) HHs selling crops (% of HHs selling)	Maize: 0.0 %, Cassava: 8.2 %, Sweet potato: 5.4 %, Taro 53.6 %, Coffee (Arabica): 85.0 %, Mango: 14.0 %, Banana: 21.4 %, Clove 18.3 %

Table- 1 (2) Fact sheet on socio-economic and agriculture situations in Suco Talitu

Items (unit)	Data
(12) Unit price of major crops (USD/kg) (2011)	Cassava: 0.5, Sweet Potato: 0.1, Taro: 0.1, Coffee (Arabica): 1.2, Mango 1.5, Banana: 1.2, Clove: 5.0
(13) Annual sales of major crops (USD/HH) (2011)	Maize: 0.0, Cassava: 4.8, Sweet potato 2.7, Taro: 17.5, Coffee (Arabica): 212.9, Mango 7.4, Banana: 12.1, Clove: 77.5
(14) Major markets for selling crops	・Coffee: Mostly taken to CCT collection point ・Fruits: Taken to Dili or sub/district bazaar and/or sold in the community ・Others: Mostly taken to Dili and some sold at sub/district bazaar. Clove is also sold to the traders coming to the village.
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 0.6, Buffalo: 0.3 Goat: 1.4, Horse: 0.1, Pig: 2.5, Chicken: 4.6
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Forest (38%), Grassland (25%), Fallow paddy field (25%), Kept in stall (13 %) ・Buffalo: Forest (43%), Grassland (43%), Kept in stall (14 %), ・Goat: Grass land (36%), Kept in stall (32%), Forest (25%), Fallow paddy field (7%)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Forest (38%), Grassland (25%), Fallow paddy field (25%), Kept in stall (13 %) ・Buffalo: Forest (29%), Grassland (43%), Kept in stall (14 %), Fallow paddy field (14%) ・Goat: Grass land (39%), Kept in stall (32%), Forest (21%), Fallow paddy field (7%)
(4) HHs selling livestock (% of HHs selling)	Cattle: 22.2 %, Goat: 7.1 %, Pig: 4.3 %, Chicken: 4.3 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 329.0, Goat: 80.0, Pig: 87.5, Chicken: 30.0
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 28.8, Goat: 7.1, Pig: 5.8, Chicken: 4.8
(7) Major markets for selling livestock	Sold in community/to the traders coming to the suco, and/or taken to Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai ru (37 %), Ai samtuku (38 %), Ai bubur (18 %), Casuarina (5%), Ai na (2 %), Others (1%)
(2) Time to collection site for firewood (minutes)	54.6
(3) Frequency of firewood collection (times/week)	3.6
(4) Major timber species (%)	Ai ru (100 %)
(5) Frequency of timber harvesting (times/month)	1.5
(6) HHs selling timber (% of HHs selling)	0.0
(7) Annual sales of timber (USD/HH)	0 USD/HH
(8) Major markets for selling timber	-

Table- 1 (2) Fact sheet on socio-economic and agriculture situations in Suco Talitu

Items (unit)	Data
4.5. NTFP	
(1) Major NTFPs (% of HHs producing)	Tua Mutin (17 %), Bamboo (10%)
(2) Harvest season of NTFP	Tua Mutin: Aug to Dec, Bamboo: June to Nov
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Tua Mutin (100 %), Bamboo (0%)
(4) Annual sales of NTFP (USD/HH) (2011)	34.8 USD/HH
(5) Major markets for selling timber	Taken to Dili

Note*1: Progress Report (1), JICA Project Team, 2011

Table-1 (3) Fact sheet on socio-economic and agriculture situations in Suco Tohumeta

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Laulara Sub-district
(2) Number of sub-villages (aldeias)*1	3 sub-villages (Aldeia Tohumeta, Berleumeta and Acaderu)
(3) Total area*1 (sq km)	7.67
(4) Total population*1 (person)	743
(5) Total number of household (HH) s*1	111
(6) Major languages	Tetun and Mambae
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (53.3 %), 1975-1999 (15.0 %), 1999-2002 (18.3 %), 2002-2010 (13.3 %), After 2010 (0.0 %)
(2) Number of HH members (person)	7.4
(3) Average age of HH members (years old)	17.7
(4) Number of members under working age (14-65 years old) (person/HH)	4.0
(5) Features of head of HHs	・Occupation: farmer (85.0%), salary worker (10.0 %), wage labor (5.0 %) ・Education: No graduated from primary school (73.3 %), Graduated from primary school (16.7 %), Graduated from high school (5.0 %) ・Organization: Group of traditional leaders (3.3%), Village committee (1.7%), Women's union (1.7%), Farmer's group (1.7%), Religious group (1.7 %), No member (83.3%)
(6) Food shortage Period	December - February
(7) Frequency of meals (times/day)	・Normal (N): 3.0 ・Food shortage (FS): 2.2
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 2.4→1.5, Corn:0.8→0.6 Beans:0.4→0.3, Cassava: 0.5→0.5, Kontas: 0.4→0.4, Banana:0.5→0.4
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 4.7 ・Home garden: 0.3, Fixed upland without soil conservation: 0.5, Shifting cultivation: 1.1, Coffee plantation: 0.5, Fallow area for shifting cultivation: 1.8, Forest: 0.2, Grazing place: 0.3
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 100.0 %, Fixed upland without soil conservation: 45.0 %, Fixed upland with soil conservation: 1.7 %, Shifting cultivation: 86.7 %, Coffee plantation: 40.0 %, Fallow area for shifting cultivation: 65.0 %, Forest: 20.0 %, Grazing place: 21.7 %
(3) Shifting cultivation practices – Period of using area before shifting (years)	1.9
(4) Shifting cultivation practices – Fallow period (years)	2.6
(5) Shifting cultivation practices – use of the same site after fallowing the area	Yes (75 %)

Table-1 (3) Fact sheet on socio-economic and agriculture situations in Suco Tohumeta

Items (unit)	Data
4. Livelihood and income/expenditure	
4.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 1,905.2 ・Breakdown: Selling maize: 1.9, Selling vegetables: 24.9, Selling tubers: 23.0 Selling coffee: 62.5, Selling fruits/tree crops: 85.2, Selling livestock products: 172.9, Selling NTFP: 16.8, Salary from permanent job: 544.5, Wage from temporary job: 637.2, Private business: 279.8, Remittance from family members:50.4 and Others(e.g., subsidies): 6.0.
(2) Annual expenditure (USD/HH)	・Total expenditure: 741.9 ・Breakdown: Food: 469.2, Health: 8.6, Education: 83.7, Clothes: 88.0, Firewood or other fuels: 57.5, Social Activity: 34.9
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 209.6 ・Breakdown: Livestock: 23.2, Housing(improvement/repair): 74.5, Household appliance: 34.3, Transportation means: 60.9, Private business: 16.7
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 96.7% and No planting: 3.3 %), Cassava (Mono: 6.7 %, Mix: 90.0 % and No planting 3.3 %), Sweet potato (Mono: 3.3 %, Mix: 86.7 % and No planting: 10.0 %), Taro (Mix: 26.7%, No plant: 73.3 %), Leaf vegetables (Mono: 13.3 %, Mix: 15.0 %), Coffee (Arabica: Mix: 8.3%, Separated: 28.3%, No planted 63.3 %),
(2) Major fruits/tree crops (% of HHs planting)	Banana (86.7 %), Mango (85.0 %), Coconuts (65.0 %)
(3) Gross cropped area (ha/HH)	Maize: 0.8, Cassava: 0.8, Sweet potato: 0.8, Taro: 0.2, Leaf vegetables: 0.2, Coffee (Arabica): 0.3
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 20.8 kg/ha, Cassava: 9.9 bunches/ha, Sweet potato: 4.4 bunches/ha, Taro: 25.8 kg/ha, Leaf vegetables: 0.5 kg/ha, Coffee (Arabica): 140.0 trees/HH, Mango: 7.3 trees/HH, Banana: 32.4 trees/HH, Coconuts: 6.8 trees/HH
(5) Seeds (type, availability and source)	・Type: Local variety ・Volume: Sufficient/not sufficient but still available. Some HHs face lack of seeds of maize and peanuts. ・Seed source: Most of seeds used is derived from their own reserves, except some seeds of maize, cassava, sweet potato and vegetables are delivered by government and NGOs.
(6) Fertilizers/Insecticide	Most of HHs is not using organic/chemical fertilizers, insecticides and fungicides though some HHs are applying organic fertilizer to leaf vegetables, cassava and sweet potato.
(7) Major causes of crop damages	Animals, pest, disease, heavy rain and wind
(8) Yield of major crops (kg/ha)	Maize: 147.2, Cassava: 397.7, Sweet potato 104.6, Taro: 127.5, Leaf vegetables: 183.3, Coffee (Arabica): 180.3
(9) Mode of post-harvesting	Put above the fire for maize while kept the vegetable seeds in jerry can

Table-1 (3) Fact sheet on socio-economic and agriculture situations in Suco Tohumeta

Items (unit)	Data
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 4.1, Cassava: 1.2 Sweet potato: 2.5, Taro: 1.9, Leaf vegetables: 0.4, Coffee (Arabica): 1.5, Mango: 6.0, Banana: 0.6, Coconuts: 33.8
(11) HHs selling crops (% of HHs selling)	Maize: 3.3, Cassava: 25.0, Sweet potato: 8.3, Taro 6.3, Leaf vegetables: 70.6, Coffee (Arabica): 25.0, Mango: 43.3, Banana: 53.3, Coconuts: 6.7
(12) Unit price of major crops (USD/kg) (2011)	Maize: 0.8, Cassava: 0.3, Sweet Potato: 0.4, Taro: 0.5, Leaf vegetables: 1.1, Coffee (Arabica): 1.5, Mango 0.5, Banana: 0.6, Coconuts: 0.3
(13) Annual sales of major crops (USD/HH) (2011)	Maize: 1.6, Cassava: 19.5, Sweet Potato: 3.3, Taro: 0.8, Leaf vegetables: 40.5, Coffee (Arabica): 62.6, Mango 43.5, Banana: 40.5, Coconuts: 2.3
(14) Major markets for selling crops	・Coffee: Mostly taken to Dili and some to CCT collection point ・Fruits: Mostly taken to Dili and some taken sub/district bazaar and/or sold in the community ・Others: All the production of staple crops and vegetables are taken to Dili
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 0.8, Buffalo: 0.2 Goat: 2.5, Horse: 0.2, Pig: 2.9, Chicken: 9.5
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Kept in stall (40 %), Grassland (33 %), Forest (27 %) ・Buffalo: Grassland (33 %), Kept in stall (33 %), Forest (17 %), Fallow paddy field (17 %) ・Goat: Kept in stall (58 %), Grass land (27 %), Forest (15 %)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Kept in stall (40 %), Grassland (40 %), Forest (20 %) ・Buffalo: Grassland (33 %), Kept in stall (33 %), Forest (33 %), ・Goat: Kept in stall (46 %), Grass land (33 %), Forest (15 %), Fallow paddy field (6 %)
(4) HHs selling livestock (% of HHs selling)	Cattle: 53.3 %, Buffalo: 16.7 %, Goat: 33.3 %, Pig: 13.2 %, Chicken: 27.3 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 376.3, Buffalo: 500.0, Goat: 62.7, Pig: 143.6, Chicken: 11.7
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 94.1, Buffalo: 8.3, Goat: 31.4, Pig: 31.1, Chicken: 17.5
(7) Major markets for selling livestock	Sold in community/to the traders coming to the suco, and/or taken to Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai ru (48%), Ai samtuku (32 %), Ai bubur (6 %), Teak (1%), Others (13%)
(2) Time to collection site for firewood (minutes)	45.0
(3) Frequency of firewood collection (times/week)	2.4
(4) Major timber species (%)	Ai ru (100 %)
(5) Frequency of timber harvesting (times/month)	4.2
(6) HHs selling timber (% of HHs selling)	0.0

Table-1 (3) Fact sheet on socio-economic and agriculture situations in Suco Tohumeta

Items (unit)	Data
(7) Annual sales of timber (USD/HH)	0 USD/HH
(8) Major markets for selling timber	-
4.5. NTFP	
(1) Major NTFPs (%% of HHs producing)	Tua Mutin (5 %)
(2) Harvest season of NTFP	Nov to Apr
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Tua Mutin (100 %)
(4) Annual sales of NTFP (USD/HH) (2011)	16.8 USD/HH
(5) Major markets for selling timber	Taken to Dili

Note*1: Progress Report (1), JICA Project Team, 2011

Table-1 (4) Fact sheet on socio-economic and agriculture situations in Suco Faturasa

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Remexio Sub-district
(2) Number of sub-villages (aldeias)*1	4 sub-villages (Aldeia Fakulau, Kaitaso, Berliso and Remerhei)
(3) Total area*1 (sq km)	48.22
(4) Total population*1 (person)	1,331
(5) Total number of household (HH) s*1	249
(6) Major languages	Tetun and Mambae (61.7%), Tetun only (21.7%), Tetun and Indonesia (10 %), Tetun, Indonesian and Mambae (6.7%)
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (55.0 %), 1975-1999 (28.3 %), 1999-2002 (6.7 %), 2002-2010 (10.0 %), After 2010 (0.0 %)
(2) Number of HH members (person)	7.1
(3) Average age of HH members (years old)	19.7
(4) Number of members under working age (14-65 years old) (person/HH)	3.0
(5) Features of head of HHs	・Occupation: farmer (96.7%), salary worker (3.3 %) ・Education: No graduated from primary school (86.7 %), Graduated from primary school (10.0 %), Graduated from secondary school (3.3 %) ・Organization: Group of traditional leaders (1.7%), Village committee (3.3%), , Farmer's group (55.0 %), Religious group (3.3 %), No member (36.7%)
(6) Food shortage Period	November - February
(7) Frequency of meals (times/day)	・Normal (N): 2.9 ・Food shortage (FS): 1.9
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 1.8→1.0, Corn:0.8→0.7 Beans:0.7→0.5, Cassava: 0.6→0.5, Kontas: 0.6→0.5, Banana:0.6→0.6
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 5.9 ・Home garden: 0.3, Fixed upland without soil conservation: 1.5, Fixed upland with soil conservation: 0.5, Shifting cultivation*2: 0.03, Coffee plantation: 0.7, Fallow area for shifting cultivation: 0.01, Forest: 1.1, Grazing place: 1.7
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 95.0 %, Fixed upland without soil conservation: 83.3 %, Fixed upland with soil conservation: 25.0 %, Shifting cultivation*2: 1.7 %, Coffee plantation: 71.7 %, Fallow area for shifting cultivation: 1.7 %, Forest: 55.0 %, Grazing place: 81.7 %
(3) Shifting cultivation practices*2 – Period of using area before shifting (years)	2.0
(4) Shifting cultivation practices*2 – Fallow period (years)	No answer

Table-1 (4) Fact sheet on socio-economic and agriculture situations in Suco Faturasa

Items (unit)	Data
(5) Shifting cultivation practices*2 – use of the same site after fallowing the area	No (100 %)
4. Livelihood and income/expenditure	
4.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 829.0 ・Breakdown: Selling maize: 8.1, Selling tubers: 42.1 Selling coffee: 77.2, Selling fruits/tree crops: 68.1, Selling livestock products: 292.7, Selling NTFP: 36.9, Salary from permanent job: 114.4, Wage from temporary job: 45.1, Private business: 25.5, Remittance from family members: 45.4 and Others(e.g., subsidies): 68.6.
(2) Annual expenditure (USD/HH)	・Total expenditure: 476.7 ・Breakdown: Food: 246.3, Health: 4.9, Education: 51.5, Clothes: 105.3, Firewood or other fuels: 22.5, Social Activity: 46.2
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 324.7 ・Breakdown: Livestock: 19.1, Farm machinery/tools: 1.0, Housing(improvement/repair): 15.0, Household appliance: 33.5, Transportation means: 14.2, Private business: 10.7, Others: 231.1
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 100.0 %), Cassava (Mono: 1.7 %, Mix: 96.7%), Sweet potato (Mono: 3.3 %, Mix: 91.7 % and No planting: 5.0 %), Groundnuts (Mono: 63.3 %, Mix: 6.7 %) Leaf vegetables (Mix: 1.7 %), Taro (Mix: 3.3%,), Coffee (Arabica: Mix: 15.0 %, Separated: 55.0 %, No planted 30.0 %, Robusta: Mix: 15.0 %, Separated 8.3 %, No planted: 76.7 %),
(2) Major fruits/tree crops (% of HHs planting)	Mango (90.0 %), Banana (98.3 %), Citrus (51.7 %)
(3) Gross cropped area (ha/HH)	Maize: 1.0, Cassava: 1.0, Sweet potato: 1.0, Groundnuts: 1.0, Leaf vegetables: 0.01, Taro: 0.02, Coffee (Arabica: 0.6, Robusta: 0.2)
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 27.5 kg/ha, Cassava: 199.2 stick/ha (8.0 branch/ha), Sweet potato: 692.5 stick/HH (6.9 branch/ha), Groundnuts: 10.3 kg/ha, Taro: 130.0 kg/ha, Coffee (Arabica): 367.7 trees/HH, Coffee (Robusta): 102.5 trees/HH, Mango: 8.8 trees/HH, Banana: 16.3 trees/HH, Citrus: 3.8 trees/HH
(5) Seeds (type, availability and source)	・Type: Local variety and some improved seeds only for maize ・Volume: Sufficient/not sufficient but still available. Some HHs face lack of seeds of cassava and sweet potato. ・Seed source: Most of seeds used is derived from their own reserves.
(6) Fertilizers/Insecticide	Most of HHs considers they are using organic fertilizers, such as grass, leaves (Albizia and Casuarina) and animal dung.
(7) Major causes of crop damages	Pest, animal, disease, drought, heavy rain and wind
(8) Yield of major crops (kg/ha)	Maize: 461.8, Cassava: 473.4, Sweet potato 357.5, Taro: 500.0, Leaf vegetables: 200.0, Coffee (Arabica): 204.8, Coffee (Robusta): 105.0

Table-1 (4) Fact sheet on socio-economic and agriculture situations in Suco Faturasa

Items (unit)	Data
(9) Mode of post-harvesting	Put above the fire for maize while kept the cassava and sweet potato in farm
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 7.3, Cassava: 7.9, Sweet potato: 9.4, Groundnuts: 6.8, Leaf vegetable: 5.0, Taro: 8.3, Coffee (Arabica: 9.3, Robusta: 7.3), Mango: 12.8, Banana: 8.6, Citrus: 8.9
(11) HHs selling crops (% of HHs selling)	Maize: 18.3, Cassava: 20.3, Sweet potato: 14.0, Groundnuts: 50.0, Leaf vegetable: 0.0, Taro: 0.0, Coffee (Arabica: 46.7, Robusta: 11.9), Mango: 90.0, Banana: 98.3, Citrus: 51.7
(12) Unit price of major crops (USD/kg) (2011)	Maize: 0.8, Cassava: 0.7, Sweet potato: 0.5, Groundnuts: 21.6, Coffee (Arabica: 1.3, Robusta: 1.2), Mango: 0.6, Banana: 0.8, Citrus: 0.9
(13) Annual sales of major crops (USD/HH) (2011)	Maize: 8.1, Cassava: 11.8, Sweet potato: 5.1, Groundnuts: 25.2, Coffee (Arabica: 56.5, Robusta: 20.6), Mango: 12.5, Banana: 8.9, Citrus: 36.5
(14) Major markets for selling crops	・Coffee: Mostly taken to Dili and CCT collection point, while some sold at the sub/district bazzar ・Fruits: Taken to Dili and sub/district bazaar, and sold in the community. In case of citrus, traders are coming to suco. ・Others: Staple crops harvested are taken to sub/district bazzar and sold to the traders coming to the suco. Some are also taken to Dili.
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 1.7, Buffalo: 1.2 Goat: 3.4, Horse: 1.2, Pig: 2.9, Chicken: 9.5
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Forest (52 %), Kept in stall (33 %), Grassland (11 %) ・Buffalo: Forest (57 %), Grassland (29%), Kept in stall (10 %), ・Goat: Kept in stall (36 %), Grass land (33 %), Forest (21 %) ・Horse: Kept in stall (45 %), Forest (29%), Grass land (16 %)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Forest (56 %), Kept in stall (30 %), Grassland (11 %) ・Buffalo: Forest (62 %), Grassland (24%), Kept in stall (10 %), ・Goat: Kept in stall (36 %), Grass land (31 %), Forest (24 %) ・Horse: Kept in stall (48 %), Forest (32%), Grass land (10 %)
(4) HHs selling livestock (% of HHs selling)	Cattle: 55.6 %, Buffalo: 28.6 %, Goat: 14.3 %, Horse: 22.6 %, Pig: 15.0 %, Chicken: 54.4 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 271.7, Buffalo: 266.7, Goat:70.0, Horse: 141.4, Pig: 141.1, Chicken: 13.3
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 117.3, Buffalo: 67.5, Goat: 19.5, Horse: 21.5, Pig: 25.3, Chicken: 38.8
(7) Major markets for selling livestock	Sold in community/to the traders coming to the suco, and/or taken to sub/district bazzar and/or Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai ru (27%), Ai bubur (45 %), Ai samtuku (20 %), casuarina (5%), Ai na (2%), Others (2%)
(2) Time to collection site for firewood (minutes)	58.0
(3) Frequency of firewood collection (times/week)	3.3
(4) Major timber species (%)	Ai bubur (45%), Ai ru (38 %), casuarinas (9%), Ai kakeu (7%), Ai samtuku (1 %)

Table-1 (4) Fact sheet on socio-economic and agriculture situations in Suco Faturasa

Items (unit)	Data
(5) Frequency of timber harvesting (times/month)	5.3
(6) HHs selling timber (% of HHs selling)	0.0
(7) Annual sales of timber (USD/HH)	0 USD/HH
(8) Major markets for selling timber	-
4.5. NTFP	
(1) Major NTFPs (%% of HHs producing)	Bamboo (70%), Honey (67%), Mushroom (7%), Ratan (3%)
(2) Harvest season of NTFP	Bamboo : Feb-Mar, Honey : Apr-May, Mushroom : Oct-Mar, Ratan : Aug-Sep
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Bamboo (2%), Honey (85%), Mushroom (100%), Ratan (0%)
(4) Annual sales of NTFP (USD/HH) (2011)	Bamboo :0.8 USD/HH, Honey: 36.1 USD/HH, Mushroom: n/a
(5) Major markets for selling timber	Taken to sub/district bazzar and/or Dili. In case of Honey, some traders are coming to suco.

Note*1: Progress Report (1), JICA Project Team, 2011

*2: The respondents are likely to consider "shifting cultivation" as slash and burn practices, not rotating farming.

Table-1(5) Fact sheet on socio-economic and agriculture situations in Suco Fadabloco

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Remexio Sub-district
(2) Number of sub-villages (aldeias)*1	4 sub-villages (Aldeia Lilitei,Liquica, Raifato and, Rileu)
(3) Total area*1 (sq km)	17.64
(4) Total population*1 (person)	2,054
(5) Total number of household (HH) s*1	354
(6) Major languages	Tetun and Mambae (90%), Tetun, Indonesian and Mambae (8%), Tetun only (2%)
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (83 %), 1975-1999 (17 %)
(2) Number of HH members (person)	7.3
(3) Average age of HH members (years old)	28.3
(4) Number of members under working age (14-65 years old) (person/HH)	4.6
(5) Features of head of HHs	・Occupation: farmer (93%), salary worker (5 %), private business (2%) ・Education: No graduated from primary school (78 %), Graduated from primary school (13 %), Graduated from secondary school (8 %)
(6) Food shortage Period	October - February
(7) Frequency of meals (times/day)	・Normal (N): 2.9 ・Food shortage (FS): 2.0
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 1.8→1.0, Corn:1.0→0.7 Beans:0.7→0.5, Cassava: 1.0→0.8, Kontas: 0.7→0.6, Banana:0.8→0.7
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 5.1 ・Home garden: 0.02, Fixed upland without soil conservation: 1.7, Fixed upland with soil conservation: 0.2, Coffee plantation: 1.5, Fallow area for shifting cultivation: 0.3, Forest: 0.5, Grazing place: 0.8
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 78 %, Fixed upland without soil conservation: 92 %, Fixed upland with soil conservation: 15 %, Shifting cultivation*2: 0 %, Coffee plantation: 87 %, Fallow area for shifting cultivation: 17 %, Forest: 27 %, Grazing place: 45 %
(3) Shifting cultivation practices*2 – Period of using area before shifting (years)	No practice of shifting cultivation
(4) Shifting cultivation practices*2 – Fallow period (years)	ditto
(5) Shifting cultivation practices*2 – use of the same site after fallowing the area	ditto

Table-1(5) Fact sheet on socio-economic and agriculture situations in Suco Fadabloco

Items (unit)	Data
4. Livelihood and income/expenditure	
.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 953.5 ・Breakdown: Selling maize: 2.4, Selling vegetables: 62.6, Selling tubers: 24.2, Selling coffee: 167.9, Selling fruits/tree crops: 189.7, Selling livestock products: 100.4, Selling NTFP: 3.4, Selling handicraft/other industry products: 4.4, Salary from permanent job: 99.1, Wage from temporary job: 48.4, Private business: 76.7, Remittance from family members: 43.7 and Others(e.g., subsidies): 130.7
(2) Annual expenditure (USD/HH)	・Total expenditure: 565.6 ・Breakdown: Food: 227.5, Health: 5.6, Education: 78/0, Clothes: 109.3, Firewood or other fuels: 21.2, Social Activity: 124.0
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 373.6 ・Breakdown: Livestock: 27.5, Farm machinery/tools: 3.6, Housing(improvement/repair): 30.1, Household appliance: 29.1, Land: 0.8, Transportation means: 4.0, Private business: 34.2, Others: 244.3
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 100.0 %), Cassava (Mono: 2 %, Mix: 97 %, No plant: 1%), Sweet potato (Mix: 95 % and No planting: 5 %), Red bean (Mono: 15%, Mix: 15%, No plant: 10%) Soybean (Mix: 13%) Groundnuts (Mono: 20%, Mix: 3%)
(2) Major fruits/tree crops (% of HHs planting)	Banana (95 %), Mango (93 %), Citrus (80 %),
(3) Gross cropped area (ha/HH)	Maize: 1.0, Cassava: 1.0, Sweet potato: 0.9, Red bean: 0.3, Soybean: 0.1, Groundnuts: 0.2, Coffee (Arabica): 0.9, Coffee (Robusta): 0.3
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 25.4 kg/ha, Cassava: 204.2 stick/ha, Sweet potato: 486.7 stick/ha, Red bean: 2.1 kg/ha, Soybean: 0.6 kg/ha, Groundnuts: 1.8 kg/ha, Coffee (Arabica): 829.7 trees/HH, Coffee (Robusta): 230.8 trees/HH, Banana: 23.2. tree/HH, Mango: 10.4 tree/HH, Citrus: 8.9 tree/HH
(5) Seeds (type, availability and source)	・Type: Local variety ・Volume: Sufficient/not sufficient but still available. ・Seed source: Most of seeds used is derived from their own reserves.
(6) Fertilizers/Insecticide	Most of HHs considers they are using organic fertilizers, such as grass, leaves (Albizia and Casuarina) and animal dung.
(7) Major causes of crop damages	Pest, disease, heavy rain, wind, animal, disease and drought
(8) Yield of major crops (kg/ha)	Maize: 504.2, Cassava: 420.9, Sweet potato: 329.9, Redbean: 61.3, Soybean: 36.8, Groundnuts: 36.8, Coffee (Arabica): 228.8, Coffee (Robusta): 204.7
(9) Mode of post-harvesting	Put above the fire for maize while the cassava and sweet potato kept in farm

Table-1(5) Fact sheet on socio-economic and agriculture situations in Suco Fadabloco

Items (unit)	Data
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 8.6, Cassava: 9.7, Sweet potato: 11.4, Red bean: 9.7, Soybean: 22.8, Groundnuts: 5.6, Coffee (Arabica): 13.2, Coffee (Robusta): 36.3, Banana: 10.7, Mango: 12.7, Citrus: 5.3
(11) HHs selling crops (% of HHs selling)	Maize: 5.0, Cassava: 20.3, Sweet potato: 14.0, Groundnuts: 21.4, Coffee (Arabica): 92.2, Coffee (Robusta): 88.9, Banana: 57.9, Mango: 71.4, Citrus: 77.1
(12) Unit price of major crops (USD/kg) (2011)	Maize: 0.6, Cassava: 0.3, Sweet potato: 0.3, Groundnuts: 0.8, Coffee (Arabica): 1.4, Coffee (Robusta): 1.0, Banana: 0.4, Mango: 0.4, Citrus: 0.6
(13) Annual sales of major crops (USD/HH) (2011)	Maize: 2.5, Cassava: 10.5, Sweet potato: 6.5, Groundnuts: 7.1, Coffee (Arabica): 133.2, Coffee (Robusta): 34.7, Banana: 16.9, Mango: 61.2, Citrus: 108.4
(14) Major markets for selling crops	・Coffee: Mostly taken to CCT collection point and/or Dili ・Fruits: Mostly Taken to Dili, while some sold at sub/district bazaar, and/or in the community. ・Others: Staple crops harvested are taken to Dili and/or sub/district bazzar. In case for maize, most of products are sold in the community.
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 1.1, Buffalo: 0.2 Goat: 2.8, Horse: 0.6, Pig: 3.1, Chicken: 8.3
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Forest (30 %), Grassland (25 %), Fallow land (25%), Kept in stall (20 %) ・Buffalo: Grassland (50%), Fallow land (33 %), Forest (17%) ・Goat: Kept in stall (45 %), Grass land (32 %), Fallow land (16%), Forest (4 %) ・Horse: Kept in stall (45 %), Grass land (23 %), Fallow land (18%), Forest (9%)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Forest (35 %), Grassland (25 %), Fallow land (25%), Kept in stall (15 %) ・Buffalo: Grassland (50%), Fallow land (33 %), Forest (17%) ・Goat: Kept in stall (45 %), Grass land (32 %), Fallow land (16%), Forest (7 %) ・Horse: Kept in stall (32 %), Grass land (27 %), Fallow land (18 %), Forest (18 %)
(4) HHs selling livestock (% of HHs selling)	Cattle: 20.0 %, Buffalo: 0.0 %, Goat: 11.4 %, Horse: 9.1 %, Pig: 28.1 %, Chicken: 44.4 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 181.3, Goat:30.0, Horse: 147.5, Pig: 62.0, Chicken: 12.0
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 18.3, Goat: 7.3, Horse: 4.9, Pig: 39.3, Chicken: 30.5
(7) Major markets for selling livestock	Mostly sold in community/to the traders coming to the suco, while some taken to sub/district bazzar and/or Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai ru (19.8 %), Ai bubur (34.6 %), Ai samtuku (27.2 %), Casuarina (13.6%), Teak (0.6%), Others (4.3%)
(2) Time to collection site for firewood (minutes)	76.1
(3) Frequency of firewood collection (times/week)	3.1

Table-1(5) Fact sheet on socio-economic and agriculture situations in Suco Fadabloco

Items (unit)	Data
(4) Major timber species (%)	Ai bubur (38%), Ai ru (29 %), Casuarina (29%), Ai samtuku (3 %), Ai kakeu (1%)
(5) Frequency of timber harvesting (times/month)	6.7
(6) HHs selling timber (% of HHs selling)	0.0
(7) Annual sales of timber (USD/HH)	0 USD/HH
(8) Major markets for selling timber	-
4.5. NTFP	
(1) Major NTFPs (% of HHs producing)	Bamboo (78%), Honey (13%), Mushroom (7%)
(2) Harvest season of NTFP	Bamboo : Feb-Mar, Honey : Apr-May, Mushroom : Jan-Feb and Apr-May
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Honey (63 %)
(4) Annual sales of NTFP (USD/HH) (2011)	3.4 USD/HH
(5) Major markets for selling timber	Taken to Dili.

Note*1: Progress Report (1), JICA Project Team, 2011

*2: The respondents are likely to consider "shifting cultivation" as slash and burn practices, not rotating farming.

Table-1(6) Fact sheet on socio-economic and agriculture situations in Suco Hautoho

Items (unit)	Data
1. General	
(1) Administrative section	Aileu District, Remexio Sub-district
(2) Number of sub-villages (aldeias)*1	3 sub-villages (Aldeia Lebutu, Ai butihun and Ramerhei)
(3) Total area*1 (sq km)	15.22
(4) Total population*1 (person)	1,066
(5) Total number of household (HH) s*1	201
(6) Major languages	Tetun and Mambae (90%), Tetun only (7%), Tetun, Indonesian and Mambae (2%), Indonesian only (2%)
2. General features of HHs	
(1) Settlement years of HHs (% of HHs to total)	Before 1975 (62 %), 1975-1999 (26%), 1999-2002 (5%), 2002-2010 (7%)
(2) Number of HH members (person)	6.9
(3) Average age of HH members (years old)	21.0
(4) Number of members under working age (14-65 years old) (person/HH)	3.8
(5) Features of head of HHs	・Occupation: farmer (90%), wage labor (5%), private business salary worker (5 %), private business (2%) ・Education: No graduated from primary school (77 %), Graduated from primary school (12 %), Graduated from high school (8 %), Graduated from secondary school (3 %) ・Organization: No members (78.3%), Village committee (8%), Group of traditional leaders (5%), Others (5%), Water user groups (2%), Religious organization (2%)
(6) Food shortage Period	October - February
(7) Frequency of meals (times/day)	・Normal (N): 2.9 ・Food shortage (FS): 2.3
(8) Frequency of consumption of major meals (times/day)	(N→FS) Rice: 2.3→2.0, Corn:1.1→0.8 Beans:0.6→0.4, Cassava: 0.8→0.8, Kontas: 0.4→0.4, Banana:0.5→0.5
3. Land use in the village	
(1) Area of land owned by HH (ha/HH)	・Total holding size: 3.3 ・Home garden: 0.01, Fixed upland without soil conservation: 0.7, Fixed upland with soil conservation: 0.2, Coffee plantation: 1.4, Fallow area for shifting cultivation: 0.01, Forest: 0.3, Grazing place: 0.7
(2) HHs owing the land (% of HHs owing the land to total)	Home garden: 97 %, Fixed upland without soil conservation: 62 %, Fixed upland with soil conservation: 15 %, Shifting cultivation*2: 0 %, Coffee plantation: 83 %, Fallow area for shifting cultivation: 1.7 %, Forest: 20 %, Grazing place: 42 %
(3) Shifting cultivation practices*2 – Period of using area before shifting (years)	2.0 years
(4) Shifting cultivation practices*2 – Fallow period (years)	2.5 years

Table-1(6) Fact sheet on socio-economic and agriculture situations in Suco Hautoho

Items (unit)	Data
(5) Shifting cultivation practices*2 – use of the same site after fallowing the area	Yes (100%)
4. Livelihood and income/expenditure	
.1. Income and expenditure	
(1) Annual income (USD/HH)	・Total income: 760.3 ・Breakdown: Selling tubers: 2.8, Selling coffee: 144.3, Selling fruits/tree crops: 147.2, Selling livestock products: 170.8, Selling NTFP: 1.1, Salary from permanent job: 74.3, Wage from temporary job: 38.6, Private business: 105.9, Remittance from family members: 60.9 and Others(e.g., subsidies): 14.3
(2) Annual expenditure (USD/HH)	・Total expenditure: 417.7 ・Breakdown: Food: 179.6, Health: 13.4, Education: 32.5, Clothes: 92.4, Firewood or other fuels: 8.9, Social Activity: 12.4, Traditional activity: 78.6
(3) Investment of productive and fixed assets (USD/HH)	・Total amount: 336.0 ・Breakdown: Livestock: 34.7, Farm machinery/tools: 16.2, Housing(improvement/repair): 46.6, Household appliance: 40.9, Land: 0.9, Transportation means: 8.3, Private business: 38.2, Others: 150.3
4.2. Agriculture	
(1) Major crops (Mode of cropping and % of HHs responding to total)	Maize (Mix: 98 %, No plant: 2%) Cassava (Mix: 100 %), Sweet potato (Mix: 93 % and No planting: 7 %), Groundnuts (Mono: 27%, Mix: 8%, No plant: 65%) Red bean (Mix: 32 %, No plant: 68 %)
(2) Major fruits/tree crops (% of HHs planting)	Orange (95 %), Mango (92 %), Banana (83 %)
(3) Gross cropped area (ha/HH)	Maize: 1.0, Cassava: 1.1, Sweet potato: 1.1, Groundnuts: 0.2, Red bean: 0.4 ha, Coffee (Arabica): 0.9, Coffee (Robusta): 0.2
(4) Volume of seed applied/Number of trees planted for coffee and fruits	Maize: 24.7 kg/ha, Cassava: 212.9 stick/ha (8.5 bundle/ha), Sweet potato: 709.1 stick/ha (7.1 bundle/ha), Groundnuts: 27.6 kg/ha, Red bean: 11.6 kg/ha, Coffee (Arabica): 195.0 trees/HH, Coffee (Robusta): 69.7 trees/HH
(5) Seeds (type, availability and source)	・Type: Local variety ・Volume: Sufficient/not sufficient but still available. ・Seed source: Most of seeds used is derived from their own reserves while some also procured from outside of suco.
(6) Fertilizers/Insecticide	Some of HHs considers they are using organic fertilizers, such as grass, leaves (Albizia and Casuarina) and animal dung.
(7) Major causes of crop damages	Disease, pest, heavy rain, animal and wind
(8) Yield of major crops (kg/ha)	Maize: 536.6, Cassava: 640.8, Sweet potato: 512.2, Groundnuts: 321.0, Red bean: 102.8, Coffee (Arabica): 174.8, Coffee (Robusta): 179.1
(9) Mode of post-harvesting	Put above the fire for maize while the cassava and sweet potato kept in farm

Table-1(6) Fact sheet on socio-economic and agriculture situations in Suco Hautoho

Items (unit)	Data
(10) Volume of lost during post-harvesting (% of volume lost during post-harvesting to total production)	Maize: 7.3, Cassava: 5.3, Sweet potato: 4.9, Groundnuts: 31.6, Red bean: 5.0, Coffee (Arabica): 8.9, Coffee (Robusta): 7.2, Orange: 7.2, Mango: 11.1, Banana : 6.9
(11) HHs selling crops (% of HHs selling to total HHs)	Maize: 0.0, Cassava: 1.7, Sweet potato: 1.8, Groundnuts: 4.8, Red bean: 0.0, Coffee (Arabica): 66.7, Coffee (Robusta): 11.7, Orange: 68.3, Mango: 53.3, Banana : 8.3
(12) Unit price of major crops (USD/kg) (2011)	Cassava: 1.0, Sweet potato: 1.0, Groundnuts: 1.0, Coffee (Arabica): 1.5, Coffee (Robusta): 1.3, Orange: 1.0, Mango: 0.8, Banana : 0.4
(13) Annual sales of major crops (USD/HH) (2011)	Cassava: 1.7, Sweet potato: 0.8, Groundnuts: 0.3, Coffee (Arabica): 124.1, Coffee (Robusta): 20.2, Orange: 105.1, Mango: 32.9, Banana : 1.8
(14) Major markets for selling crops	・Coffee: Mostly taken to Dili while some taken to CCT collection point and/or sold at sub/district bazzar ・Fruits: Mostly Taken to Dili, while some sold at sub/district bazaar,.In case for orange, some traders are coming to suco. ・Others: Staple crops harvested are taken to Dili and/or sub/district bazzar.
4.3. Livestock	
(1) Number of livestock owned (head/HH)	Cattle: 0.9, Buffalo: 0.2 Goat: 2.7, Horse: 0.7, Pig: 2.6, Chicken: 6.1
(2) Grazing area (% of HHs grazing in the area) in rainy seasons	・Cattle: Kept in stall (62 %), Forest (31 %), Grassland (7 %) ・Buffalo: Forest (43 %), Fallow land (43 %), Kept in stall (14 %) ・Goat: Kept in stall (55 %), Forest (42 %), Grass land (3 %) ・Horse: Kept in stall (61 %), Forest (30 %), Grass land (9 %)
(3) Grazing area (% of HHs grazing in the area) in dry seasons	・Cattle: Kept in stall (54 %), Forest (31 %), Grassland (15 %) ・Buffalo: Grassland (57 %), Forest (43%) ・Goat: Kept in stall (58 %), Forest (35 %), Grass land (3 %), Fallow land (3 %) ・Horse: Kept in stall (52 %), Forest (39 %), Grass land (9 %)
(4) HHs selling livestock (% of HHs selling)	Cattle: 62 %, Buffalo: 14 %, Goat: 32 %, Horse: 0 %, Pig: 16 %, Chicken: 46 %
(5) Unit price of major livestock (USD/head) (2011)	Cattle: 198.1, Buffalo: 400.0, Goat:79.0, Horse: 0.0, Pig: 128.3, Chicken: 9.6
(6) Annual sales of livestock (USD/HH) (2011)	Cattle: 73.3, Buffalo: 6.7, Goat:42.5, Horse: 0.0, Pig: 32.3, Chicken: 16.0
(7) Major markets for selling livestock	Mostly sold in community, sub/district bazzar and/or to the traders coming to the suco, while some sold in Dili
4.4. Firewood and timber	
(1) Major tree species for fire wood (% of HHs using trees for firewood)	Ai bubur (51 %), Casuarina (21%), Ai ru (16 %), Ai samtuku (4 %), Teak (2 %), Others (6 %)
(2) Time to collection site for firewood (minutes)	56.3
(3) Frequency of firewood collection (times/week)	3.3
(4) Major timber species (%)	Ai bubur (98 %), Casuarina (77%), Ai ru (63 %), Ai na (7 %)

Table-1(6) Fact sheet on socio-economic and agriculture situations in Suco Hautoho

Items (unit)	Data
(5) Frequency of timber harvesting (times/month)	4.0
(6) HHs selling timber (% of HHs selling)	0.0
(7) Annual sales of timber (USD/HH)	0 USD/HH
(8) Major markets for selling timber	-
4.5. NTFP	
(1) Major NTFPs (% of HHs producing)	Bamboo (32%), Honey (5%)
(2) Harvest season of NTFP	Bamboo : Feb-May, Honey : June-Aug
(3) HHs selling NTFPs (% of HHs selling to HHs producing)	Bamboo (16 %)
(4) Annual sales of NTFP (USD/HH) (2011)	Bamboo 1.1 USD/HH
(5) Major markets for selling timber	Taken to Dili and/or sub/district bazzar and sold to the traders coming to suco.

Note*1: Progress Report (1), JICA Project Team, 2011

*2: The respondents are likely to consider "shifting cultivation" as slash and burn practices, not rotating farming.

Appendix1-1 Results of Baseline Survey in Suco Madabeno

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun and Mambae	59	98.3%
Tetun, Mambae and Indonesian	1	1.7%
Total	60	100.0%

- General Features of Household in the village

1.2 Average of Total No. of households 7.02 persons/HH

1.3 General Features of Household members

- Average age of 18.48 years old

- Gender balance in Ave. No.of 3.75 person/HH Ave.No. of female 3.23 person/HH

- Average No. of members under working 25.22 person/HH

1.4.Main features of HH members

1.4.1 Heads of HH

Education level						Primary Occupation (Unit: person)						Organization (Unit: person)										Total	Absence (living in other place more than 3 months a year)
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Graduated from high school	Graduated from University	Others	Farmer	Wage labor	Salary worker	Private business	No job	Others	1. Members of Women's union	2. Youth organization	3. Group of Traditional Leaders	4. Water users group	5. Village committee	6. Ethnic organization	7. Religious organization	8. Farmers group	9. Others	10. No member		
34	14	12	5	1	0	43	1	5	0	10	1	0	1	2	1	2	3	3	4	0	44	60	0.0%
56.7%	23.3%	20.0%	8.3%	1.7%	0.0%	71.7%	1.7%	8.3%	0.0%	16.7%	1.7%	0.0%	1.7%	3.3%	1.7%	3.3%	5.0%	5.0%	6.7%	0.0%	73.3%	100.0%	

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)											Education (Unit: person/HH)								
	Wife	Daughter	Daughter adopted	Daughter in law	Son	Son adopted	Niece	Nefew	Grand child	Other relative	Total	No graduated from primary school	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	Active in high school	High school graduated	Active in university	Total
	0.85	2.17	0.07	0.02	2.62	0.03	0.00	0.12	0.07	0.05	5.98	2.23	1.73	0.48	0.48	0.17	0.32	0.50	0.07	5.98
	14.2%	36.2%	1.1%	0.3%	43.7%	0.6%	0.0%	1.9%	1.1%	0.8%	100.0%	37.3%	29.0%	8.1%	8.1%	2.8%	5.3%	8.4%	1.1%	100.0%

HH members	Primary Occupation (Unit: person/HH)									Organization (Unit: person)						Absence (living in other place more than 3 months a
	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	Total	1. Members of Women's union	2. Youth organization	5. Village committee	7. Religious organization	8. Farmers group	10. No member	Total	
	1.17	0.17	0.12	0.10	2.55	1.00	0.80	0.08	5.98	0.03	0.13	0.03	0.12	0.02	5.65	5.98	2.5%
	19.5%	2.8%	1.9%	1.7%	42.6%	16.7%	13.4%	1.4%	100.0%	0.6%	2.2%	0.6%	1.9%	0.3%	94.4%	100.0%	

1.4 Period of settlement of household in the village

Period of settlement	After 2010	2002-2010	1999-2002	1975-1999	Before 1975	No answer	Total
Number of HHs	1	5	5	19	29	1	60
%	1.7%	8.3%	8.3%	31.7%	48.3%	1.7%	100.0%

Appendix 1-2 Results of Baseline Survey in Suco Talitu

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun and Mambae	59	98.3%
Tetun, Mambae and others	1	1.7%
Total	60	100.0%

- General Features of Household in the village

1.2 Average of Total No. of households members: 7.12 persons/HH

1.3 General Features of Household members

- Average age of members: 21.72 years old

- Gender balance in HH: Ave. No.of Male 3.73 person/HH; Ave.No. of female 3.38 person/HH

- Average No. of members under working age (15-64 years: 5.45 person/HH

1.4.Main features of HH members

1.4.1 Heads of HH

Education level (Unit: person)						Primary Occupation (Unit: person)					Organization (Unit: person)					Total	Absence (living
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Graduated from high school	Graduated from University	Others	Farmer	Salary worker	Private business	No job	Others	1. Members of Women's union	3. Group of Traditional Leaders	5. Village committee	9. Others	10. No member		
41 68.3%	4 6.7%	3 5.0%	7 11.7%	4 6.7%	1 1.7%	39 65.0%	9 15.0%	1 1.7%	10 16.7%	1 1.7%	2 3.3%	5 8.3%	3 5.0%	1 1.7%	49 81.7%	60 100.0%	0.0%

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)								Education (Unit: person/HH)								Primary Occupation (Unit: person/HH)								Organization (Unit: person)	Absence (living in other place more than 3 months a year)
	Wife	Daughter	Son	Niece	Nefew	Grand child	Other relative	Total	No graduated from primary school	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	Active in high school	High school graduated	Total	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	Total	No member	
	0.90 14.8%	2.20 36.1%	2.60 42.6%	0.10 1.6%	0.10 1.6%	0.10 1.6%	0.10 1.6%	6.10 100.0%	1.90 31.1%	1.70 27.9%	0.50 8.2%	0.50 8.2%	0.40 6.6%	0.50 8.2%	0.60 9.8%	6.10 100.0%	1.00 16.4%	0.10 1.6%	0.20 3.3%	0.10 1.6%	3.10 50.8%	0.80 13.1%	0.70 11.5%	0.10 1.6%	6.10 100.0%	6.10	2.1%

1.4 Period of settlement of household in the village

Period of settlement	After 2010	2002-2010	1999-2002	1975-1999	Before 1975	No answer	Total
Number of HHs	5	5	9	24	16	1	60
%	8.3%	8.3%	15.0%	40.0%	26.7%	1.7%	100.0%

Appendix 1-3 Results of Baseline Survey in Suco Tohumeta

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun and [illegible]	60	100.0%
Total	60	100.0%

– General Features of Household in the village

1.2 Average of Total No. of households: 7.42 persons/HH

1.3 General Features of Household members

– Average age of members: 17.72 years old

– Gender balance in HH: Ave. No.of Male 3.98 person/HH; Ave.No. of female 3.40 person/HH

– Average No. of members under working age (15–64: 4.03 person/HH

1.4.Main features of HH members

1.4.1 Heads of

Education level						Primary Occupation (Unit: person)						Organization (Unit: person)								Total	Absence (living in other place more than 3 months a year)
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Graduated from high school	Graduated from University	Others	Farmer	Wage labor	Salary worker	Private business	No job	Others	1. Members of Women's union	3. Group of Traditional Leaders	5. Village committee	6.Ethnic organization	7. Religious group	8.Farmers Group	9. Others	10. No member		
44	10	1	3	2	0	51	3	6	0	0	0	1	2	1	1	1	1	3	50	60	0.0%
73.3%	16.7%	1.7%	5.0%	3.3%	0.0%	85.0%	5.0%	10.0%	0.0%	0.0%	0.0%	1.7%	3.3%	1.7%	1.7%	1.7%	1.7%	5.0%	83.3%	100.0%	

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)										Education (Unit: person/HH)									
	Husband	Wife	Daughter	Daughter adopted	Daughter in law	Son	Son adapted	Nefew	Niece	Other relative	Total	No graduated from primary school	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	Active in high school	High school graduated	Active in University	University graduated	Total
	0.0	0.8	2.2	0.0	0.0	3.0	0.0	0.0	0.1	0.1	6.3	2.25	2.02	0.43	0.57	0.15	0.30	0.62	0.03	0.03	6.40
	0.3%	12.8%	35.6%	0.3%	0.5%	47.9%	0.5%	0.5%	0.8%	0.8%	100.0%	35.2%	31.5%	6.8%	8.9%	2.3%	4.7%	9.6%	0.5%	0.5%	100.0%

HH members	Primary Occupation (Unit: person/HH)									Organization (Unit: person)			Absence (living in other place more than 3 months a year)
	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	Total	Youth organization	No member	Total	
	1.47	0.15	0.15	0.10	2.90	1.10	0.45	0.08	6.40	0.08	6.32	6.40	14.8%
	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	

1.5 Period of settlement of household in the village

Period of settlement	After 2010	2002–2010	1999–2002	1975–1999	Before 1975	No answer	Total
Number of HHs	0	8	11	9	32	0	60
%	0.0%	13.3%	18.3%	15.0%	53.3%	0.0%	100.0%

Appendix 1-4 Results of Baseline Survey in Suco Faturasa

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun only	13	21.7%
Tetun and [illegible]	37	61.7%
Tetun and [illegible]	6	10.0%
Tetun, Indonesian and Mambae	4	6.7%
Total	60	100.0%

– General Features of Household in the village

1.2 Average of Total No. of households 7.10 persons/HH

1.3 General Features of Household members

– Average age of members 19.66 years old

– Gender balance in HH: Ave. No.of Male 3.68 person/HH; Ave.No. of female 3.42 person/HH

– Average No. of members under working age (15–64 years old) 3.02 person/HH

1.4.Main features of HH members

1.4.1 Heads of HH

Education level			Primary Occupation (Unit:		Organization (Unit: person)					Total	Absence (living in other place more than 3 months a year)
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Farmer	Salary worker	3. Group of Traditional Leaders	5. Village committee	7. Religious Organization	8. Farmers Group	10. No member		
52	6	2	58	2	1	2	2	33	22	60	0.0%
86.7%	10.0%	3.3%	96.7%	3.3%	1.7%	3.3%	3.3%	55.0%	36.7%	100.0%	

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)											Education (Unit: person/HH)									
	Wife	Daughter	Daughter Adapted	Daughter in Law	Son	Son adopted	Son in law	Niece	Nefew	Other relative	Total	No graduated from primary school	Under literacy education program	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	High school graduated	University graduated	No response	Total
	0.95	2.05	0.02	0.06	2.36	0.02	0.05	0.10	0.12	0.37	6.10	3.20	0.07	0.22	1.88	0.02	0.60	0.03	0.00	0.08	6.10
	15.6%	33.6%	0.3%	1.0%	38.7%	0.3%	0.8%	1.6%	2.0%	6.1%	100.0%	52.5%	1.1%	3.6%	30.9%	0.3%	9.8%	0.5%	0.0%	1.3%	100.0%

HH members	Primary Occupation (Unit: person/HH)										Organization (Unit: person)								Absence (living in other place more
	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	No response	Total	Members of Women's union	Youth organization	Village committee	Religious Organization	Farmers Group	No member	No response	Total	
	1.88	0.20	0.07	0.05	2.37	0.97	0.33	0.07	0.17	6.10	0.25	0.22	0.02	0.03	0.47	4.98	0.13	6.10	20.1%
	30.9%	3.3%	1.1%	0.8%	38.8%	15.8%	5.5%	1.1%	2.8%	100.0%	4.1%	3.6%	0.3%	0.5%	7.7%	81.7%	2.1%	100.0%	

1.5 Period of settlement of household in the village

Period of settlement	2002–2010	1999–2002	1975–1999	Before 1975	Total
Number of HHs	6	4	17	33	60
%	10.0%	6.7%	28.3%	55.0%	100.0%

Section 2: Living Condition

2.1 Drinking water throughout a year

Items	2.1.1 Main water source (Multiple answers allowed)						2.1.2	2.1.3 Sufficiency			2.1.4 Quality		
	1. Piped gravity watetr	2. Springs (Natural)	3. River	4. Reservoir	5.Well (open dug well)	Total	Average distance from	1. Sufficient	2. Not sufficient	Total	1. Clean	2. Not clean	Total
Unit	No./%	No./%	No./%	No./%	No./%	No./%	minute	No./%	No./%	No./%	No./%	No./%	No./%
1) Dry season	4	35	2	10	11	62		42	18	60	57	3	60
	6.5%	56.5%	3.2%	16.1%	17.7%	100.0%	22.18	70.0%	30.0%	100.0%	95.0%	5.0%	100.0%
2) Wet season	3	37	2	8	11	61		47	13	60	51	9	60
	4.9%	60.7%	3.3%	13.1%	18.0%	100.0%	19.85	78.3%	21.7%	100.0%	85.0%	15.0%	100.0%

2.2 Food condition/Food availability

Items	2.2.1 Frequency of meals		Period of food shortage (Multiple answers)												Total
	1. Normal seasons	2. Food shortage seasons	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Unit	times/day		No.												
Food condition/Food availability			48.0	52.0	12.0	5.0	3.0	3.0	2.0	6.0	6.0	15.0	32.0	26.0	210
	2.9	1.9	22.9%	24.8%	5.7%	2.4%	1.4%	1.4%	1.0%	2.9%	2.9%	7.1%	15.2%	12.4%	100.0%

Items	2.2.2 Frequency of consumption of major foods					
	a. Rice	b. Corn	c. Beans (redbeans/long beans)	d. Cassava/Taro/Sweet potato	e. Kontas	f. Banana
Unit	times per week/ times/day					
1) Normal seasons	4.1	1.9	1.5	1.9	1.3	1.4
	1.8	0.8	0.7	0.8	0.6	0.6
% (/7 times/week)	58.8%	27.6%	21.7%	27.4%	18.3%	19.3%
2) Food shortage	2.2	1.6	1.3	2.0	1.3	1.4
	1.0	0.7	0.5	0.9	0.5	0.6
% (/7 times/week)	31.9%	22.6%	17.9%	28.6%	17.9%	19.3%

2.3 Availability of facilities in the house

Items	Availability of facilities in the house			
	a. Radio	b. TV	d. Motorcycle	j. Toilet
Unit	No. of HHs with the facilities / % to			
	19	1	4	41
	31.7%	1.7%	6.7%	68.3%
Average number of available unit per HH (unit: unit/HH)	1.1	1.0	1.0	1.0

2.4 Major diseases and

2.4.1 Children

Treatment	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																			
	2.Cold		3.Malaria		4.Dysentery		5.Diarrhea diseases		6.Denguee fever		7.Typhus fever		8.Eye disease		9.Skin diseases		10.Respiratory disease		Sub-total	
2.Buy medicine	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	100.0%	0	0.0%	0	0.0%	3	100.0%
4. Go to a village health worker in village	39	28.3%	34	24.6%	1	0.7%	33	23.9%	7	5.1%	1	0.7%	11	8.0%	3	2.2%	9	6.5%	138	100.0%
5. Go to a hospital	6	37.5%	4	25.0%	0	0.0%	5	31.3%	0	0.0%	0	0.0%	1	6.3%	0	0.0%	0	0.0%	16	100.0%
6.Apply traditional herbal medicine at	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Total	45	28.5%	39	24.7%	1	0.6%	38	24.1%	7	4.4%	1	0.6%	15	9.5%	3	1.9%	9	5.7%	158	100.0%

2.4.2 Adults

Treatment	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																			
	1.No diseases		2.Cold		3.Malaria		4.Dysentery		5.Diarrhea diseases		6.Denguee fever		8.Eye disease		9.Skin diseases		10.Respiratory disease		11. Others		Sub-total	
2.Buy medicine		0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
4. Go to a village health worker in village		0.0%	37	22.7%	40	24.5%	26	16.0%	12	7.4%	3	1.8%	15	9.2%	16	9.8%	13	8.0%	1	0.6%	163	100.0%
5. Go to a hospital		0.0%	5	35.7%	2	14.3%	1	7.1%	0	0.0%	0	0.0%	0	0.0%	5	35.7%	1	7.1%	0	0.0%	14	100.0%
6.Apply traditional herbal medicine at		0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
Total	2	1.1%	43	23.5%	42	23.0%	27	14.8%	12	6.6%	4	2.2%	17	9.3%	21	11.5%	14	7.7%	1	0.5%	183	100.0%

Section 3: Land Use

3.1 Land Use in 2010/2011

3.1.1 Current use of land

	Type of land	HHs using the land		Average of Total No. of plots used by HH	a) Land owned and used by the HHs			b) Land rented/borrowed from others		Major crops planted (Multiple answers permitted)																								Most prevailing combinations
					Average No. of Plot	Average Area per plot	Total Area/HH	Average No. of Plot	Average Area per plot	1. Paddy		2. Maize		3. Groundnuts		4. Beans		5. Sweet potato		6. Cassava		7. Leaf vegetables		8. Banana		9.Mangos		10. Others		Total						
		No.	% to total HHs				ha			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
Cultivated	A1. Home Garden	57	95.0%	1.8	1.8	1565.8 m2	0.3	0	0 m2	1	0.9%	54	47.8%	0	0.0%	3	2.7%	3	2.7%	50	44.2%	0	0.0%	2	1.8%	0	0.0%	0	0.0%	113	100.0%	Maize-Cassava
	A2. Upland (fixed) without soil conservation	50	83.3%	1.3	1.3	1.2 ha	1.5	0	0 ha	1	1.6%	33	51.6%	3	4.7%	2	3.1%	11	17.2%	9	14.1%	0	0.0%	5	7.8%	3	4.7%	3	4.7%	64	100.0%	ditto
	A3. Upland (fixed) with soil conservation	15	25.0%	0.5	0.5	1.1 ha	0.5	0	0 ha	0	0.0%	9	36.0%	1	4.0%	0	0.0%	4	16.0%	8	32.0%	0	0.0%	3	12.0%	3	12.0%	5	20.0%	25	100.0%	ditto
	A4. Shifting Cultivation	1	1.7%	0.0	0.0	1.5 ha	0.03	0	0 ha	0	0.0%	1	4.0%	0	0.0%	0	0.0%	1	4.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	8.0%	Maize-Sweet potato
	A5. Coffee Plantation	43	71.7%	0.9	0.9	0.8 ha	0.7	0	0 ha																							
Un-cultivated	B1. Currently unused but kept for shifting	1	1.7%	0.0	0.0	0.5 ha	0.01	0	0 ha																							
	B2. Forest	33	55.0%	0.7	0.7	1.6 ha	1.1	0	0 ha																							
	B3. Grazing place	49	81.7%	1.1	1.1	1.6 ha	1.7	0	0 ha																							
	SUM			6.3			5.9																									

3.1.3 Any land leased to others/unused → There is no land leased to others/unused

3.2 Shifting cultivation → 1HH answered

3.2.1 Perception/understanding on shifting cultivation

Items		Answers	
a)	Advantages of shifting cultivation	1st: High production	2nd: Stable production
b)	Disadvantages of shifting cultivation	1st: Soil erosion	2nd: Expansion of forest fires
c)	Willingness to continure shifting cultivation	Yes	reason:Increase of production
d)	Willingness to expand the area for shifting	No	reason: lack of labor
e)	Willingness to expand the area for fixed farming	No	reason: lack of labor

3.2.2 Farming practices in shifting cultivation

Items		Answers
a)	Areas used for shifting cultivation	Bush/scrub
b)	Period of using the area before shifting another place	2 years
c)	Use of the same site after fallowing the area	No
d)	Sign for reusing the fallow area	_
e)	Necessary period to show the sign mentioned above	_
f)	Major constraints in shifting cultivation practices	Limited labor

3.2.3 Use of communal land → No communal area

Section 4: Crop production

4.1 Major crops planted

	Major crops (Multiple answers permitted)																					
	0. None		1. Maize (local)		2. Maize (improved)		3.Groundnut		5. Soy bean		6. Red bean		7. Sweet potato		8. Cassava		9. Leaf vegetables		12. Others		Total	
Type of farming	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Shifting cultivation	0	0.0%	1	33.3%	0	0.0%	0	0.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	100.0%
b. Fixed upland farm	35	19.4%	41	22.8%	2	1.1%	15	8.3%	0	0.0%	0	0.0%	37	20.6%	45	25.0%	0	0.0%	5	2.8%	180	100.0%
c. Home garden	9	5.0%	51	28.3%	3	1.7%	22	12.2%	1	0.6%	0	0.0%	36	20.0%	54	30.0%	2	1.1%	2	1.1%	180	100.0%

4.2 Annual crop production

4.2.1. Cropping type

Crop	Cropping type	No.	%	Major crops to be planted in mix
a. Maize (local)	Mono	0	0.0%	
	Mix	60	100.0%	
	No plant	0	0.0%	Maize–Cassava
b. Cassava	Mono	1	1.7%	
	Mix	59	98.3%	
	No plant	0	0.0%	Cassava–Sweet potato
c. Sweet potato	Mono	2	3.3%	
	Mix	55	91.7%	
	No plant	3	5.0%	
d, Groundnuts	Mono	38	63.3%	
	Mix	4	6.7%	
	No plant	0	0.0%	Sweet potato
	No answer	18	30.0%	
e. Leaf vegetables	Mono	0	0.0%	
	Mix	1	1.7%	
	No plant	0	0.0%	Maize–Sweet potato–Cassava
	No answer	59	98.3%	
f. Taro	Mono	0	0.0%	
	Mix	2	3.3%	
	No plant	0	0.0%	Maize
	No answer	58	96.7%	

4.2.2.

Crop	Planted area	Seed volume		Total production	Yield	Return		Form of products								Total
								No reply		3 or 5 Raw		4 or 6 Dried		Others		
								No.	%	No.	%	No.	%	No.	%	
a. Maize (local)	1.0 ha/HH	27.5 kg/HH		461.8 kg/HH	461.8 kg/ha	27.5 kg/ha		0	0.0%	17	28.3%	43	71.7%	0	0.0%	60
b. Cassava	1.0 ha/HH	8.0 ikat/HH	199.2 stick/H	473.4 kg/HH	473.4 kg/ha	8.0 ikat/ha	199.2 stick/HH	0	0.0%	54	90.0%	4	6.7%	2	3.3%	60
c. Sweet potato	1.0 ha/HH	6.6 ikat/HH	657.9 stick/H	357.5 kg/HH	376.4 kg/ha	6.9 ikat/ha	692.5 stick/HH	0	0.0%	52	91.2%	4	7.0%	1	1.8%	57
d. Groundnuts	1.0 ha/HH	10.3 kg/HH		138.1 kg/HH	138.3 kg/ha	10.3 kg/ha		0	0.0%	10	28.3%	15	71.7%	17	0.0%	42
e. Leaf vegetables	0.01 ha/HH	no answer kg/HH		1.7 kg/HH	200.0 kg/ha	– kg/ha		0	0.0%	1	100.0%	0	0.0%	0	0.0%	1
f. Taro	0.02 ha/HH	2.2 kg/HH		8.3 kg/HH	500.0 kg/ha	130.0 kg/ha		0	0.0%	2	100.0%	0	0.0%	0	0.0%	2

4.2.3. Crop damages

Crop	Cause of crop damages (mutiple answers permitted)																	
	1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		6. Flood		7. Wind		8. Others		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	10	8.6%	15	12.9%	34	29.3%	20	17.2%	10	8.6%	1	0.9%	26	22.4%	0	0.0%	116	100.0%
b. Cassava	9	9.2%	12	12.2%	45	45.9%	20	20.4%	6	6.1%	0	0.0%	6	6.1%	0	0.0%	98	100.0%
c. Sweet potato	9	9.8%	16	17.4%	44	47.8%	16	17.4%	6	6.5%	0	0.0%	1	1.1%	0	0.0%	92	100.0%
d. Groundnuts	11	15.9%	13	18.8%	28	40.6%	9	13.0%	5	7.2%	0	0.0%	3	4.3%	0	0.0%	69	100.0%
e. Leaf vegetables	1	33.3%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	100.0%
f. Taro	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%

4.2.4. Marketing of the products

Crop	HHs selling the crop		Major market outlets										Form of market products								Average sold amount	Unit price	Average total sales
			1. In community		2. Sub/district bazzar		3. Go to Dili		4. Traders coming to suco		0. No response		No reply		3 or 5 Raw		4 or 6 Dried		Others				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Maize (local)	11	18.3%	1	9.1%	8	72.7%	0	0.0%	1	9.1%	1	9.1%	0	0.0%	1	9.1%	10	90.9%	0	0.0%	12.8 kg/HH	0.8 USD/kg	8.1 USD/HH
b. Cassava	12	20.3%	0	0.0%	9	75.0%	2	16.7%	3	25.0%	0	0.0%	1	8.3%	5	41.7%	6	50.0%	0	0.0%	17.0 kg/HH	0.7 USD/kg	11.8 USD/HH
c. Sweet potato	8	14.0%	0	0.0%	6	75.0%	1	12.5%	1	12.5%	0	0.0%	0	0.0%	5	62.5%	2	25.0%	1	12.5%	9.3 kg/HH	0.5 USD/kg	5.1 USD/HH
d. Groundnuts	21	50.0%	1	4.8%	17	81.0%	2	9.5%	1	4.8%	0	0.0%	0	0.0%	2	9.5%	10	47.6%	9	42.9%	27.8 kg/HH	0.8 USD/kg	25.2 USD/HH
e. Leaf vegetables	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
f. Talas	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH

4.2.5. Seed availability and Seed preservation

Crop	Seed type				Seed availability								Seed source(Multiple answers allowed)													
	Local		Improved		0. No reply		1. Sufficient		2. Not sufficient but still available		3.Short		2. Neighbour		3. NGOs		4. Community Seed bank		5. Outside of Suco		6. Own		7. Agricultural shop		8. Bazzar collect from the market	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	58	96.7%	2	3.3%	0	0.0%	34	56.7%	26	43.3%	0	0.0%	1	1.7%	6	10.0%	0	0.0%	1	1.7%	52	86.7%	0	0.0%	1	1.7%
b. Cassava	60	100.0%	0	0.0%	0	0.0%	40	66.7%	19	31.7%	1	1.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	60	100.0%	0	0.0%	0	0.0%
c. Sweet potato	57	100.0%	0	0.0%	0	0.0%	38	66.7%	18	31.6%	1	1.8%	0	0.0%	0	0.0%	1	1.8%	0	0.0%	56	98.2%	0	0.0%	0	0.0%
d. Groundnuts	42	100.0%	0	0.0%	0	0.0%	17	40.5%	25	59.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	2.4%	40	95.2%	1	2.4%	0	0.0%
e. Leaf vegetables	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
f. Talas	2	100.0%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%

Crop	Seed type				Preservation of seeds												Loss in post-harvest period		Total production
	Local		Improved		1. Put above the fire		2. Put on the tree		3. Kept in the drum/jerry can/bamboo		4. Stored in the silo		5. Left in the farm		6. Others				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Maize (local)	58	96.7%	2	3.3%	54	90.0%	3	5.0%	3	5.0%	0	0.0%	0	0.0%	0	0.0%	0.0 kg/HH	0.0%	461.8 kg/HH
b. Cassava	60	100.0%	0	0.0%	2	3.3%	0	0.0%	0	0.0%	0	0.0%	57	95.0%	1	1.7%	0.0 kg/HH	0.0%	473.4 kg/HH
c. Sweet potato	57	100.0%	0	0.0%	3	5.3%	0	0.0%	1	1.8%	0	0.0%	53	93.0%	0	0.0%	0.0 kg/HH	0.0%	357.5 kg/HH
d. Groundnuts	42	100.0%	0	0.0%	22	52.4%	1	2.4%	11	26.2%	4	9.5%	2	4.8%	2	4.8%	0.0 kg/HH	0.0%	138.1 kg/HH
e. Leaf vegetables	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0.0 kg/HH	0.0%	1.7 kg/HH
f. Talas	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0.0 kg/HH	0.0%	8.3 kg/HH

4.2.6. Chemical/Organic inputs

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		HHs using chemical insecticide/fungicide		HHs using organic insecticide/fungicide	
a. Maize (local)	0	0.0%	60	100.0%	0	0.0%	0	0.0%
b. Cassava	0	0.0%	60	100.0%	0	0.0%	0	0.0%
c. Sweet potato	0	0.0%	57	100.0%	0	0.0%	0	0.0%
d. Groundnuts	0	0.0%	42	100.0%	1	2.4%	1	2.4%
e. Leaf vegetables	0	0.0%	1	100.0%	0	0.0%	0	0.0%
f. Talas	0	0.0%	2	100.0%	0	0.0%	0	0.0%

4.3 Perenial/Tree crop

4.3.1 Coffee

4.3.1.1. Mode of planting

Crop	Cropping type	No.	%
a. Coffee (Arabica)	Mix	9	15.0%
	Separated	33	55.0%
	No planted	18	30.0%
b. Coffee (Robusta)	Mix	9	15.0%
	Separated	5	8.3%
	No planted	46	76.7%

4.3.1.2 Mode of planting

Crop	Planted area	No. of trees planted	Total production	Yield	Mode of harvesting (Multiple answers allowed)				
					1.Red cherry		2. Mix (red/green or unripe)		Total
					No.	%	No.	%	
a. Coffee (Arabica)	0.6 ha/HH	367.7 trees/HH	112.7 kg/HH	204.8 kg/ha	42	93.3%	3	6.7%	45
b. Coffee (Robusta)	0.2 ha/HH	102.5 trees/HH	24.5 kg/HH	105.0 kg/HH	14	100.0%	0	0.0%	14

4.3.1.3. Marketing of the

Crop	HHs selling the crop		Form of market products (Multiple answer is ok)						Major market outlets (Multiple answer is ok)								Sales of production		
			Cherry		Parchment		Green Bean		Sub/district bazzar		Go to Dili		CCT Collection point		Others		Ave.production sold	Ave. unit price	Average total sales
	No.	% to 60 HHs	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Coffee (Arabica)	28	46.7%	6	21.4%	24	85.7%	7	25.0%	4	14.3%	23	82.1%	10	35.7%	0	0.0%	57.8 kg/HH	1.3 USD/kg	56.5 USD/HH
b. Coffee (Robusta)	7	11.9%	2	28.6%	7	100.0%	0	0.0%	1	14.3%	4	57.1%	5	71.4%	1	14.3%	20.0 kg/HH	1.16 USD/kg	20.6 USD/HH

4.3.1.4. Chemical/Organic inputs and loss in post-harvest

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		Loss in post-harvest period		Total production
a. Coffee (Arabica)	0	0.0%	32	76.2%	10.4 kg/HH	9.3%	112.7 kg/HH
b. Coffee (Robusta)	0	0.0%	14	100.0%	1.8 kg/HH	7.3%	24.5 kg/HH

4.3.2 Other tree crops

4.3.2.1. Mode of planting

Crop	HHs planting crop		No. of trees planted	Age of trees planted	Total production	Yield	Products for harvesting					
							1.Ripe		6. Others		0. No reply	
	No.	% to 60 HHs					No.	%	No.	%	No.	%
a. Mango	54	90.0%	8.8 Trees/HH	14.6 Yrs/tree	314.1 kg/HH	35.6 kg/tree	7	13.0%	41	75.9%	6	11.1%
b. Banana	59	98.3%	16.3 Trees/HH	3.5 Yrs/tree	50.0 kg/HH	3.1 kg/tree	50	84.7%	9	15.3%	0	0.0%
c. Citrus	31	51.7%	3.8 Trees/HH	8.9 Yrs/tree	76.3 kg/HH	20.2 kg/tree	2	6.5%	25	80.6%	4	12.9%
d. Candlenuts	11	18.3%	1.4 Trees/HH	4.4 Yrs/tree	15.1 kg/HH	10.6 kg/tree	3	27.3%	4	36.4%	4	36.4%
e. Coconuts	11	18.3%	1.0 Trees/HH	12.1 Yrs/tree	7.5 kg/HH	7.8 kg/tree	3	27.3%	3	27.3%	5	45.5%
f. Orange	4	6.7%	0.7 Trees/HH	11.8 Yrs/tree	8.8 kg/HH	13.5 kg/tree	0	0.0%	4	100.0%	0	0.0%

4.3.2.2. Marketing of the products

Crop	HHs selling the crop		Form of market products		Major market outlets (Multiple answers allowed)								Sales of production		
			Fruits/nuts		1. In community		2. Sub/district		3. Go to Dili		4. Trader		No reply				
	No.	% to 60 HHs	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Ave.production sold	Ave. unit price	Average total sales
a. Mango	14	23.3%	14	100.0%	2	14.3%	5	35.7%	9	64.3%	1	7.1%	0	0.0%	21.7 kg/HH	0.6 USD/kg	12.5 USD/HH
b. Banana	14	23.3%	14	100.0%	3	21.4%	7	50.0%	8	57.1%	1	7.1%	0	0.0%	10.8 kg/HH	0.8 USD/kg	8.9 USD/HH
c. Citrus	23	38.3%	23	100.0%	11	47.8%	7	30.4%	11	47.8%	5	21.7%	0	0.0%	43.2 kg/HH	0.8 USD/kg	36.5 USD/HH
d. Candlenuts	4	6.7%	4	100.0%	1	25.0%	1	25.0%	2	50.0%	0	0.0%	0	0.0%	6.3 kg/HH	0.9 USD/kg	3.5 USD/HH
e. Coconuts	1	1.7%	n.a.	–	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	4.2 kg/HH	0.2 USD/kg	0.8 USD/HH
f. Orange	4	6.7%	4	100.0%	1	25.0%	1	25.0%	2	50.0%	0	0.0%	0	0.0%	6.3 kg/HH	0.9 USD/kg	5.8 USD/HH

4.3.2.3. Post harvest

Crop	Loss after harvest		Total production
a. Mango	40.1 kg/HH	12.8%	314.1 kg/HH
b. Banana	4.3 kg/HH	8.6%	50.0 kg/HH
c. Citrus	6.8 kg/HH	8.9%	76.3 kg/HH
d. Candlenuts	0.9 kg/HH	6.0%	15.1 kg/HH
e. Coconuts	0.8 kg/HH	11.1%	7.5 kg/HH
f. Orange	0.6 kg/HH	6.7%	8.8 kg/HH

4.3.2.4. Crop damages

Crop	Cause															
	1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		6. Flood		7. Wind		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Mango	9	11.8%	19	25.0%	14	18.4%	11	14.5%	3	3.9%	0	0.0%	20	26.3%	76	100.0%
b. Banana	11	14.1%	17	21.8%	20	25.6%	14	17.9%	1	1.3%	0	0.0%	15	19.2%	78	100.0%
c. Citrus	3	5.5%	15	27.3%	13	23.6%	7	12.7%	4	7.3%	0	0.0%	13	23.6%	55	100.0%
d. Candlenuts	0	0.0%	4	40.0%	0	0.0%	0	0.0%	0	0.0%	1	10.0%	5	50.0%	10	100.0%
e. Coconuts	2	25.0%	2	25.0%	0	0.0%	3	37.5%	0	0.0%	0	0.0%	1	12.5%	8	100.0%
f. Orange	1	20.0%	1	20.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	2	40.0%	5	100.0%

Section 5: Livestock

5.1 No. of Livestock raised and lost, consumed and sold in the last season

Type	HHs raising livestock		Ave.Total No. of Livestock	Ave. No.lost	Ave. No.consumed	Av. No.sold	HH losing livestock	Cause of loss (Multiple answers allowed)									
								1. Disease		2. Shortage of feed		3. Disaster		4. Stolen		0. No response	
	Unit:HH	% to 60 HHs	Head/HH	Head/HH	Head/HH	Head/HH	HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	27	45.0%	1.7	0.4	0.2	0.5	7	1	14.3%	1	14.3%	1	14.3%	4	57.1%	0	0.0%
Buffalo	21	35.0%	1.2	0.2	0.2	0.2	2	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
Goat	42	70.0%	3.4	1.1	0.5	0.3	15	5	33.3%	0	0.0%	0	0.0%	9	60.0%	1	6.7%
Horse	31	51.7%	1.2	0.2	0.1	0.2	5	1	20.0%	0	0.0%	1	20.0%	2	40.0%	1	20.0%
Pig	60	100.0%	2.9	0.5	0.5	0.2	10	4	40.0%	0	0.0%	1	10.0%	5	50.0%	0	0.0%
Sheep	2	3.3%	0.1	0.0	0.0	0.0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Chicken	57	95.0%	10.1	2.2	1.8	2.6	23	7	30.4%	1	4.3%	1	4.3%	17	73.9%	0	0.0%

5.2 Grazing Style

5.2.1Rainy season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place(Multiple answers permitted)										Rent if any			
		No reply		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	27	0	0%	14	52%	3	11%	1	4%	9	33%	1.7	0	0.0%	22	81.5%	5	18.5%	0	0.0%	16	59.3%	1	3.7%	0	0.0%	12	44.4%	27	100.0%	0	0.0%
Buffalo	21	0	0%	12	57%	6	29%	1	5%	2	10%	2.8	0	0.0%	17	81.0%	4	19.0%	0	0.0%	13	61.9%	1	4.8%	4	19.0%	8	38.1%	27	128.6%	0	0.0%
Goat	42	1	2%	9	21%	14	33%	3	7%	15	36%	1.4	1	2.4%	25	59.5%	16	38.1%	0	0.0%	18	42.9%	1	2.4%	0	0.0%	24	57.1%	42	100.0%	0	0.0%
Sheep	2	0	0%	1	50%	0	0%	0	0%	1	50%	3.5	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	2	100.0%	0	0.0%
Horse	31	0	0%	9	29%	5	16%	3	10%	14	45%	1.8	1	3.2%	24	77.4%	6	19.4%	1	3.2%	7	22.6%	1	3.2%	0	0.0%	22	71.0%	30	96.8%	1	3.2%

5.2.2.Dry season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place(Multiple answers permitted)										Rent if any			
		No reply		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	27	0	0%	15	56%	3	11%	1	4%	8	30%	1.9	0	0.0%	18	66.7%	9	33.3%	0	0.0%	17	63.0%	1	3.7%	0	0.0%	12	44.4%	27	100.0%	0	0.0%
Buffalo	21	0	0%	13	62%	5	24%	1	5%	2	10%	3.0	0	0.0%	14	66.7%	7	33.3%	0	0.0%	12	57.1%	0	0.0%	1	4.8%	8	38.1%	21	100.0%	0	0.0%
Goat	42	0	0%	10	24%	13	31%	4	10%	15	36%	1.5	1	2.4%	25	59.5%	16	38.1%	0	0.0%	18	42.9%	1	2.4%	0	0.0%	24	57.1%	41	97.6%	1	2.4%
Sheep	2	0	0%	1	50%	0	0%	0	0%	1	50%	3.5	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	2	100.0%	0	0.0%
Horse	31	0	0%	10	32%	3	10%	3	10%	15	48%	1.8	0	0.0%	19	61.3%	12	38.7%	0	0.0%	9	29.0%	1	3.2%	0	0.0%	22	71.0%	30	96.8%	1	3.2%

5.3 No. of livestock for marketing in 2010-2011

Type	HHs raising livestock	HHs selling livestock		No. of livestock for sale	Ave. Unit price	Ave. Total sales in 2010-2011	Market outlets (Multiple answers allowed)									
							1.In Community		2. Sub/district bazaar		3. Go to Dili		4. Traders coming to Suco		0. N.A.	
	Unit:HH	HH	% to total HHs raising	Head/HH	USD/head	USD/HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	27	15	55.6%	0.5	271.7	117.3	7	46.7%	2	13.3%	1	6.7%	5	33.3%	0	0.0%
Buffalo	21	6	28.6%	0.2	266.7	67.5	2	33.3%	1	16.7%	0	0.0%	3	50.0%	0	0.0%
Goat	42	6	14.3%	0.3	70.0	19.5	2	33.3%	2	33.3%	1	16.7%	1	16.7%	0	0.0%
Horse	31	7	22.6%	0.2	141.4	21.5	5	71.4%	0	0.0%	0	0.0%	2	28.6%	0	0.0%
Pig	60	9	15.0%	0.2	141.1	25.3	3	33.3%	2	22.2%	2	22.2%	2	22.2%	0	0.0%
Sheep	2	1	50.0%	0.0	80.0	2.7	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Chicken	57	31	54.4%	2.7	13.3	38.8	6	19.4%	11	35.5%	14	45.2%	1	3.2%	0	0.0%

Section 6: Firewood and Timberwood

6.1 Firewood

Items	Unit	Answers (Multiple answers allowed)						
a. Tree species for firewood		1. Ai ru	2. Ai bubur	3. AI samtuku	4. Casuarina	6. Ai na	7. Others	Total
(Multiple answers permitted)	HHs using species	34	56	25	6	2	2	125
	%	27.2%	44.8%	20.0%	4.8%	1.6%	1.6%	100.0%
b. Owner of the collection site		1. Other suco member	2. Outsiders of Suco	5. Own	6. Do not know			
	No. of answers	34	2	23	1			
	%	56.7%	3.3%	38.3%	1.7%			

Items	Unit	Answers
c. Ave. time to the collection site	min	58.0
d. Ave. frequency of firewood collection	times/week	3.3
e. Ave. volumes of firewood collected	bundles/visit	3.6
f. Ave. production sold per week	bundles	0.0
g. Ave. unit price	USD/bundle	–
h. Ave. total sales per week	USD	–
i. Ave. annual total sales in 2010/11	USD	–
j Major market outlet	–	–

6.2 Timberwood

Species	Total HHs collecting timbers		Time to collection site	Owner of the collection site (Multiple answers allowed)										Frequency of timber collection	Amount of timber collecte	Size of pole		Monthly production sold	Price	Monthly sales	Annual sales in 2010/11
				No reply		1. Other suco members		2. Outsiders of suco		4. Government		5. Own				Diameter	Length				
	unit: HH	%	min	HH	%	HH	%	HH	%	HH	%	HH	%	times/month	poles/visit	cm	m	pole	USD/pole	USD	USD
a. Ai ru	45	38.1%	87.2	0	0.0%	25	55.6%	1	2.2%	2	4.4%	17	37.8%	5.4	6.6	10.7	4.1	0	–	0	0
b. Ai bubur	53	44.9%	87.2	0	0.0%	27	50.9%	2	3.8%	0	0.0%	25	47.2%	6.3	6.8	13.5	3.8	0	–	0	0
c. Ai kakeu	8	6.8%	92.5	0	0.0%	7	87.5%	0	0.0%	0	0.0%	1	12.5%	6.8	7.9	10.6	4.6	0	–	0	0
d. Casuarina	11	9.3%	122.3	1	9.1%	3	27.3%	0	0.0%	0	0.0%	7	63.6%	4.0	6.8	10.8	4.0	0	–	0	0
e. Ai samtuku	1	0.8%	60.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	4.0	1.0	15.0	2.0	0	–	0	0
Total	118	100.0%											AVERAG	5.3							

Section 7: Non-Timber Forest Products

7-1 Harvest of NTFP

Species	Total HHs producing NTFP		Harvset season (Multiple answers allowed)																							
			Jan		Feb		Mar		Apr		May		June		July		Aug		Sep		Oct		Nov		Dec		Total	
	unit: HH	%																								
a. Ratan	2	3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
b. Mushroom	4	7%	2	40.0%	2	40.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	20.0%	2	40.0%	1	20.0%	5	100.0%
c. Honey	40	67%	0	0.0%	0	0.0%	0	0.0%	28	49.1%	28	49.1%	1	1.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	57	100.0%
d. Bamboo	42	70%	2	3.4%	25	43.1%	24	41.4%	2	3.4%	1	1.7%	0	0.0%	0	0.0%	4	6.9%	4	6.9%	0	0.0%	0	0.0%	0	0.0%	58	100.0%

Species	Total HHs producing NTFP		Time to collection site	Owner of the collection site									
				No reply		Other suco members		Outsiders of suco		Own		Do not know	
	unit: HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%
a. Ratan	2	3%	2.0	0	0.0%	1	50.0%	0	0.0%	1	50.0%	0	0.0%
b. Mushroom	4	7%	0.8	0	0.0%	2	50.0%	0	0.0%	2	50.0%	0	0.0%
c. Honey	40	67%	2.1	0	0.0%	15	37.5%	2	5.0%	23	57.5%	0	0.0%
d. Bamboo	42	70%	1.6	1	2.4%	14	33.3%	1	2.4%	28	66.7%	0	0.0%

7-2 Production and Sales

Species	Production in 2010/11	Total HHs selling NTFP		Price	Total sales	Market outlet									
						No response		In community		Sub/district bazzar		Go to Dili		Traders coming to suco	
	unit:kg/HH	unit: HH	% to HHs producing	USD/kg	USD/HH	HH	%	HH	%	HH	%	HH	%	HH	%
a. Ratan	3.3	0	0.0%	0	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
b. Mushroom	0.3	4	100.0%	n/a	-	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
c. Honey	29.4	34	85.0%	49.88	36.07	0	0.0%	1	2.9%	16	47.1%	12	35.3%	5	14.7%
d. Bamboo	75.0	1	2.4%	1050	0.833	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%

Section 8: Income and expenses

8-1. Sources of cash income of the HH

Item	Ave.amount(unit: USD/year)
1) Selling maize	8.1
2) Selling vegetables	0.0
3) Selling beans	0.0
4) Selling tubers	42.1
5) Selling coffee	77.2
6) Selling fruits	68.1
7) Selling livestock products	292.7
8) Selling fuel wood	0.0
9) Selling timber wood	0.0
10) Selling NTFPs (rattan, medicinal plants, etc.)	36.9
11) Selling handicraft / cottage industry products	5.0
12) Salary from permanent job	114.4
13) Wage from temporary job (s)	45.1
14) Private business (trading, shop, etc.)	25.5
15) Remittance from family members	45.4
16)Others (e.g wine making / or subsidies)	68.6
Total	829.0

8-2. Expenditure for consumption

Item	Ave.amount(unit: USD/year)
1) Expenditure for Food	246.3
2) Expenditure for Health	4.9
3) Expenditure for Education	51.5
4) Expenditure for Clothes	105.3
5) Expenditure for Firewood/Kerosine/Electorocity	22.5
6) Expenditure for Social Activitiy	46.2
Total	476.7

8-3. Investment of productive and fixed assets in the last yea

Item	Ave.amount(unit: USD/year)
1) Livestock	19.1
2) Farm machinery / tools	1.0
3) Housing (improvement / repair)	15.0
4) Household Appliance	33.5
5) Land	0.0
6) Transportation means	14.2
7) Private business	10.7
8) Others (Saving in the Bank)	231.1
Total	324.7

Result of survey for household members in suco Faturasa
A. Participation/engagement of household activities

Item	A-1Engagement in the activiites: Average rating (1: Usually, 2: Sometimes, 3: Never)		A-2 Activities which respondent would like to make it easy (5 answers selected with priority)																			
			Male										Female									
	Male	Female	1st		2nd		3rd		4th		5th		1st		2nd		3rd		4th		5th	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Home activities																						
A1 Fetching of drinking water	1.5	1.0	17	54.8%	1	3.2%	2	6.5%	0	0.0%	0	0.0%	11	34.4%	2	6.3%	0	0.0%	0	0.0%	0	0.0%
A2 Cooking	2.0	1.2	1	3.2%	5	16.1%	0	0.0%	0	0.0%	0	0.0%	9	28.1%	5	15.6%	0	0.0%	0	0.0%	0	0.0%
A3 Washing	1.8	1.2	0	0.0%	1	3.2%	3	9.7%	0	0.0%	0	0.0%	0	0.0%	3	9.4%	2	6.3%	1	3.1%	0	0.0%
A4 Sweeping the house	1.9	1.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	3	9.4%	0	0.0%	1	3.1%	0	0.0%
A5 House repair	1.2	1.8	5	16.1%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	4	12.5%	1	3.1%	0	0.0%	0	0.0%	0	0.0%
A6 Child / elderly care	1.7	1.2	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.3%	1	3.1%	2	6.3%
A7 Kitchen gardening	1.1	1.7	2	6.5%	3	9.7%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	1	3.1%	0	0.0%
A8 Sewing and knitting	2.7	1.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%	1	3.1%	1	3.1%	0	0.0%
A9 Shopping in market	1.4	2.0	1	3.2%	2	6.5%	1	3.2%	0	0.0%	2	6.5%	3	9.4%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
Average	1.7	1.4		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
b. Fixed farming activities																						
B1 Plowing	1.0	1.9	5	16.1%	12	38.7%	7	22.6%	1	3.2%	1	3.2%	0	0.0%	8	25.0%	2	6.3%	1	3.1%	1	3.1%
B2 Seeding/ transplanting	1.0	1.9	0	0.0%	2	6.5%	5	16.1%	6	19.4%	1	3.2%	0	0.0%	1	3.1%	1	3.1%	1	3.1%	0	0.0%
B3 Weeding	1.0	1.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.3%	1	3.1%	0	0.0%	0	0.0%
B4 Application of chemical fertilizers	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%	0	0.0%	0	0.0%
B5 Harvesting	1.4	1.5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	1	3.1%	1	3.1%	3	9.4%	3	9.4%
B6 Repairing of farm	1.0	1.9	0	0.0%	0	0.0%	5	16.1%	2	6.5%	2	6.5%	0	0.0%	1	3.1%	4	12.5%	1	3.1%	1	3.1%
Average	1.4	2.0		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
c. Shifting cultivation																						
C1 Slashing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.2%	2	6.3%	0	0.0%	3	9.4%	3	9.4%	0	0.0%
C2 Burning	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%	0	0.0%
C3 Clearing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.3%	0	0.0%	0	0.0%
C4 Fencing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	1	3.2%	3	9.7%	0	0.0%	1	3.1%	1	3.1%	2	6.3%	1	3.1%
C5 Seeding	3.0	3.0	0	0.0%	1	3.2%	0	0.0%	3	9.7%	0	0.0%	0	0.0%	1	3.1%	1	3.1%	1	3.1%	0	0.0%
C6 Weeding	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.3%	0	0.0%	1	3.1%
C7 Harvesting	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	1	3.2%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
Average	3.0	3.0		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
d. Livestock and poultry																						
D1 Grazing control	1.1	2.3	0	0.0%	0	0.0%	5	16.1%	7	22.6%	1	3.2%	0	0.0%	1	3.1%	2	6.3%	3	9.4%	0	0.0%
D2 Feeding	1.5	1.6	0	0.0%	0	0.0%	1	3.2%	0	0.0%	2	6.5%	0	0.0%	0	0.0%	2	6.3%	1	3.1%	0	0.0%
D3 Watering	1.4	1.6	0	0.0%	2	6.5%	1	3.2%	0	0.0%	2	6.5%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%
D4 Collection/ production of fodder	1.3	2.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
D5 Sweeping of livestock & poultry st	1.8	2.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
Average	1.4	2.0		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
e. Fishing																						
E1 Fish catching in dam reservoir	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E2 Fish catching in river	2.3	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E3 Fish production in pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E4 Maintenance of boat / engine	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E5 Maintenance of pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.9	3.0	0	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
f. Forestry																						
F1 Harvesting coffee	1.2	1.9	0	0.0%	0	0.0%	0	0.0%	4	12.9%	6	19.4%	0	0.0%	1	3.1%	0	0.0%	4	12.5%	6	18.8%
F2 Collection of firewood	1.0	1.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%	2	6.3%
F3 Timber harvest	1.0	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
F4 Collection/Production of NTFPs	1.4	2.7	0	0.0%	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%
Average	1.1	2.3		0.0%		0.0%		0.0%		0.0%		0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
g. Post harvest and marketing																						
G1 Processing food crops (e.g. thresh	1.8	1.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	4	12.5%
G2 Processing coffee cherry	1.4	2.0	0	0.0%	0	0.0%	0	0.0%	1	3.2%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
G3 Processing vegetables and fruits	1.9	2.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%
G4 Processing livestock, poultry and f	1.7	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G5 Processing Timber	1.3	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G6 Processing NTFPs	1.4	2.8	0	0.0%	0	0.0%	1	3.2%	2	6.5%	1	3.2%	0	0.0%	0	0.0%	1	3.1%	1	3.1%	2	6.3%
G7 Selling food crops	2.2	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G8 Selling coffee cherry/beans	1.5	2.5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G9 Selling vegetables and fruits	1.4	2.8	0	0.0%	0	0.0%	0	0.0%	1	3.2%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G10 Selling livestock, poultry and fishe	1.3	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G11 Selling Timber	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G12 Selling NTFPs	1.6	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G13 Selling firewood	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	1.8	2.6		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
h. Domestic business																						
H1 Rice mill operation	2.8	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H2 Trading	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	2	6.3%
H3 Shop keeping	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
H4 Handicraft	2.9	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H5 Others (Specify the name)	0.0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H5 Others	0.0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	1.9	1.9		0.0%		0.0%		0.0%		0.0%		0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
i. Communication																						
I1 Attending community meetings	1.3	1.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I2 Resolving in-village conflicts	2.3	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%
I3 Getting information from TV/Radio	2.1	2.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I4 Political discussion with others	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I5 Official letter writing	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.3	2.6		0.0%		0.0%		0.0%		0.0%		0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
j. Religious/Culture																						
J1 Dance party	1.7	2.1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%	0	0.0%
J2 Worship ceremony	1.1	1.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
J3 Sport events	2.4	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J4 Playing music	2.5	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	1.9	2.4																				
Total			31	100%	31	100%	31	100%	31	100%	31	100%	32	100%	32	100%	32	100%	32	100%	32	100%

Result of survey for household members in suco Faturasa
B. Problems in livelihoods

Item		Problems in livelihoods (3 answers selected with priority)											
		Male						Female					
		1st		2nd		3rd		1st		2nd		3rd	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	No answer	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	1	3.1%
1	Food security	30	96.8%	0	0.0%	0	0.0%	30	93.8%	1	3.1%	1	3.1%
2	Drinking water	0	0.0%	25	80.6%	1	3.2%	1	3.1%	24	75.0%	1	3.1%
3	Natural disasters	1	3.2%	4	12.9%	2	6.5%	0	0.0%	0	0.0%	9	28.1%
4	Disease/health	0	0.0%	2	6.5%	20	64.5%	1	3.1%	5	15.6%	13	40.6%
5	Education	0	0.0%	0	0.0%	5	16.1%	0	0.0%	0	0.0%	6	18.8%
6	Acquisition of firewood	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%
7	Land use (e.g., conflict with others)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.1%	0	0.0%
8	Credit (e.g., no system)	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	0	0.0%
9	Others	0	0.0%	0	0.0%	2	6.5%	0	0.0%	0	0.0%	0	0.0%
Total		31	100.0%	31	100.0%	31	100.0%	32	100.0%	32	100.0%	32	100.0%

C. Problems in Agriculture

Item		Problems in agriculture (3 answers selected with priority)																	
		Male									Female								
		1st			2nd			3rd			1st			2nd			3rd		
		No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related
0	No answer	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.1%	–	1	3.1%	–	1	3.1%	–
1	Soil (e.g., soli type)	24	77.4%	Maize(Local)	2	6.5%	Maize(local), cassava	0	0.0%	–	20	62.5%	Maize(local)	1	3.1%	Groundnuts	0	0.0%	–
2	Inputs (seeds)	6	19.4%	Maize(Local)	23	74.2%	Maize(local), cassava	1	3.2%	Groundnuts	4	12.5%	Maize(local)	16	50.0%	Maize(improved)	2	6.3%	Groundnuts. Cassav
3	Inputs (fertilizers)	0	0.0%	–	2	6.5%	Maize(local)	4	12.9%	Leaf vegetables	0	0.0%	–	0	0.0%	–	0	0.0%	–
4	Inputs (labor)	0	0.0%	–	1	3.2%	Maize(local)	3	9.7%	Maize(local)	0	0.0%	–	4	12.5%	Maize(local)	2	6.3%	Cassava
5	Inputs (availability of land)	0	0.0%	–	0	0.0%		2	6.5%	Maize(local)	0	0.0%	–	1	3.1%	Leaf vegetables	4	12.5%	Maize(local), Sweetpotato
6	Knowledge of production techniques	0	0.0%	–	2	6.5%	Maize(local), groundnuts	10	32.3%	Groundnuts, sweet potato	4	12.5%	Maize(local)	4	12.5%	Groundnuts, cassava	4	12.5%	Maize(local), cassava
7	Irrigation (e.g., lack of schemes(	0	0.0%	–	0	0.0%	–	3	9.7%	Leaf vegetables	0	0.0%	–	0	0.0%	–	0	0.0%	–
8	Machinery	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.1%	Maize(local)
9	Post-harvesting (e.g., processing)	0	0.0%	–	0	0.0%	–	3	9.7%	Groundnuts	1	3.1%	Maize(local)	2	6.3%	Groundnuts, beans	4	12.5%	Cassava
10	Marketing	1	3.2%	Maize(Local)	1	3.2%	groundnuts	5	16.1%	Maize(local)	2	6.3%	Maize(local)	3	9.4%	Groundnuts, sweet potato	14	43.8%	Maize
Total		31	100.0%	–	31	100.0%	–	31	100.0%	–	32	100.0%	–	32	100.0%		32	100.0%	

D. Problems in Animal raising

Item		Problems in animal raising (3 answers selected with priority)																	
		Male									Female								
		1st			2nd			3rd			1st			2nd			3rd		
		No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related
1	Grazing place	24	77.4%	Cattle	0	0.0%	–	1	3.2%	Cattle	17	53.1%	Cattle	6	18.8%	Cattle	6	18.8%	Buffalo
2	Disease/lack of vaccination	7	22.6%	Goat	24	77.4%	Cattle	0	0.0%	–	13	40.6%	Pig	22	68.8%	Goat,pi	4	12.5%	Goat
3	Knowledge of production techniques	0	0.0%	–	3	9.7%	Cattle	15	48.4%	Cattle	1	3.1%	Pig	1	3.1%	Goat,pi g	4	12.5%	Buffalo, goat, pig,
5	Marketing	0	0.0%	–	3	9.7%	Goat	12	38.7%	Cattle	1	3.1%	Chicken	2	6.3%	Pig, chicken	13	40.6%	Chicken
6	Others	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	3	9.4%	–
4	No applicable	0	0.0%	–	1	3.2%	–	3	9.7%	–	0	0.0%	–	1	3.1%	–	2	6.3%	–
Total		31	100.0%	–	31	100.0%	–	31	100.0%	–	32	100.0%	–	32	100.0%	–	32	100.0%	–

E. Livelihood activities consdered important

Item		Important livelihood activities (3 answers selected with priority)											
		Male						Female					
		1st		2nd		3rd		1st		2nd		3rd	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Agriculture(Food crops)	31	100.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
2	Agriculture(Cash crops)	0	0.0%	25	80.6%	3	9.7%		0.0%		0.0%		0.0%
3	Livestock/animal raising	0	0.0%	3	9.7%	17	54.8%		0.0%		0.0%		0.0%
4	Selling firewood	0	0.0%	0	0.0%	8	25.8%		0.0%		0.0%		0.0%
5	Selling NTFP	0	0.0%	3	9.7%	3	9.7%		0.0%		0.0%		0.0%
6	Business	0	0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
7	Others	0	0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
Total		31	100.0%	31	100.0%	31	100.0%	0	0.0%	0	0.0%	0	0.0%

F. Important interventions for natural resource management

Item		Average rating (1. Most important, 2. Important, 2. Not so much)	
		Male	Female
1	Environment education to	1.0	1.3
2	Tree planting/reforestation	1.0	1.4
3	Land use plan	1.1	1.7
4	Reduction of firewood consumption/alternative energy dev.	2.0	2.1
5	Infrastructures (e.g., check dam)	1.7	1.9
6	Introduce environmentally-friendly techniques (e.g., agroforestry)	1.3	1.9
7	Re-vitalization of traditional norms (e.g., Tara Bandu)	1.0	1.2
8	Government legislation and its enforcement	1.1	1.3
Average		1.3	1.6

Appendix 1-5 Results of Baseline Survey in Suco Fadabloco

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun only	1	1.7%
Tetun and Mambae	54	90.0%
Tetun, Indonesian and Mambae	5	8.3%
Total	60	100.0%

– General Features of Household in the village

1.2 Average of Total No. of households members: 7.30 persons/HH

1.3 General Features of Household members

– Average age of members: 28.35 years old

– Gender balance in HH: Ave. No.of Male 3.78 person/HH; Ave.No. of female 3.50 person/HH

– Average No. of members under working age (15–64 years old): 4.57 person/HH

1.4.Main features of HH members

1.4.1 Heads of HH

Education level			Primary Occupation (Unit: person)			Organization (Unit: person)					Total	Absence (living in other place more than 3 months a year)
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Farmer	Salary worker	Private business	3. Group of Traditional Leaders	5. Village committee	7. Religious Organization	8. Farmers Group	10. No member		
47	8	5	56	3	1	8	2	6	7	37	60	0.0%
78.3%	13.3%	8.3%	93.3%	5.0%	1.7%	13.3%	3.3%	10.0%	11.7%	61.7%	100.0%	

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)						Education (Unit: person/HH)								Primary Occupation (Unit: person/HH)								
	Wife	Daughter	Daughter Adapted	Son	Other relative	Total	No graduated from primary school	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	High school graduated	University graduated	Total	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	Total
	0.97	2.18	0.02	2.53	0.57	6.27	2.97	0.38	1.83	0.07	0.72	0.22	0.08	6.27	2.38	0.07	0.07	0.07	2.87	0.67	0.03	0.12	6.27
	15.4%	34.8%	0.3%	40.4%	9.1%	100.0%	47.3%	6.1%	29.3%	1.1%	11.4%	3.5%	1.3%	100.0%	38.0%	1.1%	1.1%	1.1%	45.7%	10.6%	0.5%	1.9%	100.0%

HH members	Organization (Unit: person)							Absence (living in other place more than 3 months a year)
	Members of Women's union	Youth organization	Village committee	Religious Organization	Farmers Group	No member	Total	
	0.02	0.18	0.02	0.07	0.07	5.92	6.27	22.3%
	0.3%	2.9%	0.3%	1.1%	1.1%	94.4%	100.0%	

1.5 Period of settlement of household in the village

Period of settlement	1975–1999	Before 1975	Total
Number of HHs	10	50	60
%	16.7%	83.3%	100.0%

Section 2: Living Condition

2.1 Drinking water throughout a year

Items	2.1.1 Main water source								2.1.2 Average distance from house to water	2.1.3 Sufficiency			2.1.4 Quality		
	1. Piped gravity watetr	2. Springs (Natural)	3. River	4. Reservoir	5.Well (open dug well)	7. Rain water (e.g. roof)	8. Reservoir and Springs (Natural)	Total		1. Sufficient	2. Not sufficient	Total	1. Clean	2. Not clean	Total
Unit	No./%	No./%	No./%	No./%	No./%	No./%	No./%	No./%	minutes	No./%	No./%	No./%	No./%	No./%	No./%
1) Dry season	1	34	3	1	20	0	1	60	53.2	31	29	60	49	11	60
	1.7%	56.7%	5.0%	1.7%	33.3%	0.0%	1.7%	100.0%		51.7%	48.3%	100.0%	81.7%	18.3%	100.0%
2) Wet season	1	34	0	4	19	2		60	39.8	50	10	60	44	16	60
	1.7%	56.7%	0.0%	6.7%	31.7%	3.3%	0.0%	100.0%		83.3%	16.7%	100.0%	73.3%	26.7%	100.0%

2.2 Food condition/Food

Items	2.2.1 Frequency of meals														
	1. Normal seasons	2. Food shortage seasons	Period of food shortage (Multiple answers)												Total
			Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Unit	times/day		No.												
Food condition	2.97	2.02	41	46	4	0	0	0	0	4	4	19	13	7	138
			29.7%	33.3%	2.9%	0.0%	0.0%	0.0%	0.0%	2.9%	2.9%	13.8%	9.4%	5.1%	100.0%

Items	2.2.2 Frequency of consumption of major foods					
	a. Rice	b. Corn	c. Beans (redbeans /long beans)	d. Cassava/ Taro/Swe et potato	e. Kontas	f. Banana
Unit	times per week/ times/day					
1)	4.2	2.3	1.7	2.2	1.7	1.8
	1.8	1.0	0.7	1.0	0.7	0.8
% (/7	59.5%	32.9%	24.8%	31.9%	24.3%	25.2%
2) Food	2.4	1.6	1.2	2.0	1.4	1.5
	1.0	0.7	0.5	0.8	0.6	0.7
% (/7	33.6%	22.9%	17.4%	28.1%	19.8%	21.7%

2.3 Availability of facilities in

Items	Availability of facilities in the house			
	a. Radio	d. Motorcycl e	g. Sewing machine	j. Toilet
Unit	No. of HHs with the facilities / % to total			
	17	2	1	36
	28.3%	3.3%	1.7%	60.0%
Average number of	1 unit	1 unit	1 unit	1 unit

2,4 Major diseases

2.4.1
Children

Treatment	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																	
	Cold		Malaria		Dysentery		Diarrhea diseases		Denguee fever		Typhus fever		Eye disease		Skin diseases		Respiratory disease		Sub-total	
Go to a village health worker in village	44	27.5%	48	30.0%	5	3.1%	33	20.6%	10	6.3%	1	0.6%	9	5.6%	2	1.3%	8	5.0%	160	100.0%
Go to a faith healer in village	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Apply traditional herbal medicine at home (Ai Namkurus	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (Ai-funan Santo Antonio)	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (Ai-	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
Ditto (Derok tahan)	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (derok tahan, goiabas tahan)	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (Ai-tahan tolu)	0	0.0%	0	0.0%	0	0.0%	2	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%	3	100.0%
Ditto (tomati lotuk nia tahan)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1	100.0%
Total	45	26.3%	53	31.0%	6	3.5%	35	20.5%	10	5.8%	1	0.6%	9	5.3%	3	1.8%	9	5.3%	171	100.0%

2.4.2
Adults

Treatment	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																	
	Cold		Malaria		Dysentery		Diarrhea diseases		Denguee fever		Typhus fever		Eye disease		Skin diseases		Respiratory disease		Sub-total	
Go to a village health worker in village	48	30.8%	38	24.4%	8	5.1%	19	12.2%	4	2.6%	1	0.6%	18	11.5%	9	5.8%	11	7.1%	156	100.0%
Go to a faith	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
Apply traditional herbal	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (Ai-funan Santo Antonio)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1	100.0%

Ditto (Ai-	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
Ditto (Derok tahan)	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (derok tahan, goiabas tahan)	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (derok masin nia tahan)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	2	100.0%
Ditto (goibas dikin)	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (Ai-tahan tolu)	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Ditto (tomate ki'ik)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1	100.0%
Ditto (tomati nia tahan)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1	100.0%
Total	49	29.2%	44	26.2%	8	4.8%	21	12.5%	5	3.0%	1	0.6%	19	11.3%	10	6.0%	11	6.5%	168	100.0%

Section 3: Land Use

3.1 Land Use in 2010/2011

3.1.1 Current use of land

	Type of land	HHs using the land		Average of Total No. of plots used by HH	a) Land owned and used by the HHs			b) Land rented/borrowed from others		Major crops planted (Multiple answers permitted)																				Most prevailing combination
					Average No. of Plot	Average Area per plot	Total Area/HH	Average No. of Plot	Average Area per plot	1. Paddy		2. Maize		3. Groundnuts		4. Beans		5. Sweet potato		6. Cassava		7. Leaf vegetables		8. Banana		Total					
		No.	% to total HHs				ha			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Cultivated	A1. Home Garden	47	78.3%	2.0	2.0	121.04 m2	0.02	0	0 m2	0	0.0%	0	0.0%	44	93.6%	45	95.7%	1	2.1%	1	2.1%	1	2.1%	0	0.0%	47	100.0%				Maize – Cassava
Cultivated	A2. Upland (fixed) without soil conservation	55	91.7%	1.9	1.9	0.91 ha	1.7	0	0 ha	1	1.7%	11	###	43	74.1%	45	77.6%	0	0.0%	9	###	0	0.0%	1	1.7%	58	100.0%				ditto
Cultivated	A3. Upland (fixed) with soil conservation	9	15.0%	0.3	0.3	0.89 ha	0.2	0	0 ha	0	0.0%	1	7.1%	4	28.6%	8	57.1%	0	0.0%	0	0.0%	1	7.1%	4	28.6%	14	100.0%				ditto
Cultivated	A4. Shifting Cultivation	0	0.0%	–	–	– ha	–	–	– ha																					
Cultivated	A5. Coffee Plantation	52	86.7%	1.4	1.4	1.11 ha	1.5	0	0 ha																					
Un-cultivated	B1. Currently unused but kept for shifting	10	16.7%	0.3	0.3	0.9 ha	0.25	0	0 ha																					
Un-cultivated	B2. Forest	16	26.7%	0.4	0.4	1.44 ha	0.5	0	0 ha																					
Un-cultivated	B3. Grazing place	27	45.0%	0.6	0.6	1.37 ha	0.8	0	0 ha																					
	SUM			6.8			5.1																							

3.1.3 Any land leased to others/unused → There is no land leased to others/unused

3.2 Shifting cultivation → There is no shifting cultivation

3.2.3 Use of communal land

HHs using communal land		Necesity of permission	Responsble for issuance	Frequency to get permission	Use of communal
No.	% to total HH				
1	1.7%	Yes	Church	Every time	Vegetable farm

Section 4: Crop production

4.1 Major crops planted

	Major crops (Multiple answers permitted)																							
	0. None		1. Maize (local)		2. Maize (improved)		3.Groundnut		5. Soy bean		6. Red bean		7. Sweet potato		8. Cassava		10. Bitter guard		12. Taro		12. Pineapple		12. Others		Total	
Type of farming	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Shifting cultivation	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
b. Fixed upland farm	9	5.0%	51	28.3%	2	1.1%	4	2.2%	3	1.7%	3	1.7%	45	25.0%	55	30.6%	2	1.1%	1	0.6%	1	0.6%	4	2.2%	180	100.0%
c. Home garden	39	21.7%	44	24.4%	2	1.1%	4	2.2%	2	1.1%	4	2.2%	40	22.2%	44	24.4%	0	0.0%	0	0.0%	0	0.0%	1	0.6%	180	100.0%

4.2 Annual crop production

4.2.1. Cropping type

Crop	Cropping type	No.	%	Major crops to be planted in mix
a. Maize (local)	Mono	0	0.0%	
	Mix	60	100.0%	
	No plant	0	0.0%	
b. Cassava	Mono	1	1.7%	
	Mix	58	96.7%	
	No plant	1	1.7%	
c. Sweet potato	Mono	0	0.0%	
	Mix	57	95.0%	
	No plant	3	5.0%	Maize local – Sweet potato– Cassava
d. Red bean	Mono	9	15.0%	
	Mix	9	15.0%	
	No plant	6	10.0%	
	No answer	36	60.0%	
e. Kedelai	Mono	0	0.0%	
	Mix	8	13.3%	
	No plant	0	0.0%	
	No answer	52	86.7%	
f. Groundnuts	Mono	12	20.0%	
	Mix	2	3.3%	
	No plant	0	0.0%	Sweet potato
	No answer	46	76.7%	

4.2.2.

Crop	Planted area	Seed volume		Total production	Crop yield	Return		Form of products								Total
								No answer		4.6 Dried		3.5 Raw		Others		
								No.	%	No.	%	No.	%	No.	%	
a. Maize (local)	1.0 ha/HH	25.4 kg/HH		510.5 kg/HH	504.2 kg/ha	25.1 kg/ha		8	13.3%	51	85.0%	1	1.7%	0	0.0%	60
b. Cassava	1.0 ha/HH	8.3 ikat/HH	204.2 stick/HH	419.2 kg/HH	420.9 kg/ha	8.3 ikat/ha	205.0 stick/ha	2	3.4%	1	1.7%	56	94.9%	0	0.0%	59
c. Sweet potato	0.9 ha/HH	5.3 ikat/HH	486.7 stick/HH	309.3 kg/HH	329.9 kg/ha	5.7 ikat/ha	519.1 stick/ha	1	1.8%	1	1.8%	55	96.5%	0	0.0%	57
d. Redbean	0.3 ha/HH	2.1 kg/HH		16.1 kg/HH	61.3 kg/ha	8.1 kg/ha		2	11.1%	4	22.2%	8	44.4%	4	22.2%	18
e. Kedelai	0.1 ha/HH	0.6 kg/HH		3.8 kg/HH	36.8 kg/ha	5.9 kg/ha		0	0.0%	3	37.5%	4	50.0%	1	12.5%	8
f. Groundnuts	0.2 ha/HH	1.8 kg/HH		30.8 kg/HH	145.1 kg/ha	8.5 kg/ha		0	0.0%	4	28.6%	5	35.7%	5	35.7%	14

4.2.3. Crop damages

Crop	Cause of crop damages (mutiple answers permitted)													
	1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		7. Wind		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	3	2.5%	10	8.4%	36	30.3%	14	11.8%	24	20.2%	32	26.9%	119	100.0%
b. Cassava	2	2.0%	16	16.2%	43	43.4%	17	17.2%	9	9.1%	12	12.1%	99	100.0%
c. Sweet potato	2	2.2%	30	32.3%	38	40.9%	11	11.8%	7	7.5%	5	5.4%	93	100.0%
d. Redbean	0	0.0%	9	30.0%	11	36.7%	2	6.7%	7	23.3%	1	3.3%	30	100.0%
e. Kedelai	1	7.7%	2	15.4%	6	46.2%	3	23.1%	0	0.0%	1	7.7%	13	100.0%
f. Groundnuts	0	0.0%	11	55.0%	6	30.0%	0	0.0%	2	10.0%	1	5.0%	20	100.0%

4.2.4. Marketing of the products

Crop	HHs selling the crop		Major market outlets								Form of market products						Average sold amount	Unit price	Average total sales
			1. In community		2. Sub/district bazzar		3. Go to Dili		4. Traders coming to suco		4.6. Dried		3.5. Raw		No answer				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Maize (local)	3	5.0%	2	66.7%	1	33.3%	0	0.0%	0	0.0%	2	66.7%	0	0.0%	1	33.3%	5.00 kg/HH	0.6 USD/kg	2.5 USD/HH
b. Cassava	12	20.3%	1	8.3%	2	16.7%	8	66.7%	1	8.3%	4	33.3%	8	66.7%	0	0.0%	29.25 kg/HH	0.3 USD/kg	10.5 USD/HH
c. Sweet potato	8	14.0%	0	0.0%	0	0.0%	8	100.0%	0	0.0%	0	0.0%	8	100.0%	0	0.0%	17.50 kg/HH	0.3 USD/kg	6.5 USD/HH
d. Redbean	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.00 kg/HH	0.0 USD/kg	0.0 USD/HH
e. soybean	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.00 kg/HH	0.0 USD/kg	0.0 USD/HH
f. Groundnuts	3	21.4%	0	0.0%	0	0.0%	3	100.0%	0	0.0%	2	66.7%	0	0.0%	1	33.3%	8.33 kg/HH	0.8 USD/kg	7.1 USD/H

4.2.5. Seed availability and Seed preservation

Crop	Seed type						Seed availability						Seed							
	Local		Improved		No answer		0. No answer		1. Sufficient		2. Not sufficient but still available		No answer		2. Neighbour		5. Outside of Suco		6. Own	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	60	100.0%	0	0.0%	0	0.0%	1	1.7%	37	61.7%	22	36.7%	0	0.0%	5	8.3%	0	0.0%	55	91.7%
b. Cassava	59	100.0%	0	0.0%	0	0.0%	0	0.0%	43	72.9%	16	27.1%	0	0.0%	2	3.4%	0	0.0%	57	96.6%
c. Sweet potato	57	100.0%	0	0.0%	0	0.0%	0	0.0%	41	71.9%	16	28.1%	0	0.0%	2	3.5%	0	0.0%	55	96.5%
d. Redbean	17	94.4%	0	0.0%	1	5.6%	2	11.8%	5	29.4%	11	64.7%	2	11.1%	1	5.6%	0	0.0%	15	83.3%
e. Kedelai	8	100.0%	0	0.0%	0	0.0%	0	0.0%	5	62.5%	3	37.5%	0	0.0%	1	12.5%	1	12.5%	6	75.0%
f. Groundnuts	14	100.0%	0	0.0%	0	0.0%	0	0.0%	8	57.1%	6	42.9%	0	0.0%	1	7.1%	0	0.0%	13	92.9%

Crop	Seed type						Preservation of seeds										Loss in post-harvest period			Total production
	Local		Improved		No answer		No answer		1. Put above the fire		2. Put on the tree		3. Kept in the drum/jerry can/bamboo		4. Stored in the silo		5. Left in the farm					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
a. Maize (local)	60	100.0%	0	0.0%	0	0.0%	0	0.0%	53	88.3%	7	11.7%	0	0.0%	7	11.7%	0	0.0%	0.0	kg/HH	0.0%	510.5 kg/HH
b. Cassava	50	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	59	118.0%	0.0	kg/HH	0.0%	419.2 kg/HH
c. Sweet potato	47	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	57	121.3%	0.0	kg/HH	0.0%	309.3 kg/HH
d. Redbean	17	94.4%	0	0.0%	1	5.6%	2	11.1%	7	38.9%	0	0.0%	8	44.4%	1	5.6%	0	0.0%	0.0	kg/HH	0.0%	16.1 kg/HH
e. Kedelai	8	100.0%	0	0.0%	0	0.0%	0	0.0%	4	50.0%	1	12.5%	3	37.5%	0	0.0%	0	0.0%	0.0	kg/HH	0.0%	3.8 kg/HH
f. Groundnuts	14	100.0%	0	0.0%	0	0.0%	0	0.0%	10	71.4%	0	0.0%	3	21.4%	1	7.1%	0	0.0%	0.0	kg/HH	0.0%	30.8 kg/HH

4.2.6. Chemical/Organic inputs

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		HHs using chemical insecticide/fungicide		HHs using organic insecticide/fungicide	
a. Maize (local)	0	0.0%	60	100.0%	0	0.0%	13	21.7%
b. Cassava	0	0.0%	59	100.0%	0	0.0%	13	22.0%
c. Sweet potato	0	0.0%	57	100.0%	0	0.0%	13	22.8%
d. Redbean	0	0.0%	16	88.9%	0	0.0%	4	22.2%
e. Kedelai	0	0.0%	8	100.0%	0	0.0%	0	0.0%
f. Groundnuts	0	0.0%	14	100.0%	0	0.0%	4	28.6%

4.3 Perenial/Tree crop production
4.3.1 Coffee
4.3.1.1. Mode of planting

Crop	Cropping type	No.	%
a. Coffee (Arabica)	Mix	13	21.7%
	Separated	38	63.3%
	No planted	9	15.0%
b. Coffee (Robusta)	Mix	13	21.7%
	Separated	5	8.3%
	No planted	42	70.0%

4.3.1.2 Mode of planting

Crop	Planted area	No. of trees planted	Total production	Crop yield	Mode of harvesting				
					1.Red cherry		2. Mix (red/green or unripe)		Total
					No.	%	No.	%	
a. Coffee (Arabica)	0.9 ha/HH	829.7 trees/HH	203.1 kg/HH	228.8 kg/ha	45	88.2%	6	11.8%	51
b. Coffee (Robusta)	0.3 ha/HH	230.8 trees/HH	64.8 kg/HH	204.7 kg/ha	17	94.4%	1	5.6%	18

4.3.1.3. Marketing of the products

Crop	HHs selling the crop		Form of market products (Multiple answer is ok)				Major market outlets								Sales of production		
			Parchment		Green Bean		Go to Dili		CCT Collection		Others		N.A		Ave.production sold	Ave. unit price	Average total sales
	No.	% to HHs producing	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Coffee (Arabica)	47	92.2%	44	93.6%	4	8.5%	15	31.9%	18	38.3%	8	17.0%	6	12.8%	111.2 kg/HH	1.38 USD/kg	133.2 USD/HH
b. Coffee (Robusta)	16	88.9%	16	100.0%	1	6.3%	4	25.0%	7	43.8%	4	25.0%	1	6.3%	31.4 kg/HH	1.04 USD/kg	34.7 USD/HH

4.3.1.4. Chemical/Organic inputs and loss in post-harvest

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		Loss in post-harvest period		Total production
a. Coffee (Arabica)	0	0.0%	48	80.0%	26.8 kg	13.2%	203.1 kg/HH
b. Coffee (Robusta)	0	0.0%	19	32.2%	23.6 kg	36.3%	64.8 kg/HH

4.3.2 Other tree crops

4.3.2.1. Mode of planting

Crop	No of HHs producing	%	No. of trees planted	Age of trees planted	Total production	Crop yield	Products for harvesting						
							1.Ripe		6. Others		0. No answer		Total
							No.	%	No.	%	No.	%	
a. Banana	57	95.0%	23.2 Trees/HH	4.4 Yrs/tree	117.2 kg/HH	5.0 kg/tree	32	56.1%	25	43.9%	0	0.0%	57
b. Mango	56	93.3%	10.4 Trees/HH	16.1 Yrs/tree	296.8 kg/HH	28.5 kg/tree	2	3.6%	48	85.7%	6	10.7%	56
c. Citrus	48	80.0%	8.9 Trees/HH	9.4 Yrs/tree	144.8 kg/HH	16.3 kg/tree	0	0.0%	37	74.0%	13	26.0%	50
d. Candlenuts	3	5.0%	0.3 Trees/HH	0.8 Yrs/tree	2.7 kg/HH	9.4 kg/tree	0	0.0%	3	100.0%	0	0.0%	3
e. Coconuts	5	8.3%	2.9 Trees/HH	0.7 Yrs/tree	4.2 kg/HH	1.5 kg/tree	1	33.3%	2	66.7%	0	0.0%	3
f. Avocado	2	3.3%	0.1 Trees/HH	0.1 Yrs/tree	0.8 kg/HH	7.1 kg/tree	0	0.0%	1	50.0%	1	50.0%	2
g. Breadfuits	1	1.7%	0.1 Trees/HH	0.3 Yrs/tree	0.3 kg/HH	6.7 kg/tree	0	0.0%	1	100.0%	0	0.0%	1
h. Jackfruits	1	1.7%	0.3 Trees/HH	0.2 Yrs/tree	3.0 kg/HH	9.0 kg/tree	0	0.0%	1	100.0%	0	0.0%	1
i. Pineapple	1	1.7%	1.0 Trees/HH	0.0 Yrs/tree	0.8 kg/HH	0.8 kg/tree	0	0.0%	1	100.0%	0	0.0%	1

4.3.2.2. Marketing of the products

Crop	HHs selling the crop		Form of market products		Major market outlets										Sales of production		
			Fruits		1. In community		2. Sub/district bazzar		3. Go to Dili		4. Trader coming to suco		0. N.A		Ave.production sold	Ave. unit price	Average total sales
	No.	% to HHs producing	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Banana	33	57.9%	33	100.0%	1	3.0%	5	15.2%	27	81.8%	0	0.0%	0	0.0%	80.2 kg/HH	0.37 USD/kg	16.9 USD/HH
b. Mango	40	71.4%	40	100.0%	0	0.0%	5	12.5%	35	87.5%	0	0.0%	0	0.0%	172.8 kg/HH	0.39 USD/kg	61.2 USD/HH
c. Citrus	37	77.1%	37	100.0%	2	5.4%	0	0.0%	29	78.4%	1	2.7%	1	2.7%	145.4 kg/HH	0.56 USD/kg	108.4 USD/HH
d. Candlenuts	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.00 USD/kg	0.0 USD/HH
e. Coconuts	1	20.0%	1	100.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	2.7 kg/HH	0.02 USD/kg	2.5 USD/HH
f. Avocado	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.00 USD/kg	0.0 USD/HH
g. Breadfuits	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.00 USD/kg	0.0 USD/HH
h. Jackfruits	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.00 USD/kg	0.0 USD/HH
i. Pineapple	1	100.0%	1	100.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0.8 kg/HH	0.00 USD/kg	0.2 USD/HH

4.3.2.3. Post harvest

Crop	Loss after harvest			Total production
a. Banana	12.6	kg/HH	10.7%	117.2 kg/HH
b. Mango	37.8	kg/HH	12.7%	296.8 kg/HH
c. Citrus	10.1	kg/HH	5.3%	190.5 kg/HH
d. Candlenuts	2.2	kg/HH	81.3%	2.7 kg/HH
e. Coconuts	0.0	kg/HH	0.0%	2.5 kg/HH
f. Avocado	0.0	kg/HH	0.0%	0.8 kg/HH
g. Breadfuits	0.0	kg/HH	0.0%	0.3 kg/HH
h. Jackfruits	1.1	kg/HH	36.1%	3.0 kg/HH
i. Pineapple	0.0	kg/HH	0.0%	0.8 kg/HH

4.3.2.4. Crop damages

Crop	Cause of crop damages (Multiple answer permitted)													
	1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		7. Wind		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Banana	0	0.0%	11	11.7%	41	43.6%	22	23.4%	2	2.1%	18	19.1%	94	100.0%
b. Mango	1	1.1%	10	10.8%	31	33.3%	15	16.1%	4	4.3%	32	34.4%	93	100.0%
c. Citrus	2	3.4%	10	16.9%	14	23.7%	7	11.9%	2	3.4%	24	40.7%	59	100.0%
d. Candlenuts	0	0.0%	1	20.0%	1	20.0%	1	20.0%	0	0.0%	2	40.0%	5	100.0%
e. Coconuts	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1	100.0%
f. Avocado	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
g. Breadfuits	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
h. Jackfruits	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100.0%
i. Pineapple	0	0.0%	0	0.0%	1	33.3%	0	0.0%	1	33.3%	1	33.3%	3	100.0%

Section 5: Livestock

5.1 No. of Livestock raised and lost, consumed and sold in the last season

Type	HHs raising livestock		Ave.Total No. of Livestock	Ave. No.lost	Ave. No.consumed	Av. No.sold	HH losing livestock	Cause of loss									
								1. Disease		2. Shortage of feed		3. Disaster		4. Stolen		0. No response	
	Unit:HH	% to 60 HHs	Head/HH	Head/HH	Head/HH	Head/HH	HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	20	33.3%	1.1	0.1	0.1	0.1	3	2	66.7%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
Buffalo	6	10.0%	0.2	0.0	0.0	0.0	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
Goat	44	73.3%	2.8	0.7	0.4	0.2	10	7	70.0%	2	20.0%	0	0.0%	1	10.0%	0	0.0%
Horse	22	36.7%	0.6	0.1	0.0	0.0	3	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%
Pig	57	95.0%	3.1	0.3	0.4	0.6	10	4	40.0%	2	20.0%	1	10.0%	3	30.0%	0	0.0%
Sheep	2	3.3%	0.1	0.0	0.0	0.0	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Chicken	54	90.0%	8.3	1.3	2.0	2.1	21	5	23.8%	3	14.3%	0	0.0%	13	61.9%	0	0.0%

5.2 Grazing Style

5.2.1Rainy season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place										Rent if any			
		0. N.A.		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	20	0	0.0%	6	30.0%	5	25.0%	5	25.0%	4	20.0%	1.5	0	0.0%	13	65.0%	7	35.0%	0	0.0%	12	60.0%	1	5.0%	0	0.0%	7	35.0%	20	100.0%	0	0.0%
Buffalo	6	0	0.0%	1	16.7%	3	50.0%	2	33.3%	0	0.0%	1.1	0	0.0%	4	66.7%	2	33.3%	0	0.0%	3	50.0%	0	0.0%	0	0.0%	3	50.0%	6	100.0%	0	0.0%
Goat	44	0	0.0%	2	4.5%	11	25.0%	7	15.9%	24	54.5%	0.7	2	4.5%	29	65.9%	13	29.5%	0	0.0%	13	29.5%	0	0.0%	1	2.3%	30	68.2%	40	90.9%	4	9.1%
Sheep	2	0	0.0%	0	0.0%	1	50.0%	0	0.0%	1	50.0%	0.5	0	0.0%	2	100.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%	2	100.0%	0	0.0%
Horse	22	1	4.5%	2	9.1%	5	22.7%	4	18.2%	10	45.5%	0.9	1	4.5%	14	63.6%	7	31.8%	1	4.5%	10	45.5%	0	0.0%	0	0.0%	11	50.0%	21	95.5%	1	4.5%

5.2.2.Dry season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place										Rent if any			
		0. N.A.		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	20	0	0.0%	7	35.0%	5	25.0%	5	25.0%	3	15.0%	1.5	0	0.0%	9	45.0%	11	55.0%	0	0.0%	13	65.0%	1	5.0%	0	0.0%	6	30.0%	20	100.0%	0	0.0%
Buffalo	6	0	0.0%	1	16.7%	3	50.0%	2	33.3%	0	0.0%	1.1	0	0.0%	4	66.7%	2	33.3%	0	0.0%	3	50.0%	0	0.0%	0	0.0%	3	50.0%	6	100.0%	0	0.0%
Goat	44	0	0.0%	3	6.8%	14	31.8%	7	15.9%	20	45.5%	0.9	2	4.5%	23	52.3%	19	43.2%	0	0.0%	18	40.9%	0	0.0%	1	2.3%	25	56.8%	39	88.6%	5	11.4%
Sheep	2	0	0.0%	0	0.0%	1	50.0%	0	0.0%	1	50.0%	0.5	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	2	100.0%	0	0.0%
Horse	22	1	4.5%	4	18.2%	6	27.3%	4	18.2%	7	31.8%	1.5	1	4.5%	10	45.5%	11	50.0%	1	4.5%	12	54.5%	0	0.0%	0	0.0%	9	40.9%	21	95.5%	1	4.5%

5.3 No. of livestock for marketing in 2010-2011

Type	HHs raising livestock	HHs selling livestock		No. of livestock for sale	Ave. Unit price	Ave. Total sales in 2010-2011	Market outlets									
							1.In Community		2. Sub/district bazaar		3. Go to Dili		4. Traders coming to Suco		0. N.A.	
	Unit:HH	Unit:HH	% to total HHs raising	Head/HH	USD/head	USD/HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	20	4	20.0%	0.1	181.3	18.3	1	25.0%	0	0.0%	0	0.0%	2	50.0%	1	25.0%
Buffalo	6	0	0.0%	0.0	-	0.0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Goat	44	5	11.4%	0.2	30.0	7.3	1	20.0%	1	20.0%	1	20.0%	2	40.0%	0	0.0%
Horse	22	2	9.1%	0.0	147.5	4.9	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
Pig	57	16	28.1%	0.6	62.0	39.3	6	37.5%	2	12.5%	7	43.8%	1	6.3%	0	0.0%
Sheep	2	0	0.0%	0.0	-	0.0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Chicken	54	24	44.4%	2.1	12.0	30.5	5	20.8%	1	4.2%	13	54.2%	2	8.3%	3	12.5%

Section 6: Firewood and Timberwood

6.1 Firewood

Items	Unit	Answers						
a. Tree species for firewood		1. Ai ru	2. Ai bubur	3. AI samtuku	4. Casuarina	5. Teak	7. Others	Total
(Multiple answers permitted)	HHs using species	32	56	44	22	1	7	162
	%	19.8%	34.6%	27.2%	13.6%	0.6%	4.3%	100.0%
b. Owner of the collection site		No response	1. Other suco member	2. Outsiders of Suco	5. Own			
	No. of answers	1	37	2	20			
	%	1.7%	61.7%	3.3%	33.3%			

Items	Unit	Answers
c. Ave. time to the collection site	min	76.1
d. Ave. frequency of firewood collection	times/week	3.1
e. Ave. volumes of firewood collected	bundles/visit	2.9
f. Ave. production sold per week	bundles	0
g. Ave. unit price	USD/bundle	–
h. Ave. total sales per week	USD	–
i. Ave. annual total sales in 2010/11	USD	–
j Major market outlet	–	–

6.2 Timberwood

	Total HHs collecting timbers		Time to collection site	Owner of the collection site										Frequency of timber	Amount of timber	Size of pole		Monthly production sold	Price	Monthly sales	Annual sales in 2010/11
				0. N.A.		1. Other suco		2. Outsiders of		3. Community		5. Own				Diamete	Length				
Species	unit: HH	%	min	HH	%	HH	%	HH	%	HH	%	HH	%	times/month	poles/visit	cm	m	pole	USD/pole	USD	USD
a. Ai ru	43	28.9%	143.0	0	0.0%	2	4.7%	3	7.0%	30	69.8%	8	18.6%	6.7	7.0	14.0	5.1	0	–	0	0
b. Ai bubur	56	37.6%	129.8	0	0.0%	1	1.8%	2	3.6%	41	73.2%	12	21.4%	7.1	5.3	19.7	3.7	0	–	0	0
c. Ai kakeu	2	1.3%	90.0	0	0.0%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	9.5	3.5	17.5	10.0	0	–	0	0
d. Casuarina	43	28.9%	117.3	0	0.0%	0	0.0%	2	4.7%	20	46.5%	21	48.8%	6.6	6.9	14.7	5.4	0	–	0	0
e. Ai samtuku	4	2.7%	105.0	0	0.0%	0	0.0%	0	0.0%	2	50.0%	2	50.0%	8.3	6.0	11.8	4.3	0	–	0	0
f. Teak	1	0.7%	60.0	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2.0	6.0	25.0	4.0	0	–	0	0

Section 7: Non-Timber Forest Products

7-1 Harvest of NTFP

Species	Total HHs producing NTFP		Harvset season (Multiple answers allowed)																	
	unit: HH	%	Jan		Feb		Mar		Apr		May		June		July		Aug		Total	
a. Bamboo	47	78.3%	1	1.4%	14	20.3%	15	21.7%	12	17.4%	16	23.2%	5	7.2%	3	4.3%	3	4.3%	69	100.0%
b. Honey	8	13.3%	0	0.0%	0	0.0%	0	0.0%	5	50.0%	5	50.0%	0	0.0%	0	0.0%	0	0.0%	10	100.0%
c. Mushroom	4	6.7%	1	25.0%	1	25.0%	0	0.0%	1	25.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%

Species	Total HHs producing NTFP		Time to collection site	Owner of the collection site									
				No reply		Outsiders of suco		Other suo members		Own		Do not know	
	unit: HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%
a. Bamboo	51	85.0%	1.6	0	0.0%	1	2.0%	7	13.7%	40	78.4%	3	5.9%
b. Honey	21	35.0%	0.9	0	0.0%	1	4.8%	3	14.3%	3	14.3%	14	66.7%
c. Mushroom	16	26.7%	0.2	0	0.0%	0	0.0%	2	12.5%	2	12.5%	12	75.0%

7-2 Production and Sales

Species	Total HHs selling NTFP		Production sold in 2010/11	Price	Total sales	Market outlet			
						No response		Go to dili	
	unit: HH	%	unit:kg/HH	USD/kg	USD	HH	%	HH	%
a. Bamboo	0	0.0%	0	0	0	0	0.0%	0	0.0%
b. Honey	5	62.5%	3.5	1.1	3.4	3	37.5%	5	62.5%
c. Mushroom	0	0.0%	0.0	#DIV/0!	0	0	0.0%	0	0.0%

Section 8: Income and expenses

8-1. Sources of cash income of the HH

Item	Ave.amount(unit: USD/year)
1) Selling maize	2.4
2) Selling vegetables	62.6
3) Selling beans	0.0
4) Selling tubers	24.2
5) Selling coffee	167.9
6) Selling fruits	189.7
7) Selling livestock products	100.4
8) Selling fuel wood	0.0
9) Selling timber wood	0.0
10) Selling NTFPs (rattan, medicinal plants, etc.)	3.4
11) Selling handicraft / cottage industry products	4.4
12) Salary from permanent job	99.1
13) Wage from temporary job (s)	48.4
14) Private business (trading, shop, etc.)	76.7
15) Remittance from family members	43.7
16)Others (e.g wine making / or subsidies)	130.7
Total	953.5

8-2. Expenditure for consumption

Item	Ave.amount(unit: USD/year)
1) Expenditure for Food	227.5
2) Expenditure for Health	5.6
3) Expenditure for Education	78.0
4) Expenditure for Clothes	109.3
5) Expenditure for Firewood/Kerosine/Electorocity	21.2
6) Expenditure for Social Activitiy	124.0
Total	565.6

8-3. Investment of productive and fixed assets in the last year

Item	Ave.amount(unit: USD/year)
1) Livestock	27.5
2) Farm machinery / tools	3.6
3) Housing (improvement / repair)	30.1
4) Household Appliance	29.1
5) Land	0.8
6) Transportation means	4.0
7) Private business	34.2
8) Others (Saving in the Bank)	244.3
Total	373.6

Result of survey for household members in suco Fadabloco-1
A. Participation/engagement of household activities

Item		A-1Engagement in the activiites: Average rating (1: Usually, 2: Sometimes, 3: Never)		A-2 Activities which respondent would like to make it easy (5 answers selected with priority)																	
				Male										Female							
		Male	Female	1st		2nd		3rd		4th		5th		1st		2nd		3rd		4th		5th	
				No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Home activities																					
A1	Fetching of drinking water	1.2	1.1	16	53.3%	4	13.3%	1	3.3%	3	10.0%	0	0.0%	16	53.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
A2	Cooking	2.1	1.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	6	20.0%	0	0.0%	0	0.0%	0	0.0%
A3	Washing	1.9	1.1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	3	10.0%	0	0.0%	1	3.3%
A4	Sweeping the house	1.8	1.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	1	3.3%
A5	House repair	1.4	1.5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
A6	Child / elderly care	1.9	1.1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	0	0.0%
A7	Kitchen gardening	1.1	1.6	5	16.7%	1	3.3%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	2	6.7%	1	3.3%	1	3.3%
A8	Sewing and knitting	2.7	1.5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	2	6.7%
A9	Shopping in market	1.6	1.9	2	6.7%	5	16.7%	4	13.3%	2	6.7%	5	16.7%	3	10.0%	4	13.3%	0	0.0%	0	0.0%	1	3.3%
Average		1.7	1.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
b. Fixed farming activities																					
B1	Plowing	1.1	1.7	3	10.0%	4	13.3%	2	6.7%	0	0.0%	1	3.3%	3	10.0%	2	6.7%	2	6.7%	2	6.7%	2	6.7%
B2	Seeding/ transplanting	1.1	1.7	1	3.3%	5	16.7%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%
B3	Weeding	1.1	1.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	2	6.7%	0	0.0%	1	3.3%	0	0.0%
B4	Application of chemical fertilizers	2.9	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
B5	Harvesting	1.7	1.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	4	13.3%	1	3.3%	2	6.7%	0	0.0%
B6	Repairing of farm	1.1	1.6	0	0.0%	2	6.7%	2	6.7%	2	6.7%	2	6.7%	0	0.0%	1	3.3%	1	3.3%	2	6.7%	1	3.3%
Average		1.5	1.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
c. Shifting cultivation																					
C1	Slashing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	1	3.3%	0	0.0%	0	0.0%
C2	Burning	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C3	Clearing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C4	Fencing	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	1	3.3%	1	3.3%	0	0.0%
C5	Seeding	3.0	3.0	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C6	Weeding	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C7	Harvesting	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average		3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
d. Livestock and poultry																					
D1	Grazing control	1.1	2.0	1	3.3%	0	0.0%	4	13.3%	1	3.3%	1	3.3%	0	0.0%	1	3.3%	4	13.3%	1	3.3%	0	0.0%
D2	Feeding	1.1	1.6	2	6.7%	4	13.3%	4	13.3%	5	16.7%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	16.7%
D3	Watering	1.1	1.6	0	0.0%	3	10.0%	2	6.7%	4	13.3%	5	16.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
D4	Collection/ production of fodder	1.3	2.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
D5	Sweeping of livestock & poultry st	1.8	2.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%
Average		1.3	1.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
e. Fishing																					
E1	Fish catching in dam reservoir	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E2	Fish catching in river	2.2	3.0	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E3	Fish production in pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E4	Maintenance of boat / engine	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E5	Maintenance of pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%
Average		2.8	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
f. Forestry																					
F1	Harvesting coffee	1.4	1.7	0	0.0%	0	0.0%	0	0.0%	3	10.0%	1	3.3%	0	0.0%	1	3.3%	2	6.7%	1	3.3%	3	10.0%
F2	Collection of firewood	1.1	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	0	0.0%
F3	Timber harvest	1.2	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%
F4	Collection/Production of NTFPs	1.7	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%
Average		1.3	2.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
g. Post harvest and marketing																					
G1	Processing food crops (e.g. thresh	1.9	1.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	4	13.3%	2	6.7%	0	0.0%
G2	Processing coffee cherry	1.5	1.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	1	3.3%
G3	Processing vegetables and fruits	2.2	2.0	0	0.0%	0	0.0%	1	3.3%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%
G4	Processing livestock, poultry and f	2.1	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G5	Processing Timber	1.7	2.8	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%
G6	Processing NTFPs	1.9	2.9	0	0.0%	1	3.3%	3	10.0%	1	3.3%	3	10.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	4	13.3%
G7	Selling food crops	2.2	2.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%
G8	Selling coffee cherry/beans	1.4	2.1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	1	3.3%
G9	Selling vegetables and fruits	1.4	2.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%
G10	Selling livestock, poultry and fishe	1.6	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G11	Selling Timber	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G12	Selling NTFPs	2.1	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G13	Selling firewood	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average		2.0	2.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
h. Domestic business																					
H1	Rice mill operation	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H2	Trading	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H3	Shop keeping	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H4	Handicraft	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	1	3.3%
H5	Others (Specify the name)	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H5	Others	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average		3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
i. Communication																					
I1	Attending community meetings	1.6	1.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	1	3.3%
I2	Resolving in-village conflicts	2.4	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I3	Getting information from TV/Radi	1.7	2.4	0	0.0%	1	3.3%	2	6.7%	5	16.7%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I4	Political discussion with others	2.8	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I5	Official letter writing	2.8	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average		2.3	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
j. Religious/Culture																					
J1	Dance party	1.9	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J2	Worship ceremony	1.4	1.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%
J3	Sport events	2.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J4	Playing music	2.4	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average		1.9	2.4																		
Total				30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%

Result of survey for household members in suco Fadabloco

B. Problems in livelihoods

Item		Problems in livelihoods(3 answers selected with priority)											
		Male						Female					
		1st		2nd		3rd		1st		2nd		3rd	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Food security	28	93.3%	0	0.0%	0	0.0%	28	93.3%	0	0.0%	0	0.0%
2	Drinking water	0	0.0%	28	93.3%	2	6.7%	1	3.3%	26	86.7%	0	0.0%
3	Natural disasters	1	3.3%	1	3.3%	8	26.7%	0	0.0%	0	0.0%	9	30.0%
4	Disease/health	1	3.3%	1	3.3%	18	60.0%	1	3.3%	3	10.0%	12	40.0%
5	Education	0	0.0%	0	0.0%	2	6.7%	0	0.0%	1	3.3%	9	30.0%
Total		30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%

C. Problems in Agriculture

Item		Problems in agriculture (3 answers selected with priority)																	
		Male									Female								
		1st			2nd			3rd			1st			2nd			3rd		
		No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops	No.	%	Major Crops	No.	%	Major Crops related
1	Soil (e.g., soli type)	21	70.0%	Maize(local)	2	6.7%	Groundnuts/Beans	0	0.0%	–	20	66.7%	Maize(local)	4	13.3%	Cassava	1	3.3%	Maize(local)
2	Inputs (seeds)	9	30.0%	Maize(local)	20	66.7%	Maize(local)	0	0.0%	–	5	16.7%	Maize(local)	13	43.3%	Leaf vegetables	2	6.7%	Groundnuts
3	Inputs (fertilizers)	0	0.0%	–	3	10.0%	Maize(local)	5	16.7%	Maize(local)	0	0.0%	–	0	0.0%	–	0	0.0%	–
4	Inputs (labor)	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.3%	Maize(local)	1	3.3%	Cassava	4	13.3%	Cassava
5	Inputs (availability of land)	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	6	20.0%	Cassava	8	26.7%	Beans/Sweet potato
6	Knowledge of production techniq	0	0.0%	–	4	13.3%	Maize(local)	6	20.0%	Maize(local)	0	0.0%	–	3	10.0%	Cassava	4	13.3%	Cassava
7	Irrigation (e.g., lack of schemes(	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.3%	Cassava
8	Machinery	0	0.0%	–	0	0.0%	–	1	3.3%	Maize(local)	0	0.0%	–	0	0.0%	–	0	0.0%	–
9	Post-harvesting (e.g., processing	0	0.0%	–	0	0.0%	–	10	33.3%	Maize(local)	1	3.3%	Cassava	1	3.3%	Cassava	2	6.7%	Maize(local)/ Sweet potato
10	Marketing	0	0.0%	–	1	3.3%	Maize(local)	8	26.7%	Groundnuts	3	10.0%	Maize(local)	2	6.7%	Cassava	8	26.7%	Groundnuts
Total		30	100.0%	–	30	100.0%	–	30	100.0%		30	100.0%		30	100.0%		30	100.0%	

D. Problems in Animal raising

Item		Problems in animal raising (3 answers selected with priority)																	
		Male									Female								
		1st			2nd			3rd			1st			2nd			3rd		
		No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related
1	Grazing place	20	66.7%	Goat, Cattle	0	0.0%	–	1	3.3%	Goat	22	73.3%	Cattle	0	0.0%	–	1	3.3%	Chicken
2	Disease/lack of vaccination	10	33.3%	Goat	20	66.7%	Goat, Chicken	0	0.0%	Chicken, Goat	8	26.7%	Pig	26	86.7%	Chicken	2	6.7%	Pig, chicken
3	Knowledge of production techniq	0	0.0%	–	10	33.3%	Chicken	9	30.0%	Chicken, Goat	0	0.0%	–	2	6.7%	Goat, chicken	9	30.0%	Pig, chicken
5	Marketing	0	0.0%	–	0	0.0%	–	15	50.0%	Goat	0	0.0%	–	2	6.7%	Cattle, pig	15	50.0%	Pig, chicken
4	N.A.	0	0.0%	–	0	0.0%	–	5	16.7%	–	0	0.0%	–	0	0.0%	–	3	10.0%	Chicken, goat
Total		30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–

E. Livelihood activities consdered important

Item		Important livelihood activities (3 answers selected with priority)											
		Male						Female					
		1st		2nd		3rd		1st		2nd		3rd	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Agriculture(Food crops)	30	100.0%	0	0.0%	0	0.0%	30	100.0%	0	0.0%	0	0.0%
2	Agriculture(Cash crops)	0	0.0%	17	56.7%	1	3.3%	0	0.0%	29	96.7%	0	0.0%
3	Livestock/animal raising	0	0.0%	13	43.3%	14	46.7%	0	0.0%	1	3.3%	22	73.3%
4	Selling firewood	0	0.0%	0	0.0%	14	46.7%	0	0.0%	0	0.0%	1	3.3%
5	Selling NTFP	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	7	23.3%
6	Business	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total		30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%

F. Important interventions for natural resource management

Item		Average rating (1. Most important, 2. Important, 2. Not so much)	
		Male	Female
1	Environment education to people	1.0	1.4
2	Tree planting/reforestation	1.0	1.5
3	Land use plan	1.0	1.8
4	Reduction of firewood consumption/alternative energy dev.	1.9	2.1
5	Infrastructures (e.g., check dam)	1.4	1.7
6	Introduce environmentally-friendly techniques (e.g., agroforestry)	1.0	1.9
7	Re-vitalization of traditional norms (e.g., Tara Bandu)	1.0	1.3
8	Government legislation and its enforcement	1.0	1.2
Average		1.2	1.6

Appendix 1-6 Results of Baseline Survey in Suco Hautoho

Section 1: General Information of households in the village

1.1 Major Language Used

Language used	No.	% to total
Tetun, Mambae and Indonesia	1	1.7%
Tetun and Mambae	54	90.0%
Tetun only	4	6.7%
Indonesia only	1	1.7%
Total	60	100.0%

– General Features of Household in the village

1.2 Average of Total No. of households members: 6.9 persons/HH

1.3 General Features of Household members

– Average age of members: 21.0 years old

– Gender balance in HH: Ave. No.of Male 2.5 person/HH; Ave.No. of female 3.2 person/HH

– Average No. of members under working age (15–64 years: 3.8 person/HH

1.4.Main features of HH members

1.4.1 Heads of HH

Education level						Primary Occupation (Unit: person)						Organization (Unit: person)						Total	Absence (living in other place more than 3 months a year)
No graduated from primary school	Graduated from primary school	Graduated from secondary school	Graduated from high school	Graduated from University	Others	Farmer	Wage labour	Salary worker	Private business	No job	Others	3. Group of Traditional Leaders	4. Water user groups	5. Village committee	7. Religious organizations	9. Others	10. No member		
46	7	2	5	0	0	54	3	1	2	0	0	3	1	5	1	3	47	60	0.0%
76.7%	11.7%	3.3%	8.3%	0.0%	0.0%	90.0%	5.0%	1.7%	3.3%	0.0%	0.0%	5.0%	1.7%	8.3%	1.7%	5.0%	78.3%	100.0%	

1.4.2 Other HH members

HH members	General composision of HH (unit:person/HH)								Education (Unit: person/HH)									
	Wife	Daughter	Daughter Adapted	Son	Niece	Nefew	Other relative	Total	No graduated from primary school	Active in Primary school	Primary school graduated	Active in Secondary School	Secondary school graduated	Active in high school	High school graduated	Active in University	University graduated	Total
	0.92	0.03	2.30	2.32	0.07	0.10	0.13	5.87	2.87	1.67	0.30	0.33	0.28	0.22	0.17	0.02	0.02	5.87
	15.6%	0.6%	39.2%	39.5%	1.1%	1.7%	2.3%	100.0%	48.9%	28.4%	5.1%	5.7%	4.8%	3.7%	2.8%	0.3%	0.3%	100.0%

HH members	Primary Occupation (Unit: person/HH)								Organization (Unit: person/HH)								Absence (living in other place more
	Farmer	Wage labor	Salary worker	Private business	Student	Child (Below school age)	No job (incl. house work)	Others	Total	Member of women's union	Youth organization	Water users group	Village committee	Religious group	No member	No answer	Total	
	1.83	0.03	0.07	0.02	2.73	1.18	0.00	0.00	5.87	0.07	0.12	0.02	0.03	0.02	5.60	0.02	5.87	8.5%
	31.3%	0.6%	1.1%	0.3%	46.6%	20.2%	0.0%	0.0%	100.0%	1.1%	2.0%	0.3%	0.6%	0.3%	95.4%	0.3%	100.0%	

Appendix 1-6 Results of Baseline Survey in Suco Hautoho

1.4 Period of settlement of household in the village

Period of settlement	After 2010	2002–2010	1999–2002	1975–1999	Before 1975	No answer	Total
Number of HHs	0	4	3	16	37	0	60
%	0.0%	6.7%	5.0%	26.7%	61.7%	0.0%	100.0%

Section 2: Living Condition

2.1 Drinking water throughout a year

Items	2.1.1 Main water source (Multiple answers allowed)							2.1.2 Average distance from house to water	2.1.3 Sufficiency			2.1.4 Quality		
	1. Piped gravity watetr	2. Springs (Natural)	3. River	4. Reservoir	5.Well (open dug well)	7. Rain water	Total		1. Sufficient	2. Not sufficient	Total	1. Clean	2. Not clean	Total
Unit	No./%	No./%	No./%	No./%	No./%	No./%	No./%	minutes	No./%	No./%	No./%	No./%	No./%	No./%
1) Dry season	15	21	14	0	14	0	64	33.9	35	25	60	53	7	60
	23.4%	32.8%	21.9%	0.0%	21.9%	0.0%	100.0%		58.3%	41.7%	100.0%	88.3%	11.7%	100.0%
2) Wet season	25	16	4	0	12	3	60	27.40	47	13	60	42	18	60
	39.1%	25.0%	6.3%	0.0%	18.8%	4.7%	100.0%		78.3%	21.7%	100.0%	70.0%	30.0%	100.0%

2.2 Food condition/Food

Items	2.2.1 Frequency of meals														
	1. Normal seasons	2. Food shortage seasons	Period of food shortage (Multiple answers)												Total
			Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Unit	times/day		No.												
Food condition/Food availability	2.96	2.28	50.0	17.0	3.0	0.0	0.0	0.0	1.0	3.0	4.0	17.0	50.0	55.0	200.0
			25.0%	8.5%	1.5%	0.0%	0.0%	0.0%	0.5%	1.5%	2.0%	8.5%	25.0%	27.5%	100.0%

Items	2.2.2 Frequency of consumption of major foods					
	a. Rice	b. Corn	c. Beans (redbeans/ long beans)	d. Cassava/ Taro/Swe et potato	e. Kontas	f. Banana
Unit	times per week/ times/day					
1) Normal	5.5	2.5	1.3	1.8	1.0	1.4
	2.3	1.1	0.6	0.8	0.4	0.6
% (/7 times/week)	78.3%	35.4%	18.7%	26.1%	13.6%	20.1%
2) Food shortage	4.6	1.9	1.0	1.8	0.8	1.1
	2.0	0.8	0.4	0.8	0.4	0.5
% (/7 times/week)	65.9%	27.3%	14.3%	25.0%	11.9%	16.1%

2.3 Availability of facilities in the

Items	Availability of facilities in the house				
	a. Radio	b. TV	c. Bicycle	d. Motorcycle	f. Toilet
Unit	No. of HHs with the facilities / % to total respondents				
	12	2	1	4	31
	20.0%	3.3%	1.7%	6.7%	51.7%
Average number of available unit per HH (unit: unit/HH)	1.0	1.0	1.0	4.0	2.0

2.4 Major diseases and treatment

2.4.1 Children

	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																			
Treatment	1.No diseases		2.Cold		3.Malaria		4. Dysentery		5.Diarrhea diseases		6.Denguee fever		7. Typhus fever		8. Eye disease		9.Skin diseases		10. Respiratory disease		Sub-total	
2. Buy medicine			11	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	11	100.0%
3. Go to a faith healer in village			1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	2	100.0%
4. Go to a village health worker in village			35	23.2%	52	34.4%	6	4.0%	19	12.6%	13	8.6%	2	1.3%	14	9.3%	6	4.0%	4	2.6%	151	100.0%
5. Go to a hospital			0	0.0%	1	25.0%	2	50.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%
6. Apply traditional herbal medicine at home			0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
Total	1	0.6%	47	28.0%	53	31.5%	8	4.8%	20	11.9%	13	7.7%	2	1.2%	14	8.3%	6	3.6%	4	2.4%	168	100.0%

2.4.2 Adults

	Major diseases (unit: No of answer/% to total responses, Multiple answers permitted)																				
Treatment	1.No diseases		2.Cold		3.Malaria		4. Dysentery		5.Diarrhea diseases		6.Denguee fever		7. Typhus fever		8. Eye disease		9.Skin diseases		10. Respiratory disease		11. Others		Sub-total
2. Buy medicine			10	90.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	9.1%	11
3. Go to a faith healer in village			0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1
4. Go to a village health worker in village			34	19.1%	39	21.9%	19	10.7%	20	11.2%	7	3.9%	6	3.4%	27	15.2%	13	7.3%	12	6.7%	1	0.6%	178
5. Go to a hospital			0	0.0%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%	0	0.0%	3
6. Apply traditional herbal medicine at			0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1
Total	3	1.5%	44	22.3%	40	20.3%	19	9.6%	22	11.2%	7	3.6%	6	3.0%	28	14.2%	13	6.6%	13	6.6%	2	1.0%	197

100.0%
100.0%
100.0%
100.0%
100.0%
100.0%

Section 3: Land Use

3.1 Land Use in 2010/2011

3.1.1 Current use of land

	Type of land	HHs using the land		Average of Total No. of plots used by HH	a) Land owned and used by the HH				b) Land rented/borrowed from others		Major crops planted (Multiple answers permitted)																				Most prevailing combi
					Average No. of Plot	Average area per Plot		Total Area/H	Average No. of Plot	Average Area per plot	1. Paddy		2. Maize		3. Groundnuts		4. Beans		5. Sweet potato		6. Cassava		7. Leaf vegetables		8. Banana		9.Mangos		10. Others		Total		
		No.	% to total HHs					ha			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Cultivated	A1. Home Garden	58	96.7%	1.7	1.7	80.5	m2	0.01	0	0 m2	0	0.0%	55	46.6%	2	1.7%	0	0.0%	5	4.2%	55	46.6%	0	0.0%	1	0.8%	0	0.0%	0	0.0%	118	100.0%	
	A2. Upland (fixed) without soil conservation	37	61.7%	1.1	1.1	0.7	ha	0.7	0	0 ha	0	0.0%	31	41.9%	0	0.0%	1	1.4%	4	5.4%	33	44.6%	0	0.0%	3	4.1%	2	2.7%	0	0.0%	74	100.0%	Maize – Cassava
	A3. Upland (fixed) with soil conservation	9	15.0%	0.2	0.2	1.1	ha	0.2	0	0 ha	0	0.0%	5	27.8%	0	0.0%	1	5.6%	2	11.1%	7	38.9%	0	0.0%	1	5.6%	2	11.1%	0	0.0%	18	100.0%	
	A4. Shifting Cultivation	0	0.0%	0.0	0.0	0.0	ha	–	0	0 ha	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	
	A5. Coffee Plantation	50	83.3%	1.2	1.2	1.1	ha	1.4	0	0 ha																						
Un-cultivated	B1. Currently unused but kept for shifting	1	1.7%	0.0	0.0	0.5	ha	0.01	0	0 ha																						
	B2. Forest	12	20.0%	0.2	0.2	1.2	ha	0.3	0	0 ha																						
	B3. Grazing place	25	41.7%	0.5	0.5	1.5	ha	0.7	0	0 ha																						
	SUM			5.0				3.3																								

3.2 Shifting cultivation

3.2.1 Perception/understanding on shifting cultivation

Items		Answers	
a)	Advantages of shifting cultivation	1st: High productic	2nd: Stable production
b)	Disadvantages of shifting cultivation	1st: Expansion of forest fires	2nd: Soil erosion
c)	Willingness to continure shifting cultivation	Yes (100%)	reason: Good production
d)	Willingness to expand the area for shifting	Yes (100%)	reason: Get more production
e)	Willingness to expand the area for fixed farming	No (100%)	reason: Get more production

3.2.2 Farming practices in shifting cultivation

Items		Answers
a)	Areas used for shifting cultivation	Forest (Middle to sparse)
b)	Period of using the area before shifting another place	2.0 years
c)	Use of the same site after fallowing the area	Yes (100%)
d)	Sign for reusing the fallow area	-Darkness of soil
e)	Necessary period to show the sign mentioned	2.5 years
f)	Major constraints in shifting cultivation practices	Limited labor, tools and seeds

3.2.3 Use of communal land → No communal area

Section 4: Crop production

4.1 Major crops planted

	Major crops (Multiple answers permitted)																					
	1. Maize (local)		2. Maize (improved)		3.Groundnut		5. Soy bean		6. Red bean		7. Sweet potato		8. Cassava		9. Leaf vegetables		10. Bitter Guard		11. Eggplant		Total	
Type of farming	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Shifting	1	16.7%	0	0.0%	0	0.0%	1	16.7%	1	16.7%	1	16.7%	1	16.7%	1	16.7%	0	0.0%	0	0.0%	6	100.0%
b. Fixed upland farm	40	28.4%	6	4.3%	4	2.8%	7	5.0%	35	24.8%	45	31.9%	2	1.4%	2	1.4%	1	0.7%	0	0.0%	141	100.0%
c. Home garden	52	31.0%	8	4.8%	3	1.8%	6	3.6%	41	24.4%	56	33.3%	2	1.2%	0	0.0%	0	0.0%	1	0.6%	168	100.0%

4.2 Annual crop production

4.2.1. Cropping type

Crop	Cropping type	No.	%	Major crops to be planted in mix
a. Maize (local)	Mono	0	0.0%	
	Mix	59	98.3%	Red bean
	No plant	1	1.7%	
b. Cassava	Mono	0	0.0%	
	Mix	60	100.0%	Maize
	No plant	0	0.0%	
c. Sweet potato	Mono	0	0.0%	
	Mix	56	93.3%	Maize, cassava
	No plant	4	6.7%	
d. Groudnuts	Mono	16	26.7%	
	Mix	5	8.3%	
	No plant	39	65.0%	Red bean
	No answer	0	0.0%	
e. Tunis (bean)	Mono	0	0.0%	
	Mix	4	6.7%	
	No plant	56	93.3%	-
	No answer	0	0.0%	
f. Onion	Mono	0	0.0%	
	Mix	4	6.7%	
	No plant	56	93.3%	-
	No answer	0	0.0%	
g. Taro	Mono	0	0.0%	
	Mix	4	6.7%	
	No plant	56	93.3%	-
	No answer	0	0.0%	
h. Soybean	Mono	0	0.0%	
	Mix	6	10.0%	
	No plant	54	90.0%	-
	No answer	0	0.0%	
i. Redbean	Mono	0	0.0%	
	Mix	19	31.7%	
	No plant	41	68.3%	-
	No answer	0	0.0%	
j. Leaf vegetables	Mono	0	0.0%	
	Mix	2	3.3%	
	No plant	58	96.7%	-
	No answer	0	0.0%	

4.2.2. Production

Crop	Planted area	Seed volume		Total production	Crop yield	Return (seeds volume/area)		Form of products								Total
								No reply		3 or 5 Raw		4 or 6 Dried		Others		
								No.	%	No.	%	No.	%	No.	%	
a. Maize (local)	1.0 ha/HH	25.5 kg/HH		536.6 kg/HH	519.3 kg/ha	24.7 kg/ha		0	0.0%	11	18.6%	47	79.7%	1	1.7%	59
b. Cassava	1.1 ha/HH	9.0 bundle/HH	225.3 stick/H	678.2 kg/HH	640.8 kg/ha	8.5 bundle/h	212.9 stick/h	0	0.0%	56	93.3%	3	5.0%	1	1.7%	60
c. Sweet potato	1.1 ha/HH	7.8 bundle/HH	780.0 stick/H	563.5 kg/HH	512.2 kg/ha	7.1 bundle/h	709.1 stick/h	0	0.0%	53	94.6%	1	1.8%	2	3.6%	56
d. Groudnuts	0.2 ha/HH	6.8 kg/HH		78.9 kg/HH	321.0 kg/ha	27.6 kg/ha		0	0.0%	5	23.8%	14	66.7%	2	9.5%	21
e. Tunis	0.04 ha/HH	0.4 kg/HH		4.2 kg/HH	100.0 kg/ha	9.6 kg/ha		0	0.0%	1	25.0%	3	75.0%	0	0.0%	4
f. Onion	0.1 ha/HH	1.7 kg/HH		5.8 kg/HH	87.5 kg/ha	25.0 kg/ha		0	0.0%	4	100.0%	0	0.0%	0	0.0%	4
g. Taro	0.1 ha/HH	1.8 kg/HH		19.8 kg/HH	264.4 kg/ha	24.2 kg/ha		0	0.0%	4	100.0%	0	0.0%	0	0.0%	4
h. Soy bean	0.1 ha/HH	1.9 kg/HH		10.0 kg/HH	92.3 kg/ha	17.9 kg/ha		0	0.0%	0	0.0%	6	100.0%	0	0.0%	6
i. Redbean	0.4 ha/HH	4.9 kg/HH		42.8 kg/HH	102.8 kg/ha	11.6 kg/ha		0	0.0%	6	31.6%	13	68.4%	0	0.0%	19
i. Leaf vegetables	0.0 ha/HH	0.2 kg/HH		3.8 kg/HH	225.0 kg/ha	10.0 kg/ha		0	0.0%	1	50.0%	1	50.0%	0	0.0%	2

4.2.3. Crop damages

Crop	Cause of crop damages (mutiple answers permitted)																	
	0. No answer		1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		6. Flood		7. Wind		8. Others		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	0	0.0%	6	6.5%	12	12.9%	29	31.2%	6	6.5%	19	20.4%	1	1.1%	20	21.5%	0	0.0%	93	100.0%
b. Cassava	0	0.0%	1	1.1%	16	17.2%	38	40.9%	17	18.3%	9	9.7%	4	4.3%	7	7.5%	1	1.1%	93	100.0%
c. Sweet potato	0	0.0%	2	2.3%	20	23.0%	33	37.9%	13	14.9%	8	9.2%	3	3.4%	7	8.0%	1	1.1%	87	100.0%
d. Groudnuts	0	0.0%	3	11.1%	1	3.7%	14	51.9%	1	3.7%	6	22.2%	0	0.0%	1	3.7%	1	3.7%	27	100.0%
e. Tunis	0	0.0%	1	12.5%	4	50.0%	1	12.5%	0	0.0%	0	0.0%	0	0.0%	2	25.0%	0	0.0%	8	100.0%
f. Onion	0	0.0%	0	0.0%	4	30.8%	3	23.1%	2	15.4%	2	15.4%	0	0.0%	2	15.4%	0	0.0%	13	100.0%
g. Taro	0	0.0%	0	0.0%	3	25.0%	4	33.3%	3	25.0%	1	8.3%	0	0.0%	1	8.3%	0	0.0%	12	100.0%
h. Soybean	0	0.0%	0	0.0%	1	16.7%	2	33.3%	0	0.0%	1	16.7%	1	16.7%	1	16.7%	0	0.0%	6	100.0%
i. Redbean	0	0.0%	0	0.0%	9	33.3%	10	37.0%	0	0.0%	4	14.8%	0	0.0%	4	14.8%	0	0.0%	27	100.0%
j. Leaf vegetables	0	0.0%	1	50.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%

4.2.4. Marketing of the products

Crop	HHs selling the crop		Major market outlets												Form of market products								Production sold	Unit price	Annual total sales
			1. In community		2. Sub/district bazzar		3. Go to Dili		4. Traders coming to suco		5. Others		0. No response		No reply		3 or 5 Raw		4 or 6 Dried		Others				
	No.	% to the HHs producing	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Maize (local)	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	– USD/kg	0.0 USD/HH
b. Cassava	1	1.7%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1.7 kg/HH	1.0 USD/kg	1.7 USD/HH
c. Sweet potato	1	1.8%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0.8 kg/HH	1.0 USD/kg	0.8 USD/HH
d. Groudnuts	1	4.8%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0.3 kg/HH	1.0 USD/kg	0.3 USD/HH
e. Tunis	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
f. Onion	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
g. Taro	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
h. Soybean	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
i. Redbean	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH
j. Leaf vegetables	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH

4.2.5. Seed availability and Seed preservation

	Seed type (Multiple answers allowd)						Seed availability								Seed source(Multiple answers allowed)													
	Local		Improved		No reply		0. No reply		1. Sufficient		2. Not sufficient but still available		3.Short		0. No answer		1. Government		2. Neighbour		3. NGOs		4. Community Seed bank		5. Outside of Suco		6. Own	
Crop	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Maize (local)	59	100.0%	0	0.0%	0	0.0%	0	0.0%	20	33.9%	39	66.1%	0	0.0%	0	0.0%	0	0.0%	1	1.7%	0	0.0%	0	0.0%	5	8.5%	46	78.0%
b. Cassava	60	100.0%	0	0.0%	0	0.0%	0	0.0%	34	56.7%	26	43.3%	0	0.0%	0	0.0%	0	0.0%	1	1.7%	0	0.0%	0	0.0%	4	6.7%	53	88.3%
c. Sweet potato	56	100.0%	0	0.0%	0	0.0%	0	0.0%	33	58.9%	23	41.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	5.4%	51	91.1%
d. Groudnuts	21	100.0%	0	0.0%	0	0.0%	0	0.0%	2	9.5%	18	85.7%	1	4.8%	0	0.0%	0	0.0%	0	0.0%	1	4.8%	0	0.0%	0	0.0%	20	95.2%
e. Tunis	4	80.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%
f. Onion	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	75.0%
g. Taro	4	100.0%	0	0.0%	0	0.0%	0	0.0%	3	75.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	3	75.0%
h. Soybean	6	100.0%	0	0.0%	0	0.0%	0	0.0%	4	66.7%	2	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	100.0%
h. Redbean	19	100.0%	0	0.0%	0	0.0%	0	0.0%	13	68.4%	6	31.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	15.8%	14	73.7%
i. Leaf vegetables	2	100.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%

	Seed source(Multiple answers				Preservation of seeds (Multiple answers allowed)												Loss in post-harvest period		Total production
	7. Agricultural shop		8. Bazzar collect from the market		0. No answer		1. Put above the fire		2. Put on the tree		3. Kept in the drum/jerry can/bamboo		4. Stored in the silo		5. Left in the farm		6. Others				
Crop	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Maize (local)	0	0.0%	8	13.6%	0	0.0%	57	96.6%	9	15.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	39.4 kg/HH	7.3%	536.6 kg/HH
b. Cassava	0	0.0%	2	3.3%	1	1.7%	1	1.7%	0	0.0%	0	0.0%	0	0.0%	58	96.7%	0	0.0%	36.1 kg/HH	5.3%	678.2 kg/HH
c. Sweet potato	0	0.0%	2	3.6%	0	0.0%	1	1.8%	0	0.0%	0	0.0%	0	0.0%	54	96.4%	0	0.0%	27.7 kg/HH	4.9%	563.5 kg/HH
d. Groudnuts	0	0.0%	0	0.0%	1	4.8%	14	66.7%	1	4.8%	4	19.0%	0	0.0%	1	4.8%	0	0.0%	25.0 kg/HH	31.6%	78.9 kg/HH
e. Tunis	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0.4 kg/HH	10.4%	4.2 kg/HH
f. Onion	0	0.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	4.0 kg/HH	68.6%	5.8 kg/HH
g. Taro	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	3.8 kg/HH	19.3%	19.8 kg/HH
h. Soybean	0	0.0%	0	0.0%	0	0.0%	3	50.0%	0	0.0%	2	33.3%	0	0.0%	1	16.7%	0	0.0%	0.3 kg/HH	3.4%	10.0 kg/HH
h. Redbean	0	0.0%	2	10.5%	1	5.3%	5	26.3%	3	15.8%	10	52.6%	0	0.0%	0	0.0%	0	0.0%	2.1 kg/HH	5.0%	42.8 kg/HH
i. Leaf vegetables	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	0.6 kg/HH	15.6%	3.8 kg/HH

4.2.6. Chemical/Organic inputs

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		HHs using chemical insecticide/fungicide		HHs using organic insecticide/fungicide	
a. Maize (local)	0	0.0%	1	1.7%	0	0.0%	0	0.0%
b. Cassava	0	0.0%	2	3.3%	0	0.0%	0	0.0%
c. Sweet potato	0	0.0%	2	3.6%	0	0.0%	0	0.0%
d. Groudnuts	0	0.0%	1	4.8%	0	0.0%	0	0.0%
e. Tunis	0	0.0%	1	25.0%	0	0.0%	0	0.0%
f. Onion	0	0.0%	0	0.0%	0	0.0%	0	0.0%
g. Taro	0	0.0%	0	0.0%	0	0.0%	0	0.0%
h. Redbean	0	0.0%	0	0.0%	0	0.0%	0	0.0%
i. Leaf vegetables	0	0.0%	0	0.0%	0	0.0%	0	0.0%

4.3 Perenial/Tree crop production
4.3.1 Coffee
4.3.1.1. Mode of planting

Crop	Cropping type	No.	%
a. Coffee (Arabica)	Mix	21	35.0%
	Separated	29	48.3%
	No plante	10	16.7%
b. Coffee (Robusta)	Mix	6	10.0%
	Separated	7	11.7%
	No plante	47	78.3%

4.3.1.2 Mode of planting

Crop	Planted area	No. of trees planted	Total production	Crop yield	Mode of harvesting						
					0. No answer		1.Red cherry		2. Mix (red/green or unripe)		Total
					No.	%	No.	%	No.	%	
a. Coffee (Arabica)	0.9 ha/HH	195.0 trees/HH	165.5 kg/HH	174.8 kg/ha	5	10.0%	45	90.0%	0	0.0%	50
b. Coffee (Robusta)	0.2 ha/HH	69.7 trees/HH	33.6 kg/HH	179.1 kg/ha	1	7.7%	12	92.3%	0	0.0%	13

4.3.1.3. Marketing of the products

Crop	HHs selling the crop		Form of market products (Multiple answer is ok)								Major market outlets (Multiple answer is ok)								Sales of production		
			1.Cherry		2.Parchment		3.Green Bean		4.Others		1.Sub/district bazzar		2.Go to Dili		3.CCT Collection point		4.Others		Ave.production sold	Ave. unit price	Average total sales
	No.	% to 60 HHs	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Coffee (Arabica)	40	66.7%	2	5.0%	35	87.5%	2	5.0%	1	2.5%	5	12.5%	23	57.5%	10	25.0%	2	5.0%	95.4 kg/HH	1.5 USD/kg	124.1 USD/HH
b. Coffee (Robusta)	7	11.7%	0	0.0%	5	71.4%	1	14.3%	1	14.3%	1	14.3%	4	57.1%	1	14.3%	1	14.3%	18.5 kg/HH	1.33 USD/kg	20.2 USD/HH

4.3.1.4. Chemical/Organic inputs and loss in post-harvest

Crop	HHs using chemical fertilizers		HHs using organic fertilizers		Loss in post-harvest period		Total production
a. Coffee (Arabica)	0	0.0%	1	2.0%	14.7 kg/HH	8.9%	165.5 kg/H
b. Coffee (Robusta)	0	0.0%	0	0.0%	2.4 kg/HH	7.2%	33.6 kg/H

4.3.2 Other tree crops
4.3.2.1. Mode of planting

Crop	HHs planting crop		No. of trees planted	Age of trees planted	Total production	Crop yield	Products for harvesting					
							1.Ripe		6. Others		0. No reply	
	No.	% to 60 HHs					No.	%	No.	%	No.	%
a. Orange	57	95.0%	5.7 Trees/HH	9.8 Yrs/HH	164.4 kg/HH	28.7 kg/tree	1	1.8%	46	80.7%	10	17.5%
b. Mango	55	91.7%	4.9 Trees/HH	10.6 Yrs/HH	119.8 kg/HH	24.7 kg/tree	2	3.6%	47	85.5%	6	10.9%
c. Banana	50	83.3%	8.8 Trees/HH	1.8 Yrs/HH	61.2 kg/HH	7.0 kg/tree	33	66.0%	8	16.0%	9	18.0%
d. Piineapple	6	10.0%	3.4 Trees/HH	3.4 Yrs/HH	11.8 kg/HH	3.4 kg/tree	1	16.7%	3	50.0%	2	33.3%
e. Candlenuts	3	5.0%	0.1 Trees/HH	0.6 Yrs/HH	6.3 kg/HH	46.9 kg/tree	0	0.0%	3	100.0%	0	0.0%
f. Jackfruits	1	1.7%	0.1 Trees/HH	0.2 Yrs/HH	2.5 kg/HH	21.4 kg/tree	0	0.0%	1	100.0%	0	0.0%

4.3.2.2. Marketing of the products

Crop	HHs selling the crop		Form of market products		Major market outlets (Multiple answers allowed)												Sales of production		
			Fruits		1. In community		2. Sub/district		3. Go to Dili		4. Trader coming		5. Others		No reply		Ave.production sold	Ave. unit price	Average total sales
	No.	% to 60 HHs	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
a. Orange	41	68.3%	41	100.0%	0	0.0%	2	4.9%	31	75.6%	8	19.5%	0	0.0%	0	0.0%	114.5 kg/HH	1.0 USD/kg	105.1 USD/HH
b. Mango	32	53.3%	32	100.0%	0	0.0%	0	0.0%	29	90.6%	0	0.0%	0	0.0%	3	9.4%	49.7 kg/HH	0.8 USD/kg	32.9 USD/HH
c. Banana	5	8.3%	5	100.0%	0	0.0%	1	20.0%	4	80.0%	0	0.0%	0	0.0%	0	0.0%	4.3 kg/HH	0.4 USD/kg	1.8 USD/HH
d. Piineapple	6	10.0%	6	100.0%	0	0.0%	0	0.0%	5	83.3%	0	0.0%	1	16.7%	0	0.0%	9.8 kg/HH	1.0 USD/kg	6.0 USD/HH
e. Candlenuts	2	3.3%	2	100.0%	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	4.2 kg/HH	0.4 USD/kg	1.5 USD/HH
f. Jackfruits	0	0.0%	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0.0 kg/HH	0.0 USD/kg	0.0 USD/HH

4.3.2.3. Post harvest

Crop	Loss after harvest		Total production
a. Orange	11.9 kg	7.2%	164.4 kg/HH
b. Mango	13.3 kg	11.1%	119.8 kg/HH
c. Banana	4.2 kg	6.9%	61.2 kg/HH
d. Piineapple	0.4 kg	3.5%	11.8 kg/HH
e. Candlenuts	0.0 kg	0.0%	6.3 kg/HH
f. Jackfruits	0.3 kg	10.0%	2.5 kg/HH

4.3.2.4. Crop damages

Crop	Cause of crop damages (Multiple answer permitted)																	
	1. Drought		2. Diseases		3. Pests/Insects		4. Animals		5. Heavy rain		6. Flood		7. Wind		0. No answers		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Orange	1	1.4%	14	20.0%	17	24.3%	10	14.3%	2	2.9%	0	0.0%	26	37.1%	0	0.0%	70	100.0%
b. Mango	1	2.0%	9	18.0%	17	34.0%	10	20.0%	2	4.0%	1	2.0%	9	18.0%	1	2.0%	50	100.0%
c. Banana	1	1.4%	18	25.0%	21	29.2%	9	12.5%	5	6.9%	0	0.0%	18	25.0%	0	0.0%	72	100.0%
d. Piineapple	2	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	66.7%	6	100.0%
e. Candlenuts	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%	0	0.0%	3	100.0%
f. Jackfruits	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1	100.0%

Section 5: Livestock

5.1 No. of Livestock raised and lost, consumed and sold in the last season

Type	HHs raising livestock		Ave.Total No. of Livestock	Ave. No.lost	Ave. No.consumed	Av. No.sold	HH losing livestock	Cause of loss (Multiple answers allowed)									
								1. Disease		2. Shortage of feed		3. Disaster		4. Stolen		0. No response	
	Unit:HH	% to 60 HHs	Head/HH	Head/HH	Head/HH	Head/HH	HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	13	21.7%	0.9	0.1	0.1	0.2	6	1	16.7%	3	50.0%	1	16.7%	2	33.3%	0	0.0%
Buffalo	7	11.7%	0.2	0.0	0.0	0.0	0	0	######	0	######	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Goat	31	51.7%	2.7	0.5	0.4	0.5	8	2	25.0%	2	25.0%	1	12.5%	3	37.5%	0	0.0%
Horse	23	38.3%	0.7	0.1	0.0	0.0	3	1	33.3%	0	0.0%	1	33.3%	0	0.0%	1	33.3%
Pig	56	93.3%	2.6	0.1	0.2	0.3	5	2	40.0%	1	20.0%	0	0.0%	3	60.0%	0	0.0%
Chicken	46	76.7%	6.1	1.1	2.0	1.4	17	6	35.3%	7	41.2%	2	11.8%	7	41.2%	0	0.0%

5.2 Grazing Style

5.2.1Rainy season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place(Multiple answers permitted)										Rent if any			
		No reply		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	13	0	0.0%	4	30.8%	1	7.7%	0	0.0%	8	61.5%	1.0	0	0.0%	7	53.8%	6	46.2%	0	0.0%	1	7.7%	0	0.0%	0	0.0%	12	92.3%	13	100.0%	0	0.0%
Buffalo	7	0	0.0%	3	42.9%	0	0.0%	3	42.9%	1	14.3%	0.9	0	0.0%	3	42.9%	4	57.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	100.0%	7	100.0%	0	0.0%
Goat	31	0	0.0%	13	41.9%	1	3.2%	0	0.0%	17	54.8%	0.7	0	0.0%	1	3.2%	6	19.4%	0	0.0%	4	12.9%	0	0.0%	0	0.0%	3	9.7%	7	22.6%	0	0.0%
Horse	23	0	0.0%	7	30.4%	2	8.7%	0	0.0%	14	60.9%	0.8	0	0.0%	13	56.5%	10	43.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	23	100.0%	23	100.0%	0	0.0%

5.2.2.Dry season

Type	HHs raising livestock	Grazing place										Time to go to the grazing place	Sufficiency						Owner of the place(Multiple answers permitted)										Rent if any			
		No reply		1. Forest		2. Grassland		3. Fallow paddy land		4. No grazing: In stall			No response		1. Sufficient		2. Not sufficient		No response		1. Other suco members		2. Outsiders of Suco		4. Government		5. Own		No response		3. Nothing	
	Unit: HH	HH	%	HH	%	HH	%	HH	%	HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%
Cattle	13	0	0.0%	4	30.8%	2	15.4%	0	0.0%	7	53.8%	1.2	0	0.0%	1	7.7%	12	92.3%	0	0.0%	1	7.7%	0	0.0%	0	0.0%	13	100.0%	13	100.0%	0	0.0%
Buffalo	7	0	0.0%	3	42.9%	4	57.1%	0	0.0%	0	0.0%	0.9	0	0.0%	1	14.3%	6	85.7%	0	0.0%	4	57.1%	0	0.0%	0	0.0%	3	42.9%	7	100.0%	0	0.0%
Goat	31	0	0.0%	11	35.5%	1	3.2%	1	3.2%	18	58.1%	1.9	1	3.2%	4	12.9%	26	83.9%	1	3.2%	1	3.2%	0	0.0%	0	0.0%	29	93.5%	31	100.0%	0	0.0%
Horse	23	0	0.0%	9	39.1%	2	8.7%	0	0.0%	12	52.2%	0.8	0	0.0%	5	21.7%	18	78.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	23	100.0%	23	100.0%	0	0.0%

5.3 No. of livestock for marketing in 2010–2011

Type	HHs raising livestock	HHs selling livestock		No. of livestock for sale	Ave. Unit price	Ave. Total sales in 2010–2011	Market outlets (Multiple answers allowed)									
							1.In Community		2. Sub/district bazaar		3. Go to Dili		4. Traders coming to Suco		0. No answer	
	Unit:HH	HH	% to total HHs raising	Head/HH	USD/head	USD/HH	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	13	8	61.5%	0.2	198.1	73.3	5	62.5%	8	100.0%	0	0.0%	0	0.0%	0	0.0%
Buffalo	7	1	14.3%	0.0	400.0	6.7	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%
Goat	31	10	32.3%	0.5	79.0	42.5	6	60.0%	1	10.0%	1	10.0%	2	20.0%	0	0.0%
Horse	23	0	0.0%	0.0	0.0	0.0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!
Pig	56	9	16.1%	0.3	128.3	32.3	6	66.7%	1	11.1%	1	11.1%	1	11.1%	0	0.0%
Chicken	46	21	45.7%	1.4	9.6	16.0	9	42.9%	3	14.3%	7	33.3%	2	9.5%	0	0.0%

Section 6: Firewood and Timberwood

6.1 Firewood

Items	Unit	Answers (Multiple answers allowed)						
a. Tree species for firewood		1. Ai ru	2. Ai bubur	3. AI samtuku	4. Casuarina	5. Teak	7. Others	Total
(Multiple answers permitted)	HHs using species	18	56	4	23	2	7	110
	%	16.4%	50.9%	3.6%	20.9%	1.8%	6.4%	100.0%
b. Owner of the collection site		1. Other suco member	2. Outsiders of Suco	4. Government	5. Own	6. Do not know		Total
	No. of answers	12	1	2	40	5		60
	%	20.0%	1.7%	3.3%	66.7%	8.3%		100.0%

Items	Unit	Answers
c. Ave. time to the collection site	min	56.3
d. Ave. frequency of firewood collection	times/week	3.3
e. Ave. volumes of firewood collected	bundles/visit	4.4
f. Ave. production sold per week	bundles	0.0
g. Ave. unit price	USD/bundle	0
h. Ave. total sales per week	USD	0
i. Ave. annual total sales in 2010/11	USD	0
j Major market outlet	–	

6.2 Timberwood

Species	Total HHs collecting timbers		Time to collection site	Owner of the collection site (Multiple answers allowed)												Frequency of timber collecti	Amount of timber collecte	Size of pole		Monthly production sold	Price	Monthly sales	Annual sales in 2010/11
				No reply		1. Other suco members		2. Outsiders of suco		4. Government		5. Own		6. Do not know				Diameter	Length				
	unit: HH	%	min	HH	%	HH	%	HH	%	HH	%	HH	%	HH	%	times/month	poles/visit	cm	m	pole	USD/pole	USD	USD
a. Ai ru	38	63.3%	84.9	0	0.0%	7	18.4%	5	13.2%	0	0.0%	24	63.2%	3	7.9%	3.8	7.1	15.7	4.1	0	0	0	0
b. Ai bubur	59	98.3%	78.8	0	0.0%	12	20.3%	1	1.7%	0	0.0%	43	72.9%	3	5.1%	4.2	6.0	16.0	4.2	0	0	0	0
c. Casuarina	46	76.7%	68.3	0	0.0%	6	13.0%	0	0.0%	1	2.2%	36	78.3%	3	6.5%	4.4	8.4	11.9	5.1	0	0	0	0
d. Ai Na	4	6.7%	45.3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	3.5	8.0	12.5	10.0	0	0	0	0
															Average	4.0							

Section 7: Non-Timber Forest Products

7-1 Harvest of NTFP

Species	Total HHs producing NTFP		Harvset season (Multiple answers allowed)																							
			Jan		Feb		Mar		Apr		May		June		July		Aug		Sep		Oct		Nov		Dec		Total	
	unit: HH	%																								
a. Bamboo	19	31.7%	2	4.9%	3	7.3%	3	7.3%	8	19.5%	8	19.5%	2	4.9%	2	4.9%	3	7.3%	3	7.3%	3	7.3%	2	4.9%	2	4.9%	41	100.0%
b. Honey	3	5.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	60.0%	1	20.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	100.0%

Species	Total HHs producing NTFP		Time to collection site	Owner of the collection site									
				No reply		1.Other suco members		2.Outsiders of suco		5. Own		6.Do not know	
	unit: HH	%	hrs	HH	%	HH	%	HH	%	HH	%	HH	%
a. Bamboo	19	31.7%	1.0	0	0.0%	2	10.5%	0	0.0%	17	89.5%	0	0.0%
b. Honey	3	5.0%	2.0	0	0.0%	0	0.0%	0	0.0%	2	66.7%	1	33.3%

7-2 Production and Sales

Species	Total HHs selling NTFP		Production sold in 2010/11	Price	Total sales	Market outlet									
						No response		1.In community		2.Sub/district bazzar		3.Go to Dili		4.Traders coming to suco	
	unit: HH	%	unit:kg/HH	USD/kg	USD	HH	%	HH	%	HH	%	HH	%	HH	%
a. Bamboo	3	15.8%	0.9	1.2	1.1	0	0.0%	0	0.0%	1	33.3%	1	33.3%	1	33.3%
b. Honey	0	0.0%	0.0	0.0	0.0	0	#REF!	0	#REF!	0	#REF!	0	#REF!	0	#REF!

Section 8: Income and expenses

8-1. Sources of cash income of the HH

Item	Ave.amount(unit: USD/year)
1) Selling maize	0.0
2) Selling vegetables	0.0
3) Selling beans	0.0
4) Selling tubers	2.8
5) Selling coffee	144.3
6) Selling fruits	147.2
7) Selling livestock products	170.8
8) Selling fuel wood	0.0
9) Selling timber wood	0.0
10) Selling NTFPs (rattan, medicinal plants, etc.)	1.1
11) Selling handicraft / cottage industry products	0.0
12) Salary from permanent job	74.3
13) Wage from temporary job (s)	38.6
14) Private business (trading, shop, etc.)	105.9
15) Remittance from family members	60.9
16)Others (e.g wine making / or subsidies)	14.3
Total	760.3

8-2. Expenditure for consumption

Item	Ave.amount(unit: USD/year)
1) Expenditure for Food	179.6
2) Expenditure for Health	13.4
3) Expenditure for Education	32.5
4) Expenditure for Clothes	92.4
5) Expenditure for Firewood/Kerosine/Electorocity	8.9
6) Expenditure for Social Activitiy	12.4
7) Expenditure for Traditional Activity	78.6
Total	417.7

8-3. Investment of productive and fixed assets in the last year

Item	Ave.amount(unit: USD/year)
1) Livestock	34.7
2) Farm machinery / tools	16.2
3) Housing (improvement / repair)	46.6
4) Household Appliance	40.9
5) Land	0.9
6) Transportation means	8.3
7) Private business	38.2
8) Others (Saving in the Bank)	150.3
Total	336.0

Result of survey for household members in suco Hautoho-1
A. Participation/engagement of household activities

Item	A-1Engagement in the activiites: Average rating (1: Usually, 2: Sometimes, 3: Never)		A-2 Activities which respondent would like to make it easy (5 answers selected with priority)																			
			Male										Female									
	Male	Female	1st		2nd		3rd		4th		5th		1st		2nd		3rd		4th		5th	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
a. Home activities																						
A1 Fetching of drinking water	1.4	1.1	12	40.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	13	43.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
A2 Cooking	1.8	1.1	1	3.3%	8	26.7%	1	3.3%	0	0.0%	0	0.0%	8	26.7%	11	36.7%	0	0.0%	0	0.0%	0	0.0%
A3 Washing	1.8	1.1	0	0.0%	0	0.0%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	6	20.0%	0	0.0%	0	0.0%
A4 Sweeping the house	1.8	1.0	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	0	0.0%
A5 House repair	1.6	1.3	9	30.0%	1	3.3%	1	3.3%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	1	3.3%	0	0.0%	1	3.3%
A6 Child / elderly care	1.8	1.2	3	10.0%	1	3.3%	1	3.3%	1	3.3%	0	0.0%	7	23.3%	0	0.0%	2	6.7%	1	3.3%	0	0.0%
A7 Kitchen gardening	1.5	1.3	2	6.7%	4	13.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	1	3.3%	1	3.3%
A8 Sewing and knitting	2.3	1.5	1	3.3%	3	10.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	6	20.0%	0	0.0%	1	3.3%	0	0.0%
A9 Shopping in market	1.9	1.6	0	0.0%	2	6.7%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	1.8	1.2		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
b. Fixed farming activities																						
B1 Plowing	1.6	1.7	2	6.7%	3	10.0%	4	13.3%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	1	3.3%	0	0.0%	0	0.0%
B2 Seeding/ transplanting	1.6	1.6	0	0.0%	3	10.0%	4	13.3%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	5	16.7%	1	3.3%	0	0.0%
B3 Weeding	1.6	1.7	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	0	0.0%
B4 Application of chemical fertilizers	2.7	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
B5 Harvesting	1.5	1.4	0	0.0%	0	0.0%	6	20.0%	3	10.0%	1	3.3%	0	0.0%	2	6.7%	2	6.7%	3	10.0%	2	6.7%
B6 Repairing of farm	1.6	1.7	0	0.0%	1	3.3%	1	3.3%	1	3.3%	1	3.3%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	2	6.7%
Average	1.8	1.8		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
c. Shifting cultivation																						
C1 Slashing	2.1	2.4	0	0.0%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C2 Burning	1.9	2.1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
C3 Clearing	1.6	2.0	0	0.0%	0	0.0%	1	3.3%	3	10.0%	1	3.3%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	0	0.0%
C4 Fencing	1.9	2.4	0	0.0%	0	0.0%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	2	6.7%	0	0.0%
C5 Seeding	1.8	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	1	3.3%	0	0.0%
C6 Weeding	1.8	2.0	0	0.0%	3	10.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%
C7 Harvesting	1.6	1.6	0	0.0%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	0	0.0%	1	3.3%	2	6.7%	0	0.0%	1	3.3%
Average	1.8	2.1		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
d. Livestock and poultry																						
D1 Grazing control	1.8	2.2	0	0.0%	0	0.0%	3	10.0%	6	20.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	3	10.0%
D2 Feeding	1.7	2.0	0	0.0%	0	0.0%	1	3.3%	3	10.0%	3	10.0%	0	0.0%	0	0.0%	2	6.7%	2	6.7%	2	6.7%
D3 Watering	1.7	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%
D4 Collection/ production of fodder	2.0	2.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
D5 Sweeping of livestock & poultry st	2.1	2.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	1.9	2.1		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
e. Fishing																						
E1 Fish catching in dam reservoir	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E2 Fish catching in river	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E3 Fish production in pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E4 Maintenance of boat / engine	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E5 Maintenance of pond	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	3.0	3.0		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
f. Forestry																						
F1 Harvesting coffee	1.3	1.7	0	0.0%	0	0.0%	0	0.0%	3	10.0%	5	16.7%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	3	10.0%
F2 Collection of firewood	1.7	2.1	0	0.0%	0	0.0%	0	0.0%	1	3.3%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%
F3 Timber harvest	2.3	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F4 Collection/Production of NTFPs	2.9	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%
Average	2.1	2.3	0	0.0%	0	0.0%		0.0%		0.0%		0.0%	0	0.0%	0	0.0%		0.0%		0.0%		0.0%
g. Post harvest and marketing																						
G1 Processing food crops (e.g. thresh	2.0	2.0	0	0.0%	0	0.0%	2	6.7%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	4	13.3%	2	6.7%
G2 Processing coffee cherry	1.6	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	3	10.0%
G3 Processing vegetables and fruits	2.4	2.2	0	0.0%	0	0.0%	0	0.0%	2	6.7%	1	3.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G4 Processing livestock, poultry and f	2.7	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G5 Processing Timber	2.9	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G6 Processing NTFPs	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G7 Selling food crops	2.5	2.6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%
G8 Selling coffee cherry/beans	2.3	2.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G9 Selling vegetables and fruits	2.4	2.5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%
G10 Selling livestock, poultry and fisher	2.6	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G11 Selling Timber	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G12 Selling NTFPs	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
G13 Selling firewood	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.6	2.6		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
h. Domestic business																						
H1 Rice mill operation	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H2 Trading	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H3 Shop keeping	2.9	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
H4 Handicraft	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	10.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	23.3%
H5 Others (Specify the name)	0.0	0.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.3	2.4		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
i. Communication																						
I1 Attending community meetings	1.7	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I2 Resolving in-village conflicts	2.7	2.7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I3 Getting information from TV/Radio	2.5	2.4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I4 Political discussion with others	3.0	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I5 Official letter writing	3.0	2.8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.6	2.6		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
j. Religious/Culture																						
J1 Dance party	2.1	2.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J2 Worship ceremony	2.0	1.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J3 Sport events	2.9	2.9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
J4 Playing music	3.0	3.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Average	2.5	2.5																				
No answers			0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%	0	0.0%
Total			30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	100%	30	97%	30	100%

Result of survey for household members in suco Hautoho-2
B. Problems in livelihoods

Item	Problems in livelihoods (3 answers selected with priority)											
	Male						Female					
	1st		2nd		3rd		1st		2nd		3rd	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 No answer	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.3%
1 Food security	24	80.0%	1	3.3%	0	0.0%	26	86.7%	1	3.3%	1	3.3%
2 Drinking water	5	16.7%	23	76.7%	0	0.0%	3	10.0%	23	76.7%	1	3.3%
3 Natural disasters	0	0.0%	0	0.0%	3	10.0%	0	0.0%	0	0.0%	8	26.7%
4 Disease/health	1	3.3%	4	13.3%	12	40.0%	1	3.3%	4	13.3%	11	36.7%
5 Education	0	0.0%	1	3.3%	14	46.7%	0	0.0%	1	3.3%	6	20.0%
6 Acquisition of firewood	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7 Land use (e.g., conflict with	0	0.0%	1	3.3%	0	0.0%	0	0.0%	1	3.3%	2	6.7%
8 Credit (e.g., no system)	0	0.0%	0	0.0%	1	3.3%	0	0.0%	0	0.0%	0	0.0%
9 Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%

C. Problems in Agriculture

Item	Problems in agriculture (3 answers selected with priority)																	
	Male									Female								
	1st			2nd			3rd			1st			2nd			3rd		
	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related	No.	%	Major Crops related
0 No answer	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–
1 Soil (e.g., soli type)	20	66.7%	Maize (local)	0	0.0%	–	1	3.3%	Red bean	19	63.3%	Maize(local)	1	3.3%	Sweet potato	2	6.7%	Cassava
2 Inputs (seeds)	5	16.7%	Maize (local)	24	80.0%	Groundnuts	1	3.3%	Leaf vegetable	7	23.3%	Maize(local), soy bean	14	46.7%	Red bean	2	6.7%	Leaf vegetables
3 Inputs (fertilizers)	0	0.0%	–	2	6.7%	Groundnuts	2	6.7%	Groundnuts	0	0.0%	–	5	16.7%	Maize(local), Ground nuts, Red bean, Leaf vegetables, Coffee	0	0.0%	–
4 Inputs (labor)	1	3.3%	Cassava	0	0.0%	–	2	6.7%	Maize(local),	0	0.0%	–	2	6.7%	Sweet potato, leaf	5	16.7%	Cassava
5 Inputs (availability of land)	0	0.0%	–	1	3.3%	Coffee	3	10.0%	Cassava	0	0.0%	–	0	0.0%	–	3	10.0%	Soy bean, Cassava and Coffee
6 Knowledge of production techniques	3	10.0%	Cassava	3	10.0%	Cassava	5	16.7%	Leaf vegetables, Citrus	2	6.7%	Maize(local), cassava	4	13.3%	Maize(local), sweet potato, cassava,	5	16.7%	Cassava
7 Irrigation (e.g., lack of schemes)	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.3%	Cassava
8 Machinery	0	0.0%	–	0	0.0%	–	0	0.0%	–	1	3.3%	Groundnuts	1	3.3%	Coffee	0	0.0%	–
9 Post-harvesting (e.g., processing)	1	3.3%	Maize (local)	0	0.0%	–	4	13.3%	Maize(local)	0	0.0%	–	2	6.7%	Cassava and coffee	6	20.0%	Cassava
10 Marketing	0	0.0%	–	0	0.0%	–	12	40.0%	Groundnuts, Cassava,	1	3.3%	Pineapple	1	3.3%	Cassava	6	20.0%	Cassava, citrus
Total	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%		30	100.0%	–

D. Problems in Animal raising

Item	Problems in animal raising (3 answers selected with priority)																	
	Male									Female								
	1st			2nd			3rd			1st			2nd			3rd		
	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related	No.	%	Major animals related
0 No answer	0	0.0%	–	0	0.0%	–	1	3.3%	–	1	3.3%	–	1	3.3%	–	2	6.7%	–
1 Grazing place	21	70.0%	Buffalo	4	13.3%	Buffalo	2	6.7%	Goat	22	73.3%	Buffalo, cattle	1	3.3%	Pig	3	10.0%	Goat
2 Disease/lack of vaccination	9	30.0%	Chicken	24	80.0%	Pig, chicken	3	10.0%	Goat	7	23.3%	Chicken	27	90.0%	Pig, chicken	4	13.3%	Goat
3 Knowledge of production techniques	0	0.0%	–	1	3.3%	Pig	4	13.3%	Goat, chicken	0	0.0%	–	0	0.0%	–	7	23.3%	Pig
5 Marketing	0	0.0%	–	1	3.3%	Pig	19	63.3%	Chicken	0	0.0%	–	0	0.0%	–	14	46.7%	Chicken
6 Others	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–	0	0.0%	–
4 No applicable	0	0.0%	–	0	0.0%	–	1	3.3%	–	0	0.0%	–	1	3.3%	–	0	0.0%	–
Total	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–	30	100.0%	–

E. Livelihood activities consdered important

Item	Important livelihood activities (3 answers selected with priority)											
	Male						Female					
	1st		2nd		3rd		1st		2nd		3rd	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 No reply	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	13.3%
1 Agriculture(Food crops)	30	100.0%	0	0.0%	0	0.0%	30	100.0%	0	0.0%	0	0.0%
2 Agriculture(Cash crops)	0	0.0%	27	90.0%	1	3.3%	0	0.0%	29	96.7%	0	0.0%
3 Livestock/animal raising	0	0.0%	3	10.0%	22	73.3%	0	0.0%	1	3.3%	19	63.3%
4 Selling firewood	0	0.0%	0	0.0%	5	16.7%	0	0.0%	0	0.0%	1	3.3%
5 Selling NTFP	0	0.0%	0	0.0%	2	6.7%	0	0.0%	0	0.0%	6	20.0%
6 Business	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7 Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%	30	100.0%

F. Important interventions for natural resource management

Item	Average rating (1. Most important, 2. Important, 3. Not so much)	
	Male	Female
1 Environment education to	1.2	1.3
2 Tree planting/reforestation	1.4	1.5
3 Land use plan	1.5	1.6
4 Reduction of firewood consumption/alternative energy dev.	1.8	1.9
5 Infrastructures (e.g., check dam)	1.7	1.8
6 Introduce environmentally-friendly techniques (e.g., agroforestry)	1.7	1.8
7 Re-vitalization of traditional norms (e.g., Tara Bandu)	1.3	1.3
8 Government legislation and its enforcement	1.3	1.4
Average	1.5	1.6

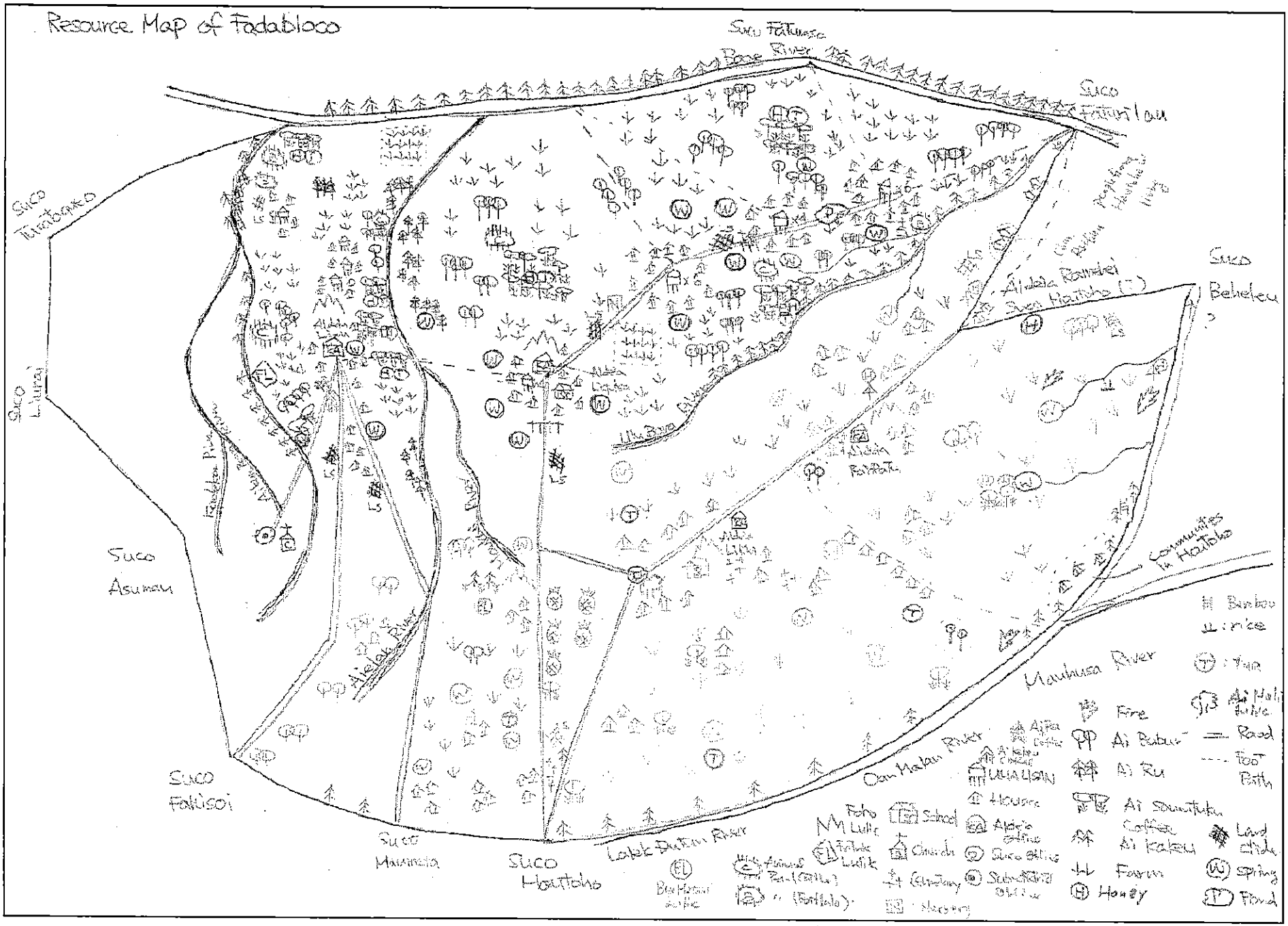


Figure 1 Resource Map of Suco Fadabloco

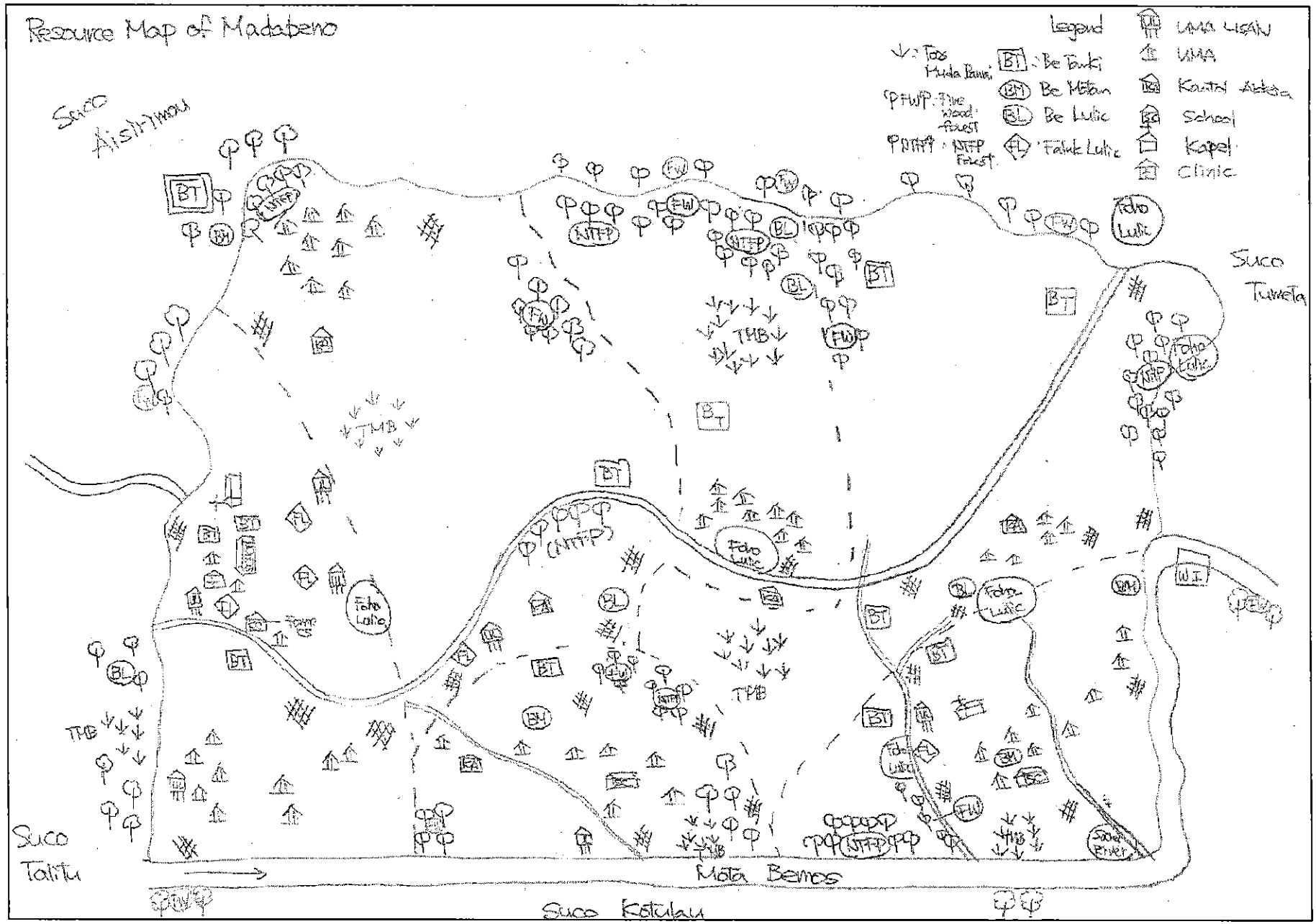


Figure 2 Resource Map of Suco Madabeno

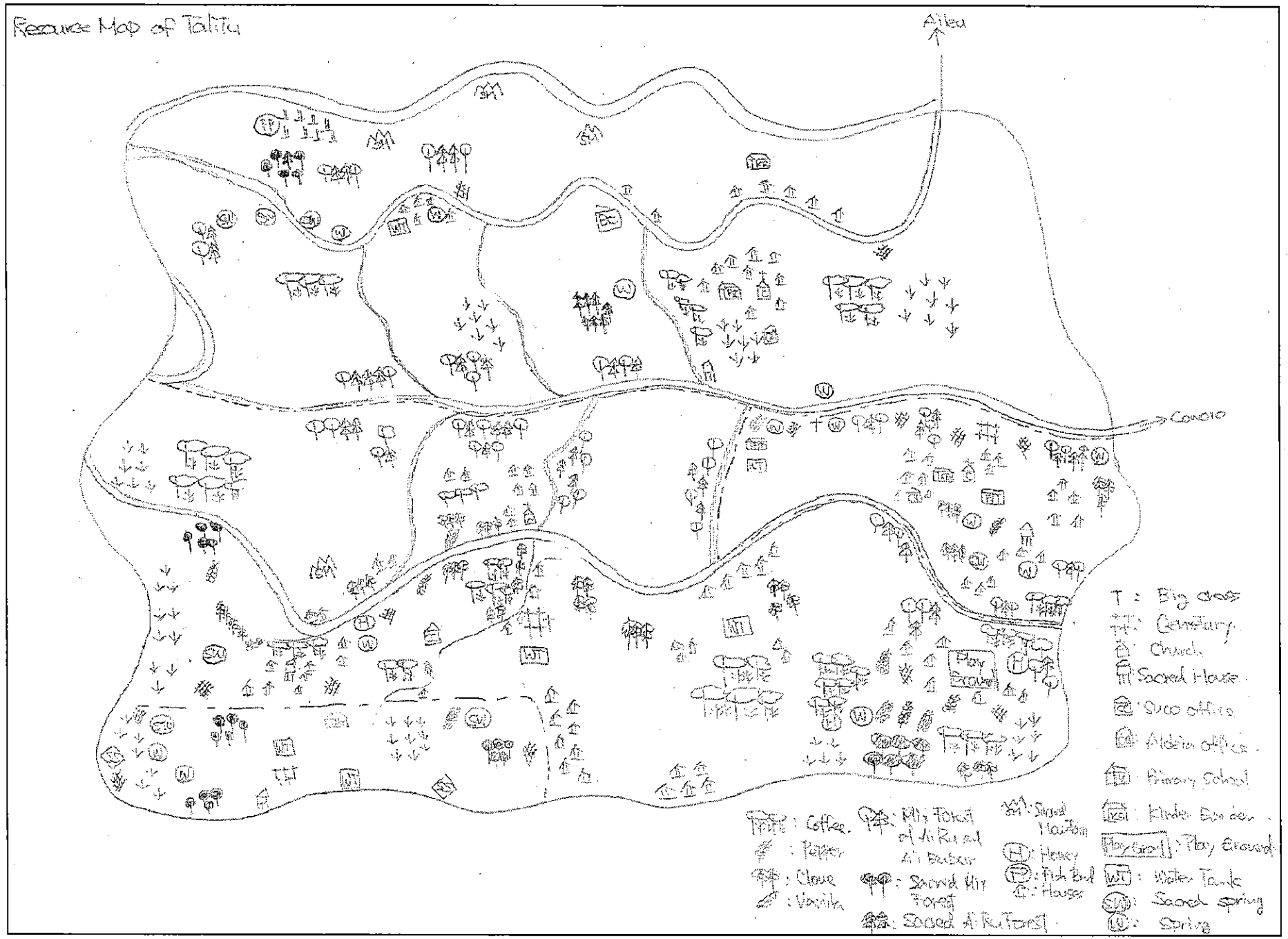
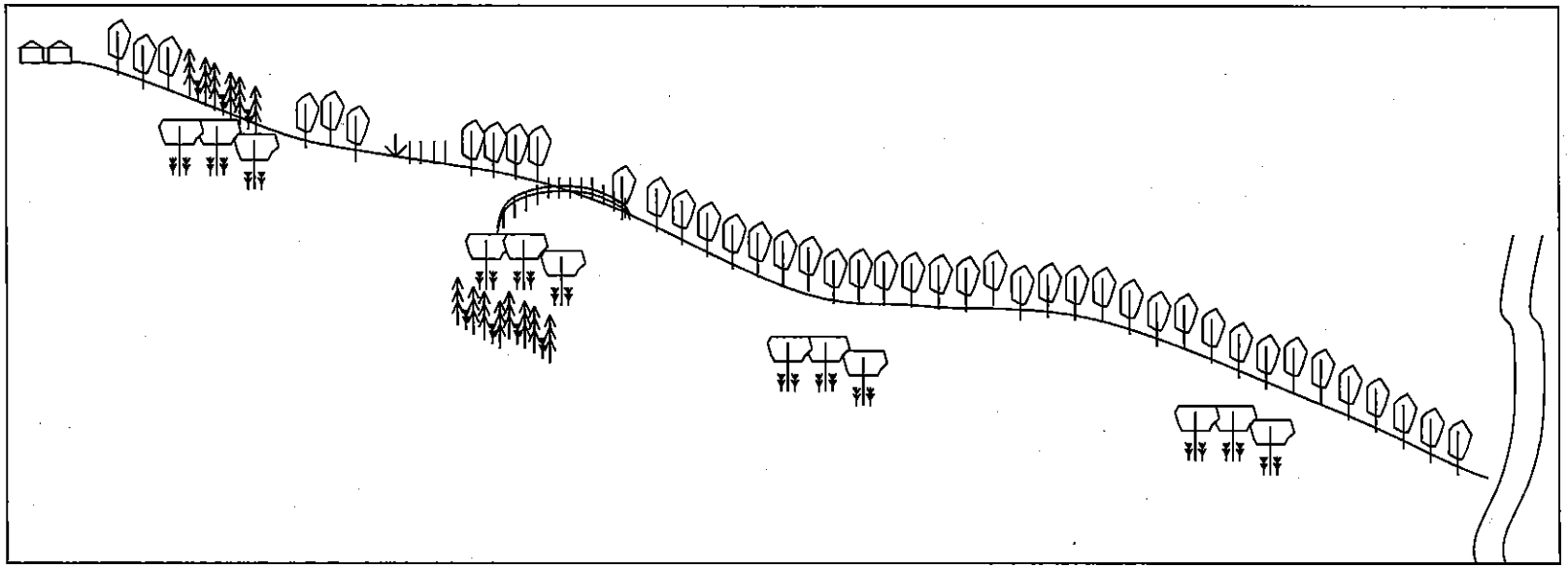
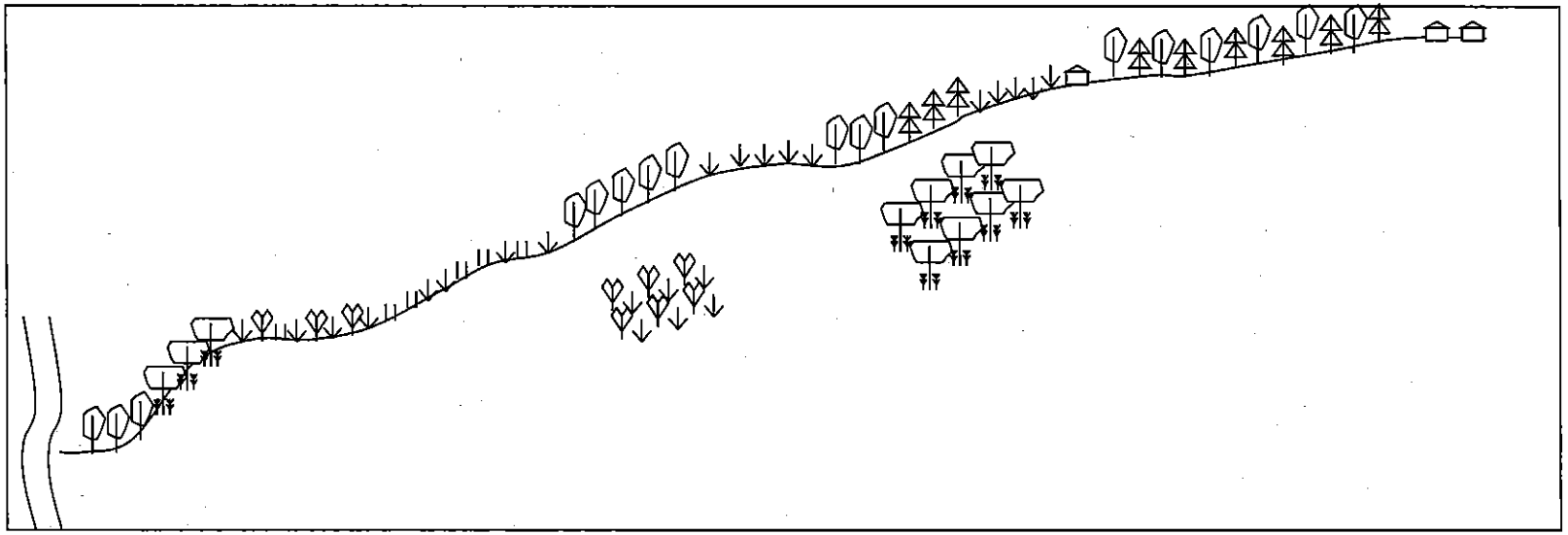


Figure 3 Resource Map of Suco Talitu



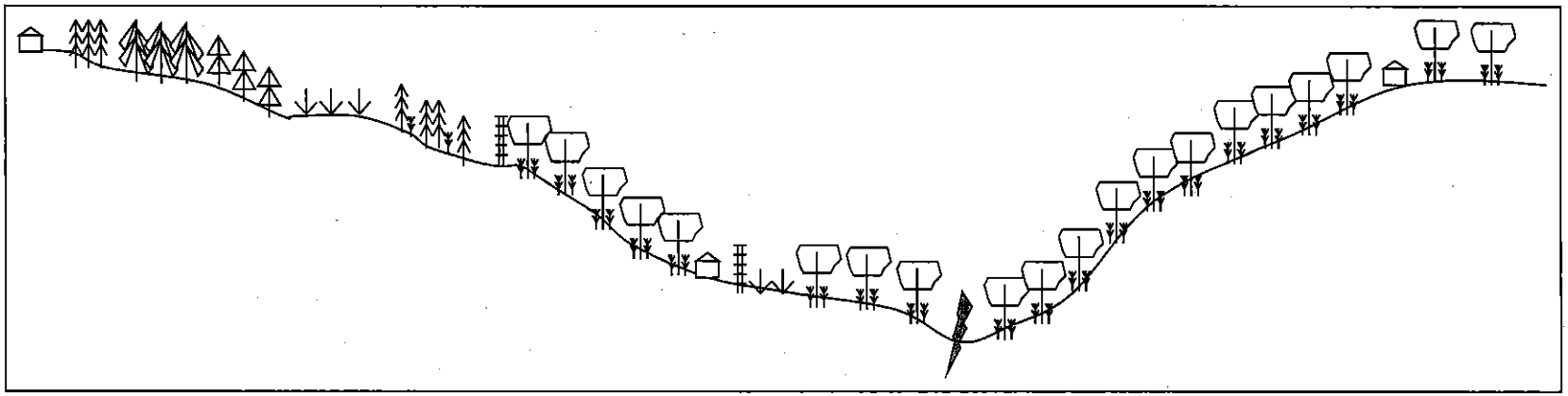
Point No. / Features	1	2	3	4
Land Use	Ai bubur forest, Coffee plantation	Permanent farm	Ai bubur forest, Coffee plantation in the opposite slopes	River
Vegetation	Ai bubur, Alvisia, Casuarina, Coffee	Cassava, Weeds	Ai bubur, Alvisia, Casuarina, Coffee	-
Land Status	Private	Private	Private	-
Gravels (1~5) Content: Size:	 Med (+3~4) Med (+2~3)	 Few (+1~2) Med (+3)	 Med to Many (+3~5) Med to Large (+3~5)	-
Soils:	Loam	Clay loam	Loam to Clay loam	-
Slope:	Steep sloping to Very steep sloping	Gently sloping	Steep sloping to Very steep sloping	
Others	Gully erosion	Animal fence is established.	The areas covered with Ai bubur are fully eroded. The areas covered with Alvisia seem to have surface soils with less stone. Ai bubur forests are used for animal grazing.	Nau Brokan River

Figure 4 (1) Transect Walk in Suco Fadabloco (Aldeias Liquica and Rieu) (1/2)



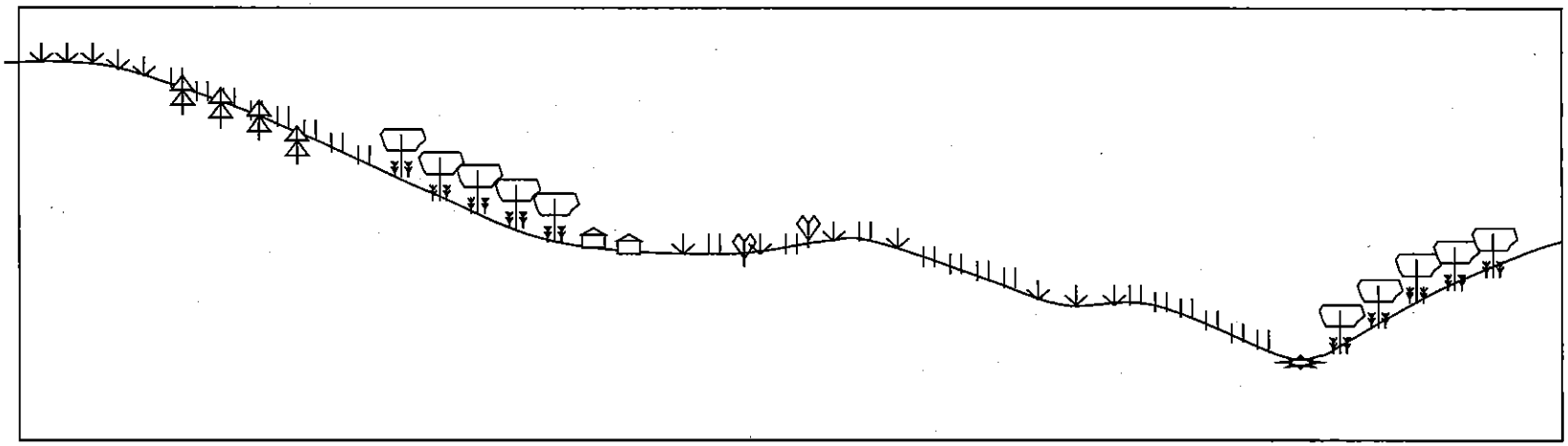
Point No. / Features	1	2	3	4	5
Land Use	Ai bubur	Coffee plantation	Permanent farm	Ai bubur forest, Ai ru forest, Permanent farm, Coffee plantation,	Mix forest of Ai ru and Ai bubur
Vegetation	Ai bubur (S - M)	Alvisia, Coffee	Cassava, Taro, Jackfruit, Banana, Malus, Weeds	Ai bubur (M -L), Ai ru (M -L), Alvisia, Coffee, Cassava, Maize, Peanut, Mango, Banana	Ai bubur (M - L) Ai ru (M - L)
Land Status	Private	Private	Private	Private	Private
Gravels (1~5) Content: Size:	 Many (+5) Med (+3)	 Med-Many (+4) Med-Large (+4)	 Med (+2~3) Med (+3)	 Med to Many (+3~5) Med to Large (+3~5)	 Med to Many (+4) Med to Large (+4)
Soils:	Sandy loam	Loam	Loam to Clay loam	Loam to Clay loam	Loam to Clay loam
Slope:	Steep sloping	Very steep sloping	Gently sloping to Steep sloping	Steep sloping to Very steep sloping	Steep sloping to Very steep sloping
Others				There are permanent farms and coffee plantations in the opposite slopes.	

Figure 4 (1) Transect Walk in Suco Fadabloco (Aldeias Liquica and Rieu) (1/2)



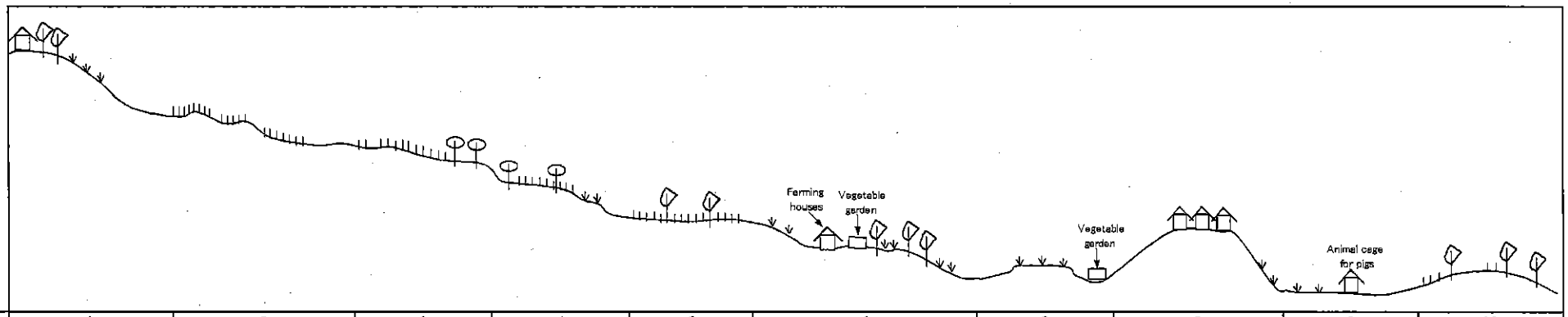
Point No. / Features	1	2	3	4	5	6	7
Land Use	Residential area, Coffee and Clove plantations	Ai ru forest	Farms	Coffee plantation	Coffee plantation	Erosion	Coffee plantation
Vegetation	Casuarina, Coffee (sdlgs), Clove	Ai ru	Tunis, Cassava, Clove	Casuarina, Coffee	Alvisia, Coffee	-	Alvisia, Coffee
Land Status	Private	Private	Private	Private	Private	-	Private
Gravels (1~5) Content: Size:	 Med (+3) Med (+2~3)	 Many (+4) Large (+4)	 Med (+2) Med (+2)	 Many (+4) Large (+4)	 Med (+3) Med (+3)	-	 Med (+2~3) Mid (+3)
Soils:	Loam	Loam	Loam	Clay loam	Reddish clay loam	-	Clay loam (wet)
Slope:	Gently sloping	Steep sloping	Gently sloping	Steep sloping	Steep to very steep sloping	Steep sloping	Steep sloping
Others	- Remopate - Used to be used for grazing.						- Bilumahato

Figure 5 (1) Transect Walk in Suco Madabeno (Aldeias Remapati, Lisimori and Bilumahatu) (1/3)



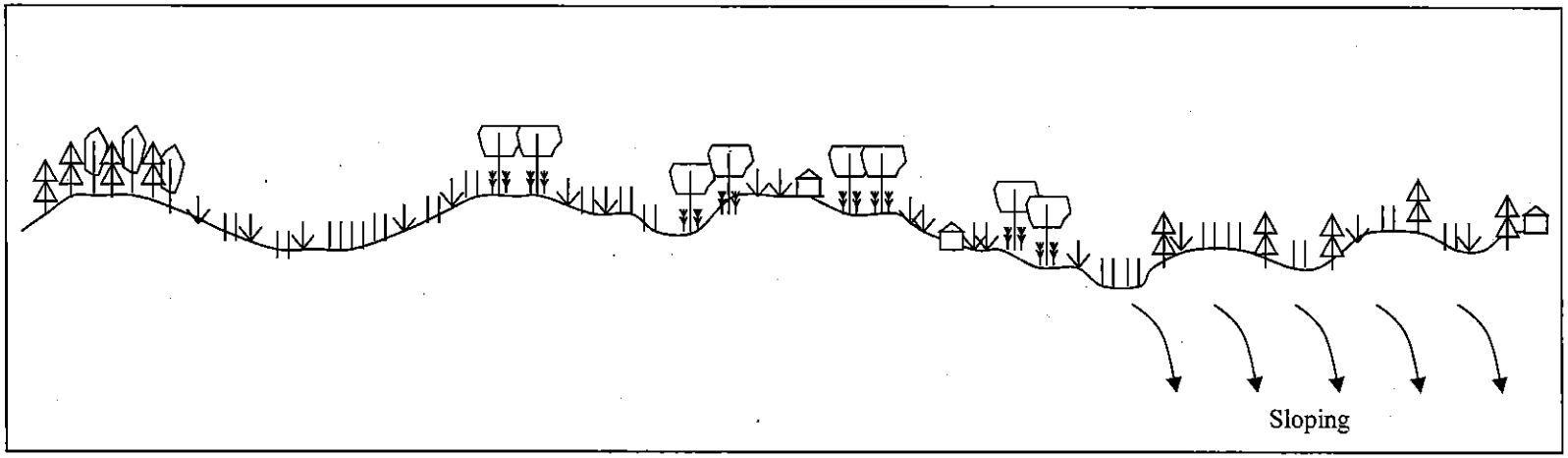
Point No. / Features	1	2	3	4	5	6
Land Use	Ai ru forest, Shifting cultivation	Coffee plantation	Houses, Permanent farm	Shifting cultivation	Stream	Coffee plantation
Vegetation	Ai ru, Cassava, Weeds	Alvisia, Coffee	Cassava, Banana	Cassava, Weed	-	Alvisia, Coffee
Land Status	Private	Private	Private	Private	-	Private
Gravels (1~5) Content: Size:	 Med (+3) Small to Med (+1~2)	 Med (+3~4) Med (+3~4)	 Med (+3~4) Med (+3~4)	 Med (+3~4) Med (+3~4)	-	 Med (+2) Small (+1~2)
Soils:	Loam	Loam	Loam	Loam	-	Clay loam
Slope:	Steep to very steep sloping	Steep sloping	Gentry sloping	Gentry sloping to Steep sloping	-	Steep sloping
Others	Bilumahatu	Species of coffee: Arabica, Robusta, and Moca.				

Figure 5 (1) Transect Walk in Suco Madabeno (Aldeias Remapati, Lisimori and Bilumahatu) (2/3)



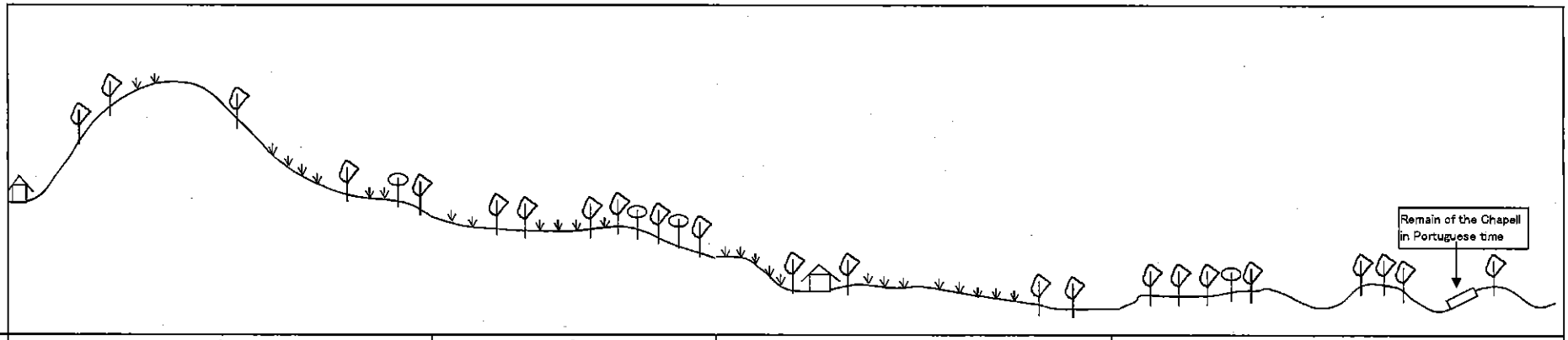
	Point No.	1	2	3	4	5	6	7	8	9	10
	Name of the Location	Raimerhei	Raimerhei	Raimerhei	Raimerhei	Raimerhei	Tatlakan Namo	Tatlakan Namo	Tatlakan Namo	Reilau	Reilau
1	Current main Land use	Residence, orchard	Shifting cultivation	Coffee plantation	Coffe plantation	Shifting cultivation	Permanent farm, uma toss (temporally house for farming)	Farm	Residence, farm	Farm, animal rearing	Forest, shifting cultivation
2	Topography	Rollong to steep	Steep	Steep	Rolling to steep	Rolling	Steep-Rolling-Steep	Rolling	Steep-rolling-steep	Rolling	Steep
4	Crop and tree species	Ai kasi, papaya, orange, corn	Chromolaena	Chromolaena, Ai kakeu, coffee, cassava	Chromolaena and coffee	Ai bubur, chromolaena, cassava	Maize, taro, bean (forloto, formongo, tunis), papaya, mango, banana, laquer mutin,cassava	Coto, Ai bubur	Maize, cassava, orange,chromolaena, Ai bubur and coconut	Corn, orange, passion fruits	Ai ku, Ai bubur, chromolaena
5	Soil	loamy with small stones	Reddish with medium stones	Loamy with medium-large stones	Loamy with small stones	Reddish	Reddish with small stones	Loamy with small stones	Loamy with small stones	Loamy with small stones	Loamy with small stones
6	Land ownership	Private land	Private land	Private land	Private land	Private land	Private land	Private land	Private land	Private land	Private land
7	Remarks	-	-	-	-	-	People of Hautoho resides in the village without problems with the community, accordingly				-

Figure 4 (2) Results of Transect Walk in Suco Fadabloco (Aldeia Raifatuk)



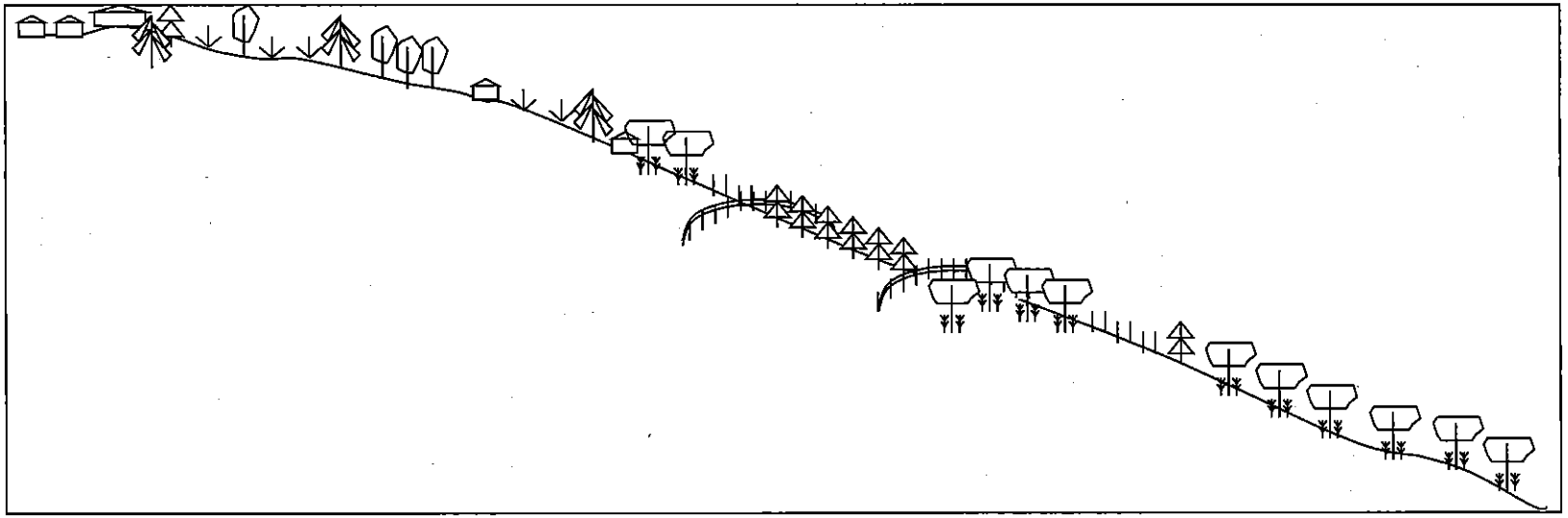
Point No. / Features	1	2	3	4
Land Use	Ai ru and Ai bubur forest	Shifting cultivation	Coffee plantation and Permanent farm	Shifting cultivation
Vegetation	Ai ru, Ai bubur, Ai mumarun	Cassava, Weeds	Alvisia, Coffee, Cassava, Pineapple, Taro, Weeds	Ai ru, Cassava, Weeds
Land Status	Private	Private	Private	Private
Gravels (1~5) Content: Size:	 Med-Many (+4) Med (+2~3)	 Med (+3) Small-Med (+1~2)	 Med (+2) Small-Med (+1~2)	 Med (+3~4) Mid (+2~3)
Soils:	Blackish clay loam	Blackish clay loam	Blackish clay loam	Loam
Slope:	Gently sloping to Steep sloping	Gently sloping to Steep sloping	Gently sloping to Steep sloping	Steep sloping to Very steep sloping
Others				Walked along the contour line

Figure 5 (1) Transect Walk in Suco Madabeno (Aldeias Remapati, Lisimori and Bilumahatu) (3/3)



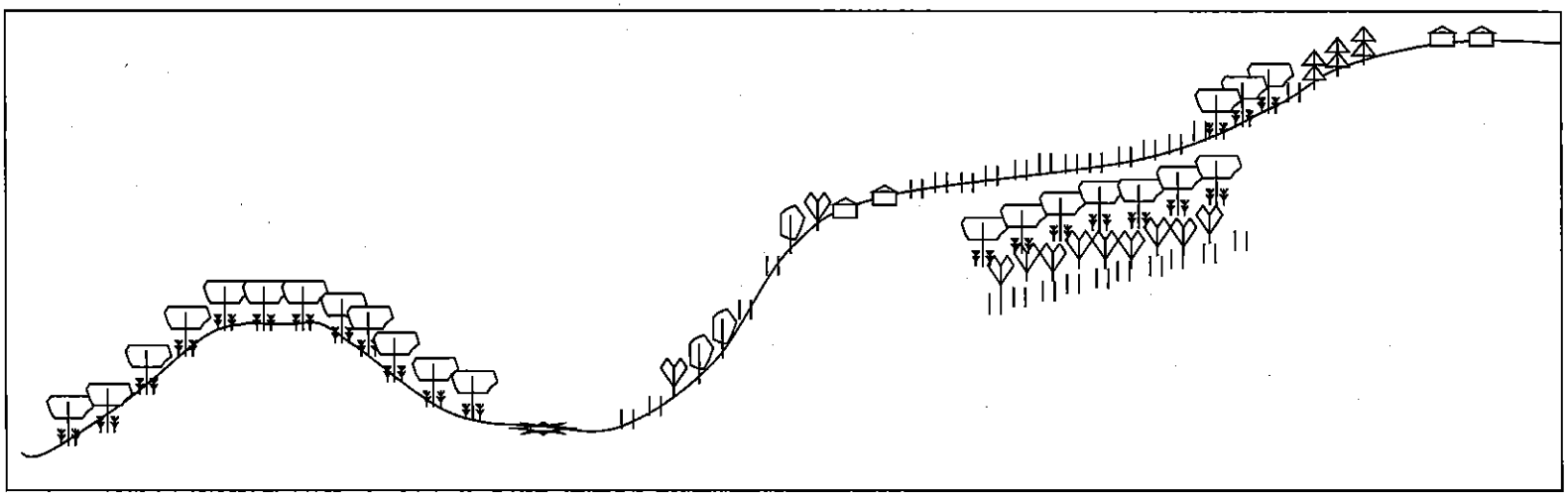
	Point No.	1	2	3	4
	Name of the Location	Manehalo	Manehalo	Manufoni	Lismori
1	Current main Land use	School, orchad, farm	Farm, forest	Farm, orchard, residence	Forest, coffee plantation
2	Topography	Steep	Flat	Flat	Steep-flat
3	Crop and tree species	Casuarina, Taro, cassava, koto, coffee, bamboo	Corn, cassava, casuarina, albizia, coffee	Corn, banana, mango, avocado, taro, contas, casuarina, albizia, Ai saria, rambutan	Albizia, Ai ru, Caliandra, coffee, Ai bubur, fern, Baranda(used for traditional medicine)
4	Soil	Loamy with stones	Loamy	Loamy, Reddish	Loamy
5	Land ownership	Private land	Private land	Private land	Private land
6	Remarks	- Water tank is located close to the site. - According to the land owner, the agricultural production of the site does not seems to be high.	- According to the land owner, coffee trees tend to be attacked by white-colored insects in every April. - Terraces around the coffee plantations were introduced in the Indonesian times.	- The farm land was owned by The families and harvest belongs to those who practice farming in the area. - Rotating cultivation has been conducted in the farm, dividing into several plots.	-

Figure 5 (2) Transect Walk in Suco Madabeno (Aldeias Manehalo, Manufoni and Lismori)



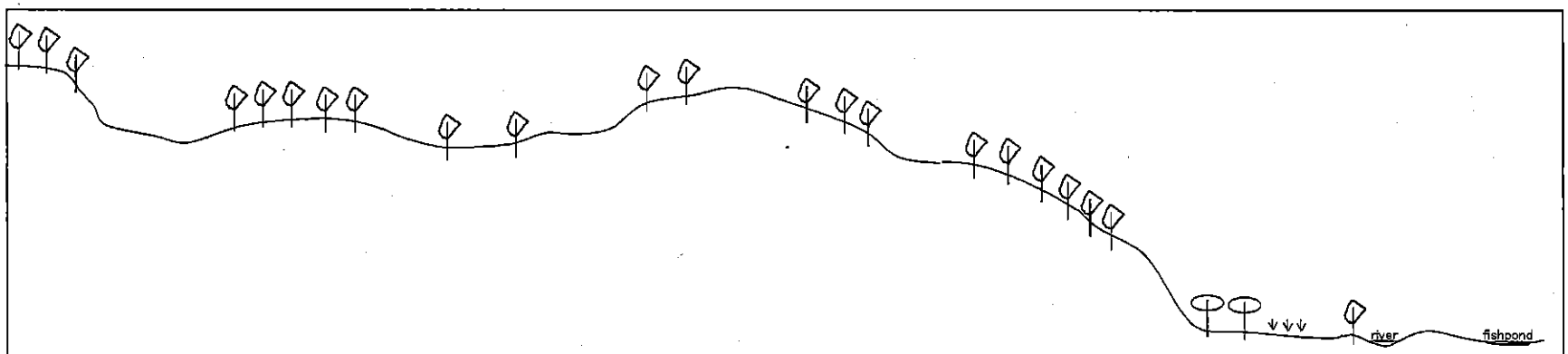
Point No. / Features	1	2	3	4	5	6	7
Land Use	Houses and permanent Farms	Grazing area	Houses, permanent farms, & coffee plantations	Shifting cultivation, Ai ru forest	Coffee plantation	Shifting cultivation	Coffee and other O
Vegetation	Ai ru, Acacia, Clove, Gmelina, Ai bubur, Pine apple, Cassava	Ai bubur	Coffee, Alvisia, Clove, Mango, Banana, Cassava, Sweet Potato	Cassava, Weeds, Ai ru	Alvisia, Coffee, Cassava	Cassava, Bamama, Ai ru, Other trees	Alvisia, Coffee, Clove, Tua, Cassava, other plants
Land Status	Private	Private	Private	Private	Private	Private	Private
Gravels (1~5) Content: Size:	 Med (+3~4) Med (+2~3)	 Med(+3) Mid (+3)	 Med (+2) Med (+2)	 Many (+4) Large (+4~5)	 Med (+3) Med (+2)	 Med (+3) Med (+2)	 Med(+2) Small -Mid (+1~2)
Soils:	Loam to Clay loam	Loam	Clay loam	Loam	Clay loam	Clay loam	Clay loam
Slope:	Gently sloping and Steep Sloping	Steep sloping	Gently sloping to sloping	Steep to Very steep sloping	Steep sloping	Steep sloping	Steep sloping
Others			Animal fence is established.	Animal fence is established.			

Figure 6 (1) Transect Walk in Suco Talitu (Aldeia Quelae) (1/2)



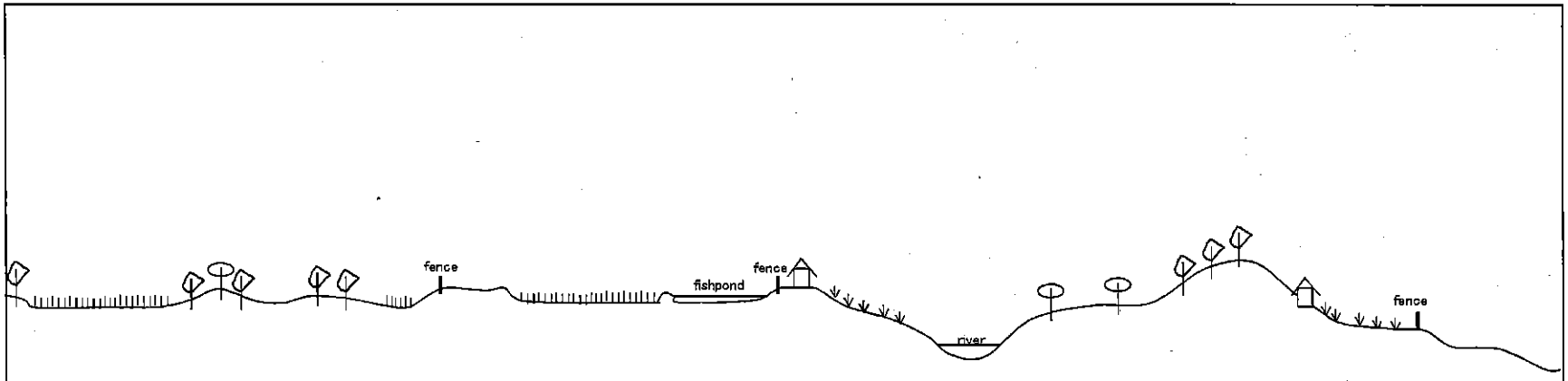
Point No. / Features	1	2	3	4	5
Land Use	Coffee plantation	Water source	Shifting cultivation	Shifting cultivation and Coffee plantation	Residential Area, Ai ru forest
Vegetation	Alvisia, Coffee, Clove	-	Cassava, Banana, Weeds, Ai bubur	Alvisia, Coffee, Cassava, Pineapple, Taro, Cowpea	Ai tru
Land Status	Private	Private	Private	Private	Private
Gravels (1~5) Content: Size:	 Few (+1) Small (+1~2)	 -	 Med (+2-3) Med (+2)	 Med (+3) Med (+3)	 Med (+3) Med (+3)
Soils:	Clay loam	-	Loam to Clay loam	Clay loam	Clay loam
Slope:	Steep Sloping	Flat	Steep sloping	Gently sloping to Steep Sloping	Gently sloping to Steep Sloping
Others					Uma Lisan

Figure 6 (1) Transect Walk in Suco Talitu (Aldeia Quelae) (2/2)



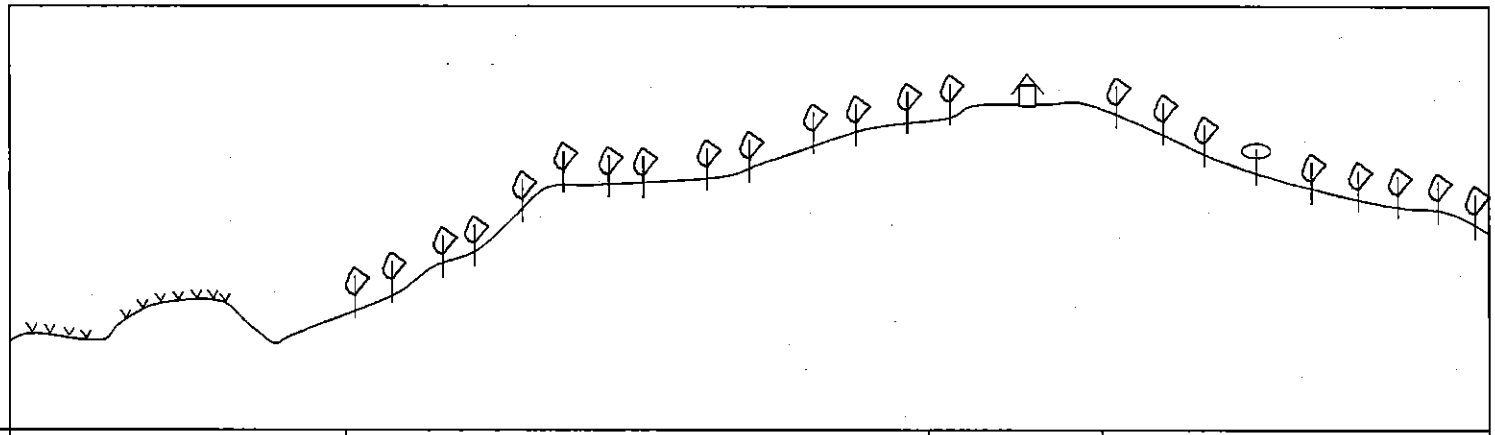
	Point No.	1	2	3	4	5	6	7	8
	Name of the Location	Tumano Fatin	Tumano Fatin	Kurui	Kurui	Kurui	Kurui	Kurui	Morohun
1	Current main Land use	Forest, grazing	Forest, grazing	Forest, grazing	Forest, grazing	Forest, grazing	Forest, orchard	Coffee plantation, orchard, farm	Orchard, forest, fishpond
2	Topography	Flat-steep-flat	Flat	Flat	Flat-slope	Slope	Slope	Flat	Flat
4	Crop and tree species	Ai-ru, fern	Ai dima, Ai ru and fern	Ai bubur and chromolaena	Ai ru, Ai bubur, fern	Ai ru, Ai bubur and fern	Ai ru, guava, koto moruk, chromolaena	Kakeu, Ai ru, coffee (moca), maize, cassava	Ai ru, guava
5	Soil	Loamy with stones	Reddish with small stones	Loamy with stones	Reddish	Loamy with stones	Loamy with stones	Loamy with stones	Loamy
6	Land ownership	Private land	Private land	Private land	Private land	Private land	Private land	Private land	Private land
7	Remarks	-	Landslide is located closely.	-	Vegetation is relatively sparse due to illegal cutting and fire.	Forest fire and landslide were happened respectively in 1999 and 2000.	-There is a water soruces close to the site with the pipes connected to the paddy fields. -Surface of soil is well-covered with grass.	- Coffee plantation was established in 2004 - Farm was developed around the residence established in portuguese time.	-

Figure 6 (2) Transect Walk in Suco Talitu (Aldeias Quelae and Fakutukhun) (1/3)



	Point No.	9	10	11	12	13	14	15	16
	Name of the Location	Ai fafu	Warda	Warda	Fometahun	Fuletenam	Fuletenam	Laiulun	Airritlaran
1	Current main Land use	Orchard, paddy field, forest	Orchard, forest, paddy field	Paddy field	Fishpond, residence	Farm	Grazing, orchard	Forest, residence, farm	Farm, orchard, grazing
2	Topography	Flat	Flat-slope-flat	Flat	Flat	Slope	Flat	Slope	Flat
4	Crop and tree species	Guava, paddy, coffee, samtuku, kakeu, cassava, banana, ai funan	Kakeu, Ai fau, Ai funan, paddy	Paddy	-	Taro, kontas, sweet potato, cassava, corn, papaya	Bamboo, kakeu, guava, coffee	Ai ru, ai bubur, taro, kontas, banana, pumpkin, cassava, mango, jackfruits, passion fruits	Guava, kakeu
5	Soil	loamy	loamy	loamy	loamy	loamy	loamy without stones	Loamy with small stones	Loamy
6	Land ownership	Private land	Private land	Private land	Private land	Private land	Private land	Private land	Private land
7	Remarks	-	-	- The owner of the paddy field nominated one of his/her relatives to mannage the paddy field. The harvest of the area is belonging to the person who manage the area.	-	- Permanent farm	-	-	-

Figure 6 (2) Transect Walk in Suco Talitu (Aldeias Quelae and Fakutukhun) (2/3)



	Point No.	17	18	19	20
	Name of the Location	Aldeia Fakutuhun: Kurufun	Raimutiin	Raimutin	Raimutin
1	Current main Land use	Grazing	Forest, grazing	Residence	Orchard, forest
2	Topography	Flat	Slope-Flat-Slope	Flat	Slope
4	Crop and tree species	Chromolaena	Ai ru, Ai bubur	No vegetation	Ai ru, pineapple, coffee, kakeu
5	Soil	Loamy	Loamy with small stones,reddish	Loamy	Loamy
6	Land ownership	Private land	Private land	Private land	Private land
7	Remarks	- Currently, the area is used for grazing animals such asu pig, cow and goat.	- Wild Fire occurred - Illegal cutting occurred	- The family has the farm close to the river.	- Timber logging is conducted in the area.

Figure 6 (2) Transect Walk in Suco Talitu (Aldeias Quelae and Fakutukhun) (3/3)

Group of Aldeia Lilitei

No	Name	Posistion
1	Adelino dos Santos	Chefe Sub Grupo
2	Joao Martins	Membru
3	Francisco do Rego	Membru
4	Anival Martins	Membru
5	Anacleto da Costa Baptista	Membru
6	Marcelino Oliveira	Membru
7	Salamao Oliveira	Membru
8	Recardino Baptista	Membru
9	Domingos da Costa Alves	Membru
10	Napoliaoa Fatima	Membru
11	Vidal de Andrade	Membru
12	Jacob de Andrade	Chefe Sub Grupo
13	Serfin do Santos	Membru
14	Alberto Baptista	Membru
15	Celestino de Andrade	Membru
16	Francisco Pineiro	Membru
17	Domingos Dias	Membru
18	Miguel Tilman	Chefe Sub Grupo
19	Joao de Andrade	Membru
20	Joao Tilman	Membru
21	Ozorio dos Santos	Membru
22	Eduardo Mendonca	Membru
23	Jorge Baptista	Chefe Sub Grupo
24	Jose sequera	Membru
25	Agosto de Jesus	Membru
26	Francisco Antonio	Membru
27	Fernando de Jesus	Membru
28	Marcos de Jesus	Membru
29	Tomas Baptista	Membru
30	Armindo soares	Membru
31	Domingos de Carvalho	Membru
32	Tomas do Rego	Membru
33	Mario Jose	Membru

Group Aldeia Liquica

No	Name	Posistion
1	Joao Baptista	Chefe Sub Grupo
2	Abrao Martins	Membru
3	Izac da Costa	Membru
4	Quistováo Martins	Membru
5	Bonifacio Bere	Membru
6	Tomas da Costa	Membru
7	Manuel de Andrade	Membru
8	Domingos de Jesus	Membru
9	Luis de Jesus	Membru
10	Esperança da Costa	Membru
11	José da Costa	Chefe Sub Grupo
12	Daniel da Costa	Membru
13	José da Costa	Membru
14	Carlito Belo	Membru
15	António da Costa	Membru
16	Januario José	Membru
17	José Ricardo	Membru
18	Marcos da Costa	Membru
19	António Brito	Membru
20	Adão do Rego	Membru
21	Adão Saramento	Chefe Sub Grupo
22	Liquinuno José	Membru
23	Mateus da Costa	Membru
24	Manuel mendonça	Membru
25	Domingos José	Membru
26	Lorenço da Costa	Membru
27	Agustinho da Costa	Membru
28	João de Jesus	Membru
29	Paul José	Membru
30	Alcino da Costa	Membru
31	João Gomes	Chefe Sub Grupo
32	Americo Gomes	Membru
33	Marcelino da Costa	Membru
34	Francisco da Costa	Membru
35	Adão Tilman	Membru
36	Lorenço Tilman	Membru
37	Fernando Coli	Membru
38	António José	Membru
39	Albertino Tilman	Membru
40	António José maucoli	Membru

Group Aldeia Raifato

No	Name	Posistion
1	Fernando dos santos	Chefe Sub Grupo
2	Alexo Carvelho	Membru
3	Deolindo de Melo	Membru
4	Agustinho gama	Membru
5	Cipriano dos santos	Membru
6	Tomas Carvalho	Membru
7	João Carvalho	Membru
8	Francisco Amaral	Membru
9	Tadeo Amaral	Membru
10	Alvano Baptista	Membru
11	Alexandre Soares	Chefe Sub Grupo
12	Ozorio Martins	Membru
13	Delfino Correia	Membru
14	Vitorio José	Membru
15	Nico Demos Amaral	Membru
16	Martinho Pinto	Membru
17	António Correia	Membru
18	Afonso Carvalho A	Membru
19	Abril Fatima	Membru
20	Silvestre dos Santos	Membru
21	José Carvalho Recardo	Chefe Sub Grupo
22	António soares	Membru
23	Manuel Baptista	Membru
24	Agustinho Saldanha	Membru
25	Domingos Carvalho	Membru
26	Domingos Martins	Membru
27	Mario José	Membru
28	Domingos José	Membru
29	João Carvalho	Membru
30	Afonso Carvalho	Membru
31	Afonso Carvalho B.	Chefe Sub Grupo
32	Manuel soares	Membru
33	Francisco verdical	Membru
34	João Tilman	Membru
35	Felis dos Santos	Membru
36	Felis Tilman	Membru
37	Napoleão da Silva	Membru
38	Tomas Correia	Membru
39	Mario Carvalho	Membru
40	Manuel Carvalho	Membru

Group Aldeia Rileu

No	Name	Posistion
1	Antonio Da Costa	Chefe Sub Grupo
2	Agustino Da Costa	Membru
3	Alsino Mendonca	Membru
4	Luis Pinto	Membru
5	Felismino Pinto	Membru
6	Bocon Pinto	Membru
7	Baresto De Jesus	Membru
8	Mario De Jesus	Membru
9	Mateus Soares	Membru
10	Duardo Soares	Membru
11	Zito Barreto	Chefe Sub Grupo
12	Andre Da Costa	Membru
13	Tomas Pinto	Membru
14	Raimundo Da Costa	Membru
15	Joao Baptista	Membru
16	Veles Martins	Membru
17	Agusto Ximenes	Membru
18	Alfredo Ximenes	Membru
19	Izadoro Soares	Membru
20	Agustinho De Jesus	Membru
21	yanto Novo Eko Soares	Chefe Sub Grupo
22	Domingos Martins	Membru
23	Sebastiao Da CoSta	Membru
24	Martinho Martins	Membru
25	Celestino da Costa	Membru
26	Amelia Soares	Membru
27	Manuel da Costa	Membru
28	veles lauten	Membru
29	silberto da Costa	Membru
30	Antonio Da Costa	Membru
31	Alberto da Costa	Chefe Sub Grupo
32	Ernesto da Costa	Membru
33	Luis da Costa	Membru
34	Cujebio da Costa	Membru
35	Domingos Lobes	Membru
36	Francisco da Costa	Membru
37	Pedro Da Costa	Membru
38	Antonio Da Costa	Membru
39	Tomas da Costa	Membru
40	silveiro da Costa	Membru

List of Members in Aldeia Lismori

Leader of the Group Jeca Soares Araujo

Sub group1; Centro Lismori

No	Name	Sex	Position
1	Theovos Alves Coban	M	Chefe of group & core member of SUFP
2	Alfaredo Marques	M	Vice
3	Jeca Soares Araujo	M	Core member of general SUFP & SPTPP
4	Armando Lurdes	M	Member
5	Antonio Fernandes	M	Member
6	Jose Hendriques	M	Member
7	Joana Lay	F	Member
8	Elisa Araujo	F	Member
9	Deometro Sarmento	M	Member
10	Agusto Sarmento Tilman	M	Member
11	Jose Lobatu Maria	M	Member
12	Ijeas Lurdes Quintas	M	Member
13	Carmoneza da Concencaun	F	Member
14	Joao Fransisco	M	Member
15	Rafael de Carvallho	M	Member
16	Marcus de Deus	M	member
17	Marcus Tilman	M	Chefe of group
18	Marta Soriana da Silva	M	Vice
19	Bento Sarmento	M	Core member of SPTPP
20	Olandina Fatima	M	Member
21	Angelino Lopes	M	Member
22	Juliao Lurdes	M	Member
23	Agusto Tilman	M	Member
24	Lucia da Costa	F	Member
25	Amelia Sarmento	F	Core member of SUFP
26	Manuel de Carvallho	M	Member
27	Jose de Deus	M	Member
28	Cipriano da Costa	M	Member
29	Antonio Exposto Mendes	M	Member
30	Cesar da Costa	M	Member
31	Marcus de Jesus	M	Member
32	Angelmos Castro	M	Member
33	Jose Ijeas da Roja	M	Member

List of Members in Aldeia Remapati

Sub group 1; Hahu Moris

No	Name	Se	Position
1	Martinho Pinto	M	Chefe of group
2	Manuel da Cruz	M	Vice
3	Manuel Moniz	M	Core member of SUFP
4	Antonio Vidigal	M	Member
5	Afonso Soares	M	Member
6	Armando Moniz	M	Member
7	Angelina Lodrigues	F	Member
8	Antonio Mendonca	M	Member
9	Alexandre Batista	M	Member
10	Bortolomeu Lurdes	M	Member
11	Filomino da Cruz	M	Core member of SPTPP
12	Antonio Soares	M	Member
13	Joao Batista	M	Member
14	Lorenso Alexo Amaral	M	Member
15	Gabriel Mendonca	M	Member
16	Fernanda Sousa	F	member
17	Antonio Alexo Amaral	M	Chefe of group
18	Antonio de Carvallho	M	Vice & core member of SUFP
19	Cornelio Alexo	M	Member
20	Domingos Amaral	M	Member
21	Antonio da Silva Mali	M	Member
22	Rui Alexo Amaral	M	Member
23	Antonio Mendonca	M	Member
24	Paul do Rosario Lurdes	M	Member
25	Antonio H Sarmento	M	Member
26	Casmero Sarmento	M	Member
27	Adelina Soares	F	Member
28	Celestino Mali	M	Core member of SPTPP
29	Felix da Cruz	M	Member
30	Moises Gonsaga	M	Member
31	Quintao Exposto	M	Member

List of Members in Aldeia Desmanehata

Sub group I

No	Name	Sex	Position
1	Domingos Gonsalves	M	Chefe of group
2	Filomino Martins	M	Member
3	Agusta da Costa	F	Member
4	Fernando Martins	M	Member
5	Alberto dos Santos	M	Core member of SUFP
6	Marcos da Silva	M	Member
7	Miguel Ximenes	M	Member
8	Antonio Pinto Lurdes	M	Member
9	Sebastiao Cabral	M	Member
10	Manuel da Costa	M	Member
11	Amandio Amaral	M	Member
12	Vicente da Silva	M	Member
13	Jose da Costa Marcal	M	Chefe of group and core member of SUFP-MP & SPTPP
14	Lorenso Pereira	M	Core member of general SUFP-MP demo plot
15	Aurelia Rodrigues	F	Member
16	Jacob Marcal	M	Core member of general SPTPP-MP
17	Sara Mendonca	F	Member
18	Luis da Costa	M	Member
19	Duarte da Costa	M	Member
20	Armando Fernandes	M	Member
21	Jose Aleixo Exposto	M	Member
22	Maria Sarmento	F	Member
23	Filomino Tilman	M	Member
24	Jose Ataide	M	Member

List of Members in Aldeia Manefoni Centro

No	Name	Sex	Position
1	Samuel Gonsalves	M	Chefe of group
2	Armindo Izaias da Rosa	M	Core member of SUFP-MP & SPTPP
3	Manuel Gonsalves	M	Member
4	Agosto Alves Sarmento	M	Member
5	Domingos Varudu	M	Member
6	Joao da Costa	M	Member
7	Isabel Borges	F	Member
8	Casmira Grandeira	F	Chefe of group
9	Alsino de Fatima	M	Core member of SUFP-MP
10	Adao de Zena	M	Member
11	Domingas Soares	F	Member
12	Agosto da Costa	M	Member
13	Rui Tilman do Rego	M	Member
14	Vergilio dos Reis	M	Member
15	Fernando Ximenes	M	Member

List of Members in Aldeia Manefoni Aimbeno

No	Name	Sex	Position
1	Pedro Izaias	M	Chefe of group & core member
2	Salvador Pereira	M	Member
3	Antonio Sarmento Soares	M	Member
4	Sebastiao Batista	M	Member
5	Francisco da.Costa .A	M	Member
6	Jose de Deus Maia	M	Member
7	Domingos Sarmento	M	Member
8	Domingos A.Fatima	M	Chefe of group & core member
9	Manuel Bareto	M	Core member of general SUFP & SPTPP
10	Filomena da Concecao	F	Member
11	Jose dos Santos	M	Member
12	Antonio Bareto	M	Member
13	Manuel Sarmento	M	Member
14	Amelia Bendita	F	Member
15	Eugenio Faria	M	Member
16	Clementino D. Maia	M	Member

List of Members in Aldeia Manehalo Turisai

No	Name	Sex	Position
1	Alexandre Moniz	M	Chefe of group, core member of SPTPP-MP
2	Natalino da Silva Lopes	M	Vice
3	Luis da Costa Lopes	M	Core member of SPTPP-MP
4	Adolfo Manu Lopes	M	Member
5	Vicente da Silva Mali	M	Member
6	Afonso Mesquita Tilman	M	Member
7	Abrao de Oliveira	M	Member
8	Antonio S. Pereira	M	Member
9	Armando Bestias	M	Member
10	Joaquina Quili	F	Member
11	Paulino de Carvalho	M	Member
12	Domingos Pedro Siquera	M	Member
13	Marta de Oliveira	F	Member
14	Martins Riveiro Bras	M	Member
15	Domingos Barreto	M	Member
16	Manuel Mendonca Nunes	M	Member
17	Fernando Manu	M	Member
18	Filomena de Araujo	F	Member

List of Members in Aldeia Manehalo Sentru

No	Name	Sex	Position
1	Marcos Barreto	M	Chefe of group
2	Jose Mau da Silva	M	Core member of general SUFP & tree planting demo
3	Joao de Oliveira	M	Core member of SPTPP
4	Francisco	M	Core member of SUFP
5	Agustino do Rego	M	Member
6	Bernardo Barreto	M	Member
7	Eduardo de Carvalho	M	Member
8	Jose Sarmento	M	Member
9	Julio Amaral	M	Member
10	Luis Alves	M	Member
11	Manuel Aleixo	M	Member
12	Manuel dos Santos	M	Member
13	Pedro Luis	M	Member
14	Rosa Bilou	F	Member
15	Vicenti do Santos	M	Member
16	Martina Riveiro	F	Member
17	Mendes Sarmento	M	Chefe of group
18	Manuel Sarmento	M	Member
19	Marcelo Borges	M	Member
20	Mateus Sarmento	M	Member
21	Miguel Oliveira da Si	M	Member
22	Antonio Branco	M	Core member of SUFP
23	Filomena da Conceic	F	Member
24	Rita da Conceicao	F	Member
25	Joao Gonsalves	M	Member

List of Members in Aldeia Bilimahatu

No	Name	Sex	Position
1	Armindo de Araujo	M	Chefe of group & core member of SUFP
2	Nunu Soares	M	Vice
3	Egas Gomes Riberio	M	Chefe of general group
4	Orlando Exposto	M	Member
5	Cristiano Marcal	M	Member
6	Paulino Tilman	M	Member
7	Tomasio de Araujo	M	Member
8	Domingos Trasana	M	Member
9	Fransisco da Quinha	M	Member
10	Januario Suriano	M	Member
11	Romaldo do Rego	M	Member
12	Domingos dos Santos	M	Member
13	Filomino da Silva	M	Member
14	Manuel Soares	M	Member
15	Filomeno Soares Lurdes	M	Member
16	Domingos Mau Besi	M	Leader of Sub Group & core member of SUFP
17	Domingos Tilman	M	Vice
18	Abilio Exposto	M	Member
19	Lorenco Mendonca	M	Member
20	Luis de Carvallho	M	Member
21	Antonio Morais	M	Member
22	Maria Mendonca	F	Member
23	Martina da Cruz	F	Core member of SPTPP
24	Alvaro dos Santos	M	Member
25	Domingos Castro	M	Member
26	Fransisco Soares	M	Member
27	Pedro Vidigal Mendonca	M	Member
28	Zacarias Mau Terza	M	Core member of SPTPP
29	Fransisco Varudu	M	Member
30	Marselino Ximenes	M	Member
31	Maria Imaculada	F	Member

List of Members in Aldeia Bilimahatu Eraplari

Sub Group 1

No	Name	Sex	Position
1	Martinho Soares	M	Leader of Sub group & core member of general SPTPP and
2	Manuel Soares da Concencao	M	Vice
3	Mariano Moura da Silva	M	Member
4	Alberto Laca Mau	M	Member
5	Lorentino Soares	M	Member
6	Vitoria de Jesus	F	Member
7	Joao Alves	M	Member
8	Joao Mendonca	M	Member
9	Jose de Jesus	M	Leader of group & core member of SUFP
10	Quintiliano Moniz Talo	M	member
11	Antonio Sarmento	M	Member
12	Agustinho Soares	M	Core member of SUFP
13	Albano da Silva	M	Member
14	Alberto Soares Lurdes	M	Member
15	Jose Soares Martins	M	Member
16	Agapito Soares	M	Member
17	Manuel Clementino	M	Member
18	Luis Fernandes	M	Member
19	Miguel Moura	M	Member
20	Domingos de Jesus	M	Member
21	Afonso de Fatima	M	Member
22	Manuel de Fatima	M	Member
23	Fernando Cardoso	M	Member
24	Manuel Sarmento	M	Member
25	Domingos Soares	M	Member
26	Jose dos Santos	M	Member
27	Fernando da Silva	M	Member
28	Afonso Soares Paiva	M	Member
	Total		

List of Members group

Aldeia : Fatuk-hun

No	Name	Sex		Position
		M	F	
1	Manuel de Carvalho	v		Chefe of group and core member of SPTPP
2	Jacinta S. Sarmento		v	Vice
3	Filomeno de Deus Maia	v		Member
4	Matias Barreto	v		Member
5	Luciana Barreto Saldanha		v	Member
6	Paul Castro	v		Core member of SPTPP
7	Xavier Barreto	v		Member
8	Maria Barreto Ribeiro		v	Member
9	Antonio Ribeiro	v		Member
10	Jose Barreto Ribeiro	v		Member
11	Jose Agosto	v		Member
12	Mario Gonzaga	v		Member
13	Domingos de Sarmento	v		Member
14	Pedro Doutel	v		Member
15	Mario da Costa Gonzaga	v		Core member of general SUFP
16	Eduardo Mau da Costa	v		Member
17	Paulino Castro	v		Member
18	Ismael Barreto	v		Member
19	Celestino Amaral	v		Chefe de Grupo
20	Ana Xavier	v		Vice
21	Joao da Rosa Barreto	v		Member
22	Abril Marques	v		Core member of SUFP
23	Agosto de Carvalho	v		Member
24	Antonio Piedade	v		Member
25	Matias Alves Sarmento	v		Member
26	Mateus do Martins	v		Member
27	Antonio Mali Mau	v		Member
28	Miguel de Carvalho	v		Member
29	Rui Soriano Martins	v		Member
30	Jose Ribelo	v		Member
31	Domingas Ximenes	v		Member
32	Jorge de Deus Maia	v		Member
33	Alvaro de Deus Maia	v		Member
34	Joao Barreto de Carvalho	v		Member
35	Francisco Ximenes	v		Member
36	Celestino Riberu	v		Member
	Total	**33**	**3**	

List of Members group

Aldei : Talito

Grou : Talito 1 (Male 9, Female 2)

No	Name	Sex		Position
		M	F	
1	Jose Manuel Freitas	v		Chefe of group
2	Angelina Soares		v	Vice
3	Dominggos Almeida	v		Member
4	Miguel Soares Brito	v		Core member of SPTPP
5	Marcelina Pinto		v	Member
6	Mario Aleixo	v		Member
7	Lorenso Faria	v		Core member of SPTPP
8	Jose Madeira	v		Member
9	Antonio Mota	v		Member
10	Antonio Ornai	v		Member
11	Rui Vitor	v		Member
	Total	**9**	**2**	

Grou : Talito 2 (Male 10, Female 1)

No	Name	Sex		Position
		M	F	
1	João Mesquita de Deus	M		Chefe of group
2	Manuel Gomes	M		Vice
3	Inasio Soares	M		Member
4	Albano da Costa	M		Member
5	Eujebio Xavier Ximenes	M		Member
6	Armando da Costa Mau	M		Member
7	Januario Nunes	M		Member
8	João Ximenes	M		Member
9	Alexandre Gomes	M		Member
10	Afonso Mesquita	M		Member
11	Fatima da Costa Mota		F	Member
12	Marcus Barreto	M		
	Total	**11**	**1**	

List of Members group

Alde : Quelae

Grou : 1

No	Name	Sex	Position
1	Joao Barreto	M	Vice
2	Dominggos Bere	M	Member
3	Brigida Borges	F	Member
4	Fedelino da Costa Belo	M	Member
5	Pedro Nico Cabral	M	Core member of SPTPP
6	Madalena Namo Bau	F	Member
7	Celestino Sarmento	M	Member
8	Jose Duku Rai	M	Member
9	Mateus Barreto	M	Member
10	Mateus Coli	M	Member
11	Leonito Barreto	M	Member
12	Agosto Afonso	M	Member
13	Paul Amaral	M	Member
14	Aquino Pereira Tilman	M	Member
15	Guilherminha B. Tilman	F	Member
16	Ermelinda Ximenes	M	Member
17	Felis Maia Soares	M	Chefe of group and core member of SPTPP
18	Joanico S. D. Sarmento	M	Vice
19	Josefa da Costa Borges	F	Member
20	Alberto de Jesus	M	Member
21	Antonio do Rego	M	Member
22	Agosto Tilman Pereira	M	Member
23	Joao de Deus Maia	M	Member
24	Marcelo Ximenes	M	Member
25	Alda Mesquita	F	Member
26	Lucio de Deus Maia	M	Member
27	Luis de Jesus	M	Member
28	Francisca Pereira	F	Member
29	Francisca Laha Mau	F	Member
30	Maria Gonzaga	F	Member
31	Jose Gonzaga	M	Member
32	Manuel Mau Mali	M	Member

List of Members group

Aldei : Casamanatuto

Grou : 1 (Male 13)

No	Name	Sex	Position
1	Alex Dasi Soares	M	Chefe of group and core member of SUFP
2	Eduardo dos Reis	M	Vice and core member of SPTPP
3	Carlos Monis	M	Core member of SPTPP
4	Adelino Gomes	M	Core member of general SUFP
5	Antonio Agosto	M	Member
6	Carlos Castaneiro	M	Member
7	Jose Francisco	M	Member
8	Mateus Amaral	M	Member
9	Bendito dos Santos	M	Member
10	Matias dos Santos	M	Member
11	Mateus do Rego	M	Member
12	Paulo Pereira	M	Member
13	Joao da Silva	M	Member
14	Jose dos Santos	M	Chefe of group and core member of SUFP
15	Alcino Gomes	M	Vice
16	Antonio M de Jesus	M	Member
17	Inacio da Cruz	M	Member
18	Alito Gomes	M	Member
19	Agapito Soares	M	Member
20	Martino Amaral	M	Member
21	Jaime Nunes	M	Member
22	Jose Martins	M	Member
23	Evaristo de Jesus	M	Member
24	Manuel Sarmento	M	Member
25	Clementino Soares	M	Member
26	Calistro Sarmento	M	Member

Table 1 (1) Results of Trend Analysis at Suco Faturasa

Period	Income	Maize production	Cassava production	Koto Marek (Wild beans)	Kumbili (Natural and Planted Sweet Yam)	Honey	Maek (Wild tuber)	Livestock (goat, pig, etc)
1960-1975	+1 • Some households had many animals, and some had coffee plantations. • But most of incomes they gained, such as sales of coffee and animals, were paid for tax payment.	+ 5 (40-60 bdls) • Soils were in good condition. • There was no strong wind. • Ave production: 40-60 bundles.	+1 • Cassava was often damaged by wild pigs.	+10 • There were main dense forests. • There were few animals eating the beans.	+10 for Production +10 for Consumption • There was no damage caused by animals because of its thorns/ spines. • Its capacity to regenerate is vigorous.	+10 • There were many dense forests. • The yield of honey was high.	+10 for Production +7 for Consumption • They rarely consumed it. • There were few animal damage.	+4 • They lived in a nomadic way to escape from the imposition of tax. • The limited number of villagers owned a number of animals. • Only king or rich households owned animals, but they owned a great number of animals. • Animals were raised by free grazing and therefore the farms needed to be fenced to protect crops from animals.
1975-1999	+4 • They were able to sell coffee and other products to earn some income.	+21 (20 bundles) • Crops were damaged by pests diseases. • There were long droughts. • The rainfall pattern of the area fluctuated.	+5 • Many wild pigs were hunted. • Because of "Goton-yoron", the cropped area of cassava expanded.	+5 • There were many animals eating the beans. • Expansion of weed (A. Merderek) suppressed the beans.	+10 for Production +10 for Consumption • Same as above • Almost all the communities consumed Kumbili during the turmoil. (It can be propagated sexually and vegetatively. The crop is tolerant of drought.)	+10 • Same as above	+10 for Production +5 for Consumption • Same as above	+5 • After 1980, the Indonesian government encouraged villagers to raise animals (cattle and goat). • Animals were killed by the Indonesian army during the civil war. • Animals were raised

Results of PRA Survey at Suco Faturasa

Trend Analysis

Period	Income	Maize production	Cassava production	Koto Marek (Wild beans)	Kumbili (Natural and Planted Sweet Yam)	Honey	Maek (Wild tuber)	Livestock (goat, pig, etc)
								by free grazing and therefore the farms needed to be fenced to protect crops from animals.
1999-2000	+2 • There was no agricultural produce to market.	0 (0 bundles) • There was no corn produce since they evacuated from the area.	+5 • There was no effect made by the civil war. • They were able to harvest cassava planted in 1997/98.	+5 • Same as above	+10 for Production +4 for Consumption • Same as above • Many other crops were produced in the farm.	+5 • Long droughts shortened the flowering season. • Some Ai bubur trees were infected with a leaf disease/ pest. Honeybees were not able to make honey combs on the infected trees.	+10 for Production +2 for Consumption • Same as above	+5 • Animals were left at the village during the turmoil but most of them were not killed.
2001-2007	+3 • There were government and NGO projects assisting in income generating. • They had agricultural commodities to sell, such as coffee, honey, and tua mutin.	+3 (30 bundles) • They expand ed the cropping area because of "Harosa", which was the mutual aid system called "Gotong Yorong" during the Indonesian era.	???? • Production of cassava was affected by pest and rat infestations.	+1 • The area where the bean grows was limited. • Hence, they plant the bean in their farm.	+10 for Production +4 for Consumption • Same as above • Many other crops were produced in the farm.	+3 • Strong winds dropped flowers and honey combs. • Many Ai bubur tress were infected with a leaf diseases / pest.	+10 for Production +2 for Consumption • Same as above • They consumed it only when they face a shortage of food..	+2 • Animals were killed by pests and diseases. • Cattle was affected by a long drought in 2006. • In 2005 and 2006, the village received vaccination for pig and chicken. • Only few households owned a number of animals.
2007-2011	+4 • Although there was	+3 • Although the	+ 8 • Reduction of animal	+1 • The area where the	+10 for Production +?? for Consumption	+10 for Production +5 for Collection	+10 for Production +2 for Consumption	+4 • Since the tara bandu

Results of PRA Survey at Suco Faturasa

Trend Analysis

Period	Income	Maize production	Cassava production	Koto Marek (Wild beans)	Kumbili (Natural and Planted Sweet Yam)	Honey	Maek (Wild tuber)	Livestock (goat, pig, etc)
	no change in income derived from agricultural produce, local people were able to increase their incomes from pension, for aged persons (over 60), government projects (so called US$ 3 project), pension for veterans and ex-teachers, and compensation for victim in 1999. In some families, they can increase their incomes because one of family member became a police or civil servant. • Access to market outlets for farm production is quite limited. • No farm produce is expected in 2011 due to long rain.	production of maize was high in 2008 owing to the use of seeds from SOL and USC-CTL, many of them were damaged by mildew during the storage (in post harvest season). • Local people were not able to plant maize in 2010/2011 due to long rain.	damage owing to the village regulations and expansion of well-maintained farm have resulted in the increase of cassava production.	bean grows is limited due to the expansion of farmland. • The bean has been rarely planted since local people prefer to plant other upland crops than the bean because it is a time-and water-consuming crop for cooking.	• Less local people plant kumbili. • There are many kumbili naturally growing in the village since few people harvest it. • Kumbili is one of the emergency crops which local people consume only when a food shortage occurs. • Many kumbili grow in forests but the consumption of kumbili in the village has declined as there are many other upland crops to consume.	• The production of honey in 2008 and 2009 was high. • A collector fell out of a tree while collecting honey due to heavy rain in 2010/2011. • Other collectors are afraid of a similar accident this year.	• Same as above • The collection of maek is not difficult but rather troublesome. • The old generation knows how to collect and process maek.	ceremony and set-up of fences around the grazing area in 2008, animals have been put in the grazing area. Since the area is far from their dwelling, they became lack of control and many of them have become wild. • Households that own animals are limited.

Table 1 (2) Results of Trend Analysis at Suco Faturasa

Period	Land availability	Water	Forest	Forest fire	Wind	Crop damage by pest	Climate (Drought)	Landslide
1960-1975	+7 • The households were distributed over the territory of suco and used more than half of the area. • There were many dense forests.	+5 • Many households lived near sources of water. • There was no tree cutting or shifting cultivation.	+10 • The area was extensively covered with forests. • Tara bandu was effective in protecting forests.	+5 • Tara bandu/village regulations were not written and seasonally effective in minimizing forest fire occurrence. • Law enforcement of the government was strong. • Liurai who hold power in law enforcement sometimes initiated forest fires for hunting.	0 • There was no damage caused by wind.	+2 • There was crop damage caused by rodent. • Post harvest loss was also caused by weevil.	0 • None	+1 • There was a landslide in Remehei in 1976.
1975-1999	+4 • They were forced to stay at the village and not allowed to use remote areas and dense forest for shifting cultivation. • The resistance group hided in dense forests and communities were not able to go to the forests.	+5 • Forests were burnt and cut for shifting cultivation or animal raising. • There were droughts and landslides.	+5 • Forests were burned by the Indo army for its operation or hunting. • Local people also burned forests for shifting cultivation and hunting.	+10 • Forest fires were often caused by the Indo army for its military operation as well as hunting. • Shifting cultivation also caused forest fires.	+5 • Strong wind often damaged crop production.	+10 • Corn and kontas were damaged by rodent. • Application of fertilizer provided by the Indonesian Government caused the crop damage.	0 • None	0 • None
1999-2000	+7 • There was no	+5 • Same as above	+3 • Its coverage	+5 • Forest fires were	+10 • Same as above	+10 • Post harvest loss	+5 • There was a long	0 • None

Results of PRA Survey at Suco Faturasa

Trend Analysis

Period	Land availability	Water	Forest	Forest fire	Wind	Crop damage by pest	Climate (Drought)	Landslide
	resistance group in the forests. • There was no control by the Indonesian army. • There were some returnees coming back to the village.		decreased owing to shifting cultivation, timber collection, forest fires for hunting, and landslides.	caused mainly by sifting cultivation. • Forest fires have increased with the increase of population. • There are also forest fires caused by people of other villages.		caused by weevil was severe in maize production. • Coffee trees were infected by powdery mildew or a disease that made the branches whitish.	drought in December 1999.	
2001-2007	+10 • They were able to use any places, even those far from the village. • The population of the village increased by returnees. • The farm land was expanded owning to the population increase.	+5 • The climate condition was the same as it had been before.	+2 • Deforestation caused by shifting cultivation progressed as the population increased.	+5 • Same as above	+10 • Same as above • There had been a strong wind that damaged houses in the village between 2001 and 2007.	+10 • Same as above	+5 • The dry season became longer than before. • There was a long drought that killed animals.	+4 • There were four landslides in 2003. (Each aldeia had a landslide iin 2003.)
2007-2011	+10 • After the tara bandu ceremony, all households in the village have a right to use a certain amount of area for farming. • There is a need to assess the land availability for the future generation.	+6 • The volume of water has become high owning to: i) heavy rain in 2010/2011 and ii) no tree cutting in water catchments since the tara bandu ceremony.	+4 • The existing forests have become dense. • There has been no forest fire and illegal cutting since the tara bandu ceremony. • Fixed farming techniques introduced by USC-CTL have reduced the areas of	0 • There has been no forest fire since the tara bandu ceremony. • The village regulations are quite effective in ridding forest fires.	+6 • Strong wind damaged houses in December 2009. • No strong wind has taken place in 2010 and 2011.	+10 • Same as above	+10 • The area has suffered with a long spell of rain for 16 months in 2010 and 2011.	+1 • There was a landslide along the main road from Remexio to Tulataqueo.

Results of PRA Survey at Suco Faturasa

Trend Analysis

Period	Land availability	Water	Forest	Forest fire	Wind	Crop damage by pest	Climate (Drought)	Landslide
	• The population increase will affect the future land use. • There is no clear information about the land ownership.		shifting cultivation.					

Table 2 (1) Results of Trend Analysis at Suco Fadabloco

Period	Income	Coffee production	Maize production	Cassava	Scarlet runner beans	Sweet potato	Buffalo and cow	Pig
1960-1975	+2 • Agricultural production was high, but farm income was low, as it was difficult to earn cash income and tax payment was quite high. • Farm products were enough to eat, but farmers were not able to sell them or convert them into money. • Only king, militias, and teachers were able to pay tax in cash, but ordinary farmers paid tax in kind (animals). • The number of crops planed was limited, but the productivity was rather high owing to soil fertility. • Forests had riches of edible products. • Villagers were not able to send their children to school as they were poor. • Most of the youth were forced to work for Portuguese as a servant instead of tax payment. • No transportation means to Dili was available and bazaar was open only once a week.	+ 5 • Production of coffee was good though the size of plantations were not so big. • The soils were fertile enough to generate good production. • The area of coffee plantation was limited to avoid paying tax.	+10 • Even the size of land was small, the yield of maize was high thanks to soil fertility.	+10 • Cassava production was high.	+10 • The production was higher than expectation.	+10 • Sweet potato production was high.	+5 • During the Portuguese era they only had buffalo. • Only few people could afford to have more than one head of buffalo.	+10 • Almost all the households raised pigs. • No animal disease of pig occurred.
1975-1999	+6 • The conditions were the same as the Portuguese era. • Production of maize, cassava, orange declined due to degradation of soil fertility.	+7 • Coffee production had increased as the plantation had expanded. • They expanded the	+8 • Along with expansion of farms, land degradation had progressed	+10 • The condition was the same as the previous period.	+10 • Same as above	+10 • Same as above	+8 • They lost buffaloes, but got cows from the Indonesian government. The government promoted local people to	+8 • During civil war, they ran into the forest and were not able to take care

Result of RRA at Fadabloco

Trend Analysis

Period	Income	Coffee production	Maize production	Cassava	Scarlet runner beans	Sweet potato	Buffalo and cow	Pig
	• Everything had its price. For example, cassava leaves and banana leaves became marketable. • They all had money enough to send their children to school. • Civil war occurred and they took refuge in forests from 1977 to 1979. In 1980, they moved to the city. • In 1998, they again went back to forests and ate forest products. • They can buy clothes by using earnings.	coffee plantation because of high price.	gradually. As a result, the production declined.				raise cows.	of pigs. • After 1980, they fed again. • In 1999, the production of pig decreased due to lack of feed. • Many pigs were killed by pest.
1999-2002	+6 • During the crisis, people in the city were killed, but there was no effect on Fada bloco. There was nothing lost and burnt in the village. • After the crisis, they started going down to Dili for earning cash income. • NGOs and donors provided projects for them, so many of them were able to earn cash income. Three currencies, namely $US, $Aus, and Rupiah were used.	+4 • The price went up along with the introduction of US$. However the production decreased as the heavy rain washed out the flowers. Only leaves were left in the trees.	+6 • The production had decreased due to soil degradation and long rain.	+10 • Same as above	+10 • Same as above	+10 • Same as above.	+8 • The production of cow was the same as the previous period. • They used/consumed cows for traditional ceremony.	+10 • Every household had pigs. • There was no sicknesses • They bought piglets..
2002-2009	+7 • As there were several government projects, e.g., US$3 projects, local communities were able to easily access to money. • Agricultural products were carried to Dili for sale by 4-hours walk through small path.	+5 • The production of coffee fluctuated year by year. It was caused by climate change.	+4 • The production of maize had decreased due to the same reasons as the last era.	+10 • Same as above.	+10 • Same as above	+10 • Same as above.	+4 • A numbers of cows died in bushes due to the lack of the feed though there were new born babies. • Invasive weed (*Chromolaena odorata*) were robustly grown and	+10 • Same as above.

Result of RRA at Fadabloco

Trend Analysis

Period	Income	Coffee production	Maize production	Cassava	Scarlet runner beans	Sweet potato	Buffalo and cow	Pig
	• High school students who lived in the city by themselves carried agricultural products for sale when coming back to the city. • The peace and order situation in Dili was improved and people were able to bring products to Dili.						thickly covered the grazing areas.	
2010-2011	+8 • Although the income derived from agricultural produce declined, local people were able to increase their income from the pensions for aged persons (over 60), government projects (so called US$ 3 project), pensions for veterans, ex-teachers and compensations for the victims in 1999. • There were enough production of cassava and sweet potato, they needed cash to buy other food and new clothes. • The expenses necessary for traditional ceremony such as engagement, wedding and funeral., were large. • No farm produce is expected in 2011 due to long rain.	+2 ~~weevil~~ • They were scarcely able to harvest coffee in 2010 due to the long rain.	+ 2 • The production of maize was reduced due to the heavy rain.	+10 • The level of the production was status quo even though they had much rain.	+5 • They had too much rain to harvest the beans.	+10 • Same as above.	+5 • They left cows in bushes for feeding them. • The production has slightly increased.	+10 • Since as above.

Table 2 (2) Results of Trend Analysis at Suco Fadabloco

Period	Land availability	Water	Forest	Forest fire	Hunting	Pest	Climate	Landslide	Stability
1960-1975	+5 • About 50 % of the total area were used by the communities. • The elders cultivated 2-3 plots simultaneously, while the youth used only one plot in general.	+5 • The flow of water at the water sources was limited. • Community lived far from the water sources. • It was difficult to access to the water sources especially in dry season.	+5 • The communities were not interested in planting seedlings.	+4 • Forest fire took place due to the lack of community police.	+4 • Few households practiced hunting.	+7 • Corn and cassava were damaged by pig.	+6 • Heavy rains/winds often took place. • The rainy season regularly started in November.	+6 • Many landslides were caused by the heavy rains/strong winds in 1973.	+8 • The communities respected the village leaders as well as each other. • The stability of the village was maintained by the Portuguese government. The law enforcement was very strong in the Portuguese era.
1975-1999	+7 • The population of the village was not still high. • The villagers received training courses on modern farming techniques from the Indonesian government.	+7 • Water tanks were constructed in the village by the Indonesian government.	+6 • Some Seedlings of Caliandra were planted in the village with the support from the Indonesian government.	+4 • There were still forest fires taking place in the village owing to the difficulty of in controlling fires.	+5 • The Indonesian army went to forests fro hunting with local communities.	+7 • The Indonesian army killed wild pigs. • Crops were damaged by rodents. • The communities were not able to maintain the farms as they were forced to relocate by the Indonesian government.	+5 • The village had less heavy rains/winds.	+5 • The incidence of landslides declined owing to the decrease of heavy rains/winds.	+0 • The communities felt unsafe during the Indonesian occupation.
1999-2002	+10	+6	+7	+4	+3	+6	+4	+0	+10

Result of RRA at Fadabloco

Trend Analysis

Period	Land availability	Water	Forest	Forest fire	Hunting	Pest	Climate	Landslide	Stability
	• The population of the village had increased. • The government and World Vision provided training coruses on agriculture.	• The use of water was limited as the water pipes were broken and many households used the same water sources.	• The communities cut caliandra trees.	• Same as above.	• The Indonesian army withdrew from the village and the number of people who practiced hunting also decreased.	• Some villagers started maintaining their farms with pest control.	• Same as above.	• No landslide took place due to less heavy rains/winds.	• After the independence, the communities respected each other. (or People had the common objective of independence.)
2002-2009	+10 • The villagers were able to use their lands for farming. • The population of the village had increased.	+5 • Same as above. • No external support had been given for improvement of the water supply systems.	+8 • The forest cover in the village expanded owing to frequent rains.	+4 • Same as above.	+3 • Same as above.	+7 • Some farms were damaged by rodents due to the increase of rodents in the fields.	+5 • The village had heavy rains and winds.	+8 • Many landslides took place in 2007, which caused damage to farms and coffee plantations, especially those located along the rivers/streams.	+5 • The communities were disturbed and felt unsafe during the turmoil in 2006.
2010-2011	+10 • All the lands in the village were divided by the communities.	+5 • The volume of water from the courses has not changed even though the village has had more rains than before.	+8 • Same as above.	0 • No forest fire has taken place since the many fields in the village are covered with chlomoraena, which does not die down or become dry even in the dry season.	+1 • Interest of the communities in hunting is limited.	+10 • Long and heavy rains have adversely affected the crop production, especially maize production.	+10 • Same as above. • The rainy season seems to have changed.		

Table 3 (1) Results of Trend Analysis at Suco Madabeno

Period	Income	Maize production	Cassava production	Coffee	Sweet potato	Taro	Kontas	Maek (corm of konjak)
1960-1975	4+ • Although they produced many crops but were not able to sell the products due to the lack of transportation means to sell. • Only the persons hired as casual laborers were able to earn cash income. . • Livestock were used for paying tax.	10+ • Soil fertility of the farm was high. • Despite the fact that communities were forced to render a service to the Portuguese government and did not have enough time for farming, they were able to have a good harvest of maize.	10+ • Production of cassava was high. .	4+ • Shade trees in the village were not many. • There were not enough laborers working in coffee plantations in the village as many villagers were forced to work for the Portuguese government as servants.	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.
1975-1999	6+ • Although they produced many crops but were not able to sell the products due to the lack of transportation means to sell. • The community sold some products, such as coffee and red bean, to the buyers coming to the village. • The community sold the livestock.	8+ • Soil fertility became declined due to frequent burning of the farms. • Crops were damaged by insects.	10+ • Same as above	8+ • They produced coffee seedlings using wildlings from coffee plantations. • NCBA provided seedlings of Albizia and coffee. • The Indonesian extension workers supported the communities in the expansion of coffee production.	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.

Results of PRA at Madabeno
Trend Analysis

Period	Income	Maize production	Cassava production	Coffee	Sweet potato	Taro	Kontas	Maek (corm of konjak)
1999-2000	3+ • There was less opportunities to earn income due to turmoil and many Indonesian buyers left the country.	4+ • In 1999, some villagers evacuated from the village and were not able to plant maize. • In 2000, a shortage of rainfall affected the maize production.	10+ • Same as above.	6+ • The production had been good until the crisis happened. • During the crisis, some coffee plantations as well as coffee stock were burned.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.
2001-2007	6+ • They were able to work as civil servants and/or laborers for projects supported by the government and NGO. • Some buyers sold the products at the kiosks. • The communities were able to access to the credits operated by NGOs.	5+ • There have been enough rainfalls in the village. • Some villagers started to open new places with fertile soils.	10+ • Same as above.	9+ • The coffee production had increased owing to the technical support by NCBA/World Vision.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.
2007-2011	9+ • The communities have earned income by selling products to middlemen. • They can sell products at the markets using public transportation. • The elders in the	3+ • In 2007-2008, the maize production was good thanks to the sufficient rainfall. • In 2009-2010, the production drastically declined.	10+ • Same as above.	10+ • Coffee trees planted in the Indonesian times started to produce coffee.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.	10+ • Same as above.

Period	Income	Maize production	Cassava production	Coffee	Sweet potato	Taro	Kontas	Mack (corm of konjak)
	village have received pensions from the government.							

Table 3 (2) Results of Trend Analysis at Suco Madabeno

Period	Uhi (long sweet potato)	Kuan (round yam)	Kumbili (yam)	Ai same (long yam)	Banana	Lehe (green and red bean)	Koto Morok (wild bean)	Crop damage
1960-1975	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.	10+ • The fertility of soils in the farms was high.	5+ • Banana was not popular in the village. •	2+ • Lehe was not popular in the village.	4+ • Koto Morok was naturally grown in the forest.	4+ • Crop were damaged by winds/rains, pest, rodent and raccoon (eating coffee)
1975-1999	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.	10+ • The yield of the crop was high.	5+ • Same as above.	2+ • Same as above.	4+ • There was no change in the production of the crop.	6+ • Pest attacks became more serious. • Crops were still damaged by rains, winds, animals such as rodent and monkey.
1999-2000	10+ • Same as above	10+ • Same as above	10+ • Same as above	10+ • Same as above	5+ • Same as above	2+ • Same as above	4+ • Same as above	7+ • It was difficult to control pests during the Indonesian times.
2001-2007	10+ • Same as above	10+ • Same as above	10+ • Same as above	10+ • Same as above	5+ • Same as above	2+ • Same as above	4+ • Same as above	7+ • Crops were damaged by rains, winds, animals, and insects.
2007-2011	10+ • Same as above	10+ • Same as above	10+ • Same as above	10+ • Same as above	5+ • Same as above	2+ • Same as above	4+ • Same as above	7+ • Same as above. • Long and heavy rains severely damaged the crops in 2010-2011.

Table 3 (3) Results of Trend Analysis at Suco Madabeno

Period	Honey	Livestock	Land availability	Water	Forest	Forest fires	Rainfall	Landslide	Tua Mutin
1960-1975	7+ • The production was high but few people took honey due to the fear of falling from a tree.	4+ • Only the persons who earned cash income were able to raise animals. • It was not easy to raise animals in the village due to the cold temperature.	9+ • The communities easily accessed a land for farming as the limited number of households practiced farming due to time constraints. Most of them were forced to work for the Portuguese government as servants.	8+ • Households living in the hillside needed to go to the riverside to fetch water.	10+ • No illegal logging was observed.	3+ • The communities burned the farms in land preparation. • Tara-bandu was effective. • The police deployed by the Portuguese government regulated the activities of the communities.	10+ • It rained regularly.	3+ • Landslide had rarely taken place. • Forests largely covered the areas of the village.	4+ • The limited number of the households in the village collected tua mutin. • There were many tua trees in the villages.
1975-1999	5+ • As there were some fatal accidents caused by falling from trees while collecting honey, many households were afraid to climb a tree to get honey.	5+ • The communities in the village were given animals by the Indonesian government.	7+ • Due to the population increase, the available area for farming in the village was reduced.	7+ • A shortage of water was observed in the dry seasons.	8+ • Landslide took place in forests in the village. • Resistant guerrillas against the Indonesian occupation burned forests in the village. • Forests or trees in forests were illegally cut with chain saw.	9+ • The Indonesian army burned forests to drive the guerrillas from forests. • The communities also burned forests for hunting.	9+ • The rainfall pattern or timing was slightly changed.	5+ • The incidence of landslide increased due to the deforestation caused by illegal logging and forest fires.	8+ • The number of the households who had knowledge on production/collection of tua mutin increased.
1999-2000	3+ • Many of them were still afraid to climb up a tree to collect honey.	3+ • Some animals were killed by the Indonesian army.	6+ • The population and households in the village kept increasing, while the available area in the village	7+ • Same as above.	6+ • Illegal cutting sometimes took place due to no government regulation. • It was difficult to regulate forest	9+ • It was difficult to regulate and control forest fires during the crisis.	9+ • Same as above.	5+ • Same as above.	7+ • Some villagers evacuated from the village during the crisis.

Results of PRA at Madabeno

Trend Analysis

Period	Honey	Livestock	Land availability	Water	Forest	Forest fires	Rainfall	Landslide	Tua Mutin
			decreased.		fires during the crisis.				
2001-2007	2+ • There were few bee combs in the village.	6+ • The number of the households who raised animals had increased. • MAF/World Vision provided the financial support to the communities for the purchase of animals.	5+ • Same as above.	7+ • Same as above.	5+ • There was still no control of illegal logging by the government. • No deployment of the forest guard was made.	5+ • The households set the fireline to control a fire.	9+ • Same as above.	7+ • The incidence of landslide increased due to the deforestation caused by forest fires.	8+ • The number of the households who collected/produced tua mutin increased. • There were many trees of tua in the village. • Many buyers came to the village to buy tua mutin.
2007-2011	1+ • The collection of honey is not popular in the village due to lacks of interest among the households and bee comb in the village.	7+ • The number of animals has increased owing to the reproduction of those purchased between 2001 and 2007.	3+ • Same as above.	7+ • Same as above.	7+ • Forest guards were deployed to control and regulate the illegal cutting.	0 • There has been no forest fire since the Tara Bandu ceremony in 2010. • Forest guards deployed have been effective in reducing the incidence of forest fires.	2+ • The village had a long rain in 2010.	9+ • A long and heavy rain in 2010/2011 caused landslides in the village.	7+ • The heavy rain in 2010/2011 affected the production of tua mutin.

Table 4 (1) Results of Trend Analysis at Suco Talitu

Period	Income	Maize production	Coffee	Cassava	Animal	Animal damage	Rice	Vanilla	Pepper	Clove
1960-1975	+4 • Only the teachers and government staff were able to get salary.	+10 • Maize production was high as most of the households in the village planted maize.	+2 • Shade trees for coffees were limited in the village.	+10 • Production of cassava was high.	+10 • Everybody used to have lots of animals to use them for the cultural ceremonies.	+5 • Since Tara Bandu was effective, animals entering farms were freely killed.	+5 • Paddy fields were limited in the village.	+0 • No one grew/produce vanilla.	+0 • No one grew/produced pepper.	+0 • No one grew/produced clove.
1975-1999	+6 • The communities were able to earn more cash income from coffee.	+7 • The production of maize decreased. • Some maize farms were converted to coffee plantations. • Newly opened areas were also used for the production of other crops, e.g., clove.	+8 • Many communities planted coffee as the price of coffee was high. • The Indonesian government provided the seedlings of coffee and samtuku through the extension workers.	+9 • The production of cassava was reduced due to the labor limitation for cropping.	+8 • The places for animal grazing were limited in the village.	+5 • If animals entered into others' farms and caused feeding damage to crops, the owner of animals had to pay compensation for the crop damage to the farm owner.	+4 • Rice production had decreased due to the insect attack.	+2 • Not many households planted vanilla.	+0 • Same as above.	+7 • Many communities in Aldeias Talitu and Casmantutu had planted clove.
1999-2001	+3 • After the Indonesian's withdrawal, rupia's value delined.	+5 • The production of maize had decreased. • The farms for maize were limited. It was planted in the farms adjacent to coffee plantations.	+9 • Coffee plantations had expanded as coffee price was kept high.	+5 • The households who planted cassava decreased as many of them engaged in the activities of NGOs and other donors.	+5 • Animals were killed by the Indonesian army.	+8 • Most of the people evacuated to the mountain area, and it was therefore difficult to control animals.	+3 • Few households managed the paddy field.	+2 • During the turmoil, most of the communities left their farms.	+4 • The communities used and managed a pepper nursery left by the Indonesian agricultural extension office.	+7 • Most of the communities in Aldeia Talitu and Casmantutu continued to plant clove.

Result of PRA at Talitu

Trend Analysis

Period	Income	Maize production	Coffee	Cassava	Animal	Animal damage	Rice	Vanilla	Pepper	Clove
2002-2007	+4 • The government started to provide pensions for the elders in 2007.	+4 • Some farms planted with maize were covered with trees.	+9 • The area of coffee plantation in the village was not changed as the communities planted other crops, such as, e.g., clove.	+3 • Fewer villagers were planting cassava due to time constraints as they were busy in working for the government projects.	+6 • After the independence, villagers started to rear animals.	+6 • Some community members returned to the village and started to plant trees/put fences to control free grazing.	+3 • Same as above.	+6 • Many households received seedlings of vanilla with the assistance from CCT.	+6 • The number of households who had interest in production of pepper increased.	+8 • The number of households who planted clove increased as they noticed that the price of clove was high. (US$5/kg @ CCT/Timor Grobal)
2007-2010	+8 • The household income in the village has increased by selling coffee, vanilla, pineapple and pepper.	+2 • The area used for maize production was limited.	+9 • Clove had replaced coffee in the coffee plantations.	+2 • Fewer villagers planted cassava as most of them already had income to buy the food.	+6 • The communities graze animals without any fear of loss.	+4 • Most of households lived in the top of hill and therefore it was difficult to control animals/	+2 • Rice production was reduced because the communities were able to earn more cash income.	+7 • The number of households who planted vanilla increased as the price of the product was high.	+7 • Those who had already produced pepper started to share their seedlings with others.	+9 • Many people planted clove owing to its high selling price (5USD/kg).
2010-2011	+10 • Some of the communities are employed as teachers and nurses.	0 • Most of the communities purchase maize at the markets.	+8 • Some aged coffee plantations did not generate any production.	+1 • A long rainy in 2010 did not allow the communities to plant cassava.	+5 • The place for animal grazing is limited. • Animals are tied with trees/sticks.	+2 • The communities built fences to protect crops from animal feeding damages.	+3 • Few hosehololds managed the paddy field.	+5 • Price of the product has declined to 3 USD/kg.	+8 • Every household has produced white pepper and sold it at US$ 5 /kg.	+10 • Two aldeias has increased the production of clove.

Table 4 (2) Results of Trend Analysis at Suco Talitu

Period	Landslide	Wild fire	Rainfall	Tua mutin	Forest	Plantations	Water sources	Honey	Land availability	Firewood
1960-1975	+2 • Few landslides took place as the area was covered with forests.	+0 • No wild fire took place owing to strict control by the local authority.	+6 • The rainfall pattern was regular and stable. • The rainy season started in October and ended in April.	+8 • The production of Tua mutin was high.	+8 • There were many forests remaining in the village since the population pressure was low.	+2 • The areas of clove, coffee and sandalwood plantations were limited.	+0 • The communities needed to go to the river to fetch water.	+1 • The honey collection/ production was limited.	+8 • Many lands were available in Portuguese time.	+0 • The communities did not sell firewood.
1975-1999	+2 • Same as above.	+8 • The Indonesian army burnt mainly dense forests to drive the guerillas from forests.	+6 • Same as above.	+8 • Same as above.	+7 • People cut trees for planting coffee/clove.	+5 • Coffee plantation was expanded as a source of income.. • The Indonesian government provided technical supports for farmers.	+2 • Water pipes were installed to supply water to houses in the village.	+0 • No honey production / collection was made in the village.	+5 • Since the Indonesian army forced the communities to relocate their houses, their land use was limited.	+4 • Some households used to sell firewood.
1999-2001	+2 • Same as above.	+7 • The incidence of wild fires decreased little bit owing to the withdrawal of the Indonesian army.	+6 • Same as above.	+7 • Some households who produced/ collected Tua Mutin left the village during to the turmoil.	+6 • Plantations of clove, coffee and pepper increased. • The communities cut trees for timber/firewood collection.	+5 • No expansion was made during the tumoil.	+2 • Same as above.	+0 • Same as above.	+8 • The communities could use their lands without any interventions by the Indonesian government.	+3 • Few households sold firewood.
2002-2007	+2 • Same as above.	+4 • The	+6 • The rainy	+8 • The number of	+5 • Forests were	+6 • The	+2 • Same as above.	+0 • Same as above.	+7 • The households	+5 • The number of

Result of PRA at Talitu

Trend Analysis

Period	Landslide	Wild fire	Rainfall	Tua mutin	Forest	Plantations	Water sources	Honey	Land availability	Firewood
		communities got aware that the burning was harmful to trees/forests.	seasons was shortened as compared to the previous years..	households who produced / collected Tua Mutin increased owing to the dissemination of techniques among villagers.	converted into clove and coffee plantations.	plantations had been expanded year by year.			and population in the village increased.	households who engaged in selling firewood increased.
2007-2010	+3 • The incidence of landslides increased due to heavy rains.	+2 • The awareness level of the necessity of forest conservation was increased among the communities. • Tree plantations were expanded by the communities.	+5 • Same as before.	+6 • The number of producers / collectors had decreased as their interests had changed from Tua to the other crops.	+4 • Dens forests had been reduced as coffee plantations had expanded. • Logging continued place for timber production and building houses.	+7 • Same as above.	+4 • .The government and NGOs supported the suco in the installation of water supply systems.	+0 • Same as above.	+6 • The households and population in the village have kept increasing.	+5 • Same as above.
2010-2011	+6 • Heavy rains in 2010/2011 have caused some landslides.	+0 • No wild fire has been observed since the Tara Bandu ceremony.	+10 • The rainy season started in October 2009 and ended in July 2010.	+4 • A heavy and long rain in 2010 affected the production of Tua Mutin.	+3 • Landslide has caused damage to forests in the village.	+9 • The plantations of coffee has been expanded owing to the seedlings provided by CCT.	+6 • Water supply pipes to the houses in the village were installed by the government and world Vision.	+0 • Same as above	+6 • Same as above.	+4 • The households who engage in selling firewood become less as they need to get the official license from the Government to sell firewood.

Table 5 Results of Seasonal Calender at Suco Faturasa

(1) Activities related to Traditional Ceremonies and Crop Production

Result of RRA in Faturasa
Seasonal Calendar

NO	ACTIVITY	MONTH												Allotment of work		Problem	Solution
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women		
A.	**Traditional Activities**																
A-1	Koremetan (ceremony for dead person after one year of his/her dealth)													+	+	- Conflict between the villagers	- Conpensation
A-2	Lia Moris (traditional engagement celemony)													+	+	- Conflict between the villagers	- Conpensation
A-3	Tara Bandu (Traditional ban)													+	+	- Some villagers break the rules.	- Breakers should be penilized.
A-4	Hatama "Meik + Kroat"													+	+	-	-
A-5	Independence Day													+	+	- Getting drunk & making troubles	- Local authorities should solve it.
A-6	Religious Day													+	+	-	-
A-7	Harosan (making group garden/mutual coorperation)													+	+	- Break Rules	- Breakers must attend collective activities.
A-8	Ulat Animal (Ceremonies to offer an animal saclifiiced to God)													+	+	- Getting drunk & making troubles	- Local authorities should solve it.
A-9	Uma Lulik (Traditional house)													+	+	- Same as above	- Same as above
B	**Production of annual crops**																
B-1	Land preparation (Slashing)													++	+		
B-2	Land preparation (Burning)													Slashing & Burning	Food preparation		
B-3	Seed preparation (for corn and other upland crops) <1															- Shortage of seeds	- Buy seeds
B-4	Preparation of peanut farm (permanent farm)															- Lack of farming tools	- Buy farming tools
B-5	Planting/Seeding (fro corn and other upland crops) <1													+	+	- Lack of farming tools	- Buy farming tools
B-6	Seeding (peanut)															- Lack of seed	- Buy seeds
B-7	Weeding (for corn)													+	+	- Lack of materials - Shortage of food	- Buy materials needed
B-8	Weeding (for peanut)													+	+	- Lack of materials - Shortage of food	- Buy materials needed
B-9	Harvesting (corn, beans, pumpkin, squash, peanut, soybean)															- Lack of bag/basket - Lack of machete	- Buy bags/baskets and machete
B-10	Harvesting (Sweet potato)															- Lack of bag/basket - Lack of machete	- Buy bags/baskets and machete
B-11	Harvesting (Cassava and tubers)															- Lack of bag/basket - Lack of machete	- Buy bags/baskets and machete
C	**Other Farming Activities**																
C-1	Planting seedlings of fruits (Banana, Coffee, Bamboo, Jackfruit, Mango, Tobacco, etc.)														+	- Lack of seedling	- Buy seedling
C-2	Fencing													+++	+	- Lack of materials (machete, axe, iron stick, and saw)	- Buy or borrow materials needed
C-3	Vegetable farming													+	+	- Lack of materials	- Buy materials needed
C-4	Harvesting (coffee)													+	+	- Lack of bag - Lack of coffee miller	- Buy bags and necessary materials for miller
C-5	Harvesting (Mango)																
C-6	Harvesting (Orange)																
C-7	Harvesting (Jackfruit)																
D	**Other Economic Acitivites**																
D-1	Building houses													++	+ cooking	- Lack of materials (machete, axe, iron stick, and saw)	- Buy or borrow materials needed
D-2	Labor work at city/town													+		- No labor required for farming	- Go to city/town to find a job
D-3	Hunting													+			
D-4	Harvesting (honey)													+	+	- Lack of container and rope	Buy or borrow materials needed

Note: <1: Maize, Tunis, Beans, Pumpkin, Squash, Soybean, Cassava

Table 5 Results of Seasonal Calender at Suco Faturasa

(2) Activities related to Harvesting Seasons of Major Agricultural Products

NO	ACTIVITY	MONTH												Sale/Consumption		Problem	Solution
		1	2	3	4	5	6	7	8	9	10	11	12	Consumptio	Sale		
H	**Agricultural Crops**																
E-1	Corn			+										+		- Shortage of rainfall - Crop damage by rat and wind	- No means
E-1	Cassava	+	+	+	+									+		- Shortage of rainfall	- Same as above
E-2	Sweet potato													+		- Same as above	- Same as above
E-3	Kontas													+		- Same as above	- Same as above
E-4	Mango	+	+	+	+									+	+	- Shortage of rainfall - Existence of competitors - Cost of transportation	- No means - Give produce to relatives
E-5	Peanut			+	+									+	+++	- Shortage of rainfall - Crop damage by rat	- Keep producing
F-1	Vegetables					+	+	+	+	+	+			+	+++	- Shortage of rainfall - Crop damage by insect - Existence of competitors - Cost of transportation	- No means - Give produce to relatives
F-2	Forest Beans					+	+	+						+		- Shortage of rainfall	-
F-3	Maek						+	+	+					+		- Same as above	-
F-4	Kumbili						+	+	+					+		- Same as above	-
G-1	Coffee						+	+	+					+	+++	- Shortage of rainfall - Existence of competitors - Cost of transportation	- Keep producing
G-2	Honey					+	+							+	+++	- Strong wind - Existence of competitors - Cost of transportation	- Keep producing
G-3	Tua mutin	+	+	+	+	+	+	+	+	+	+	+	+	+	+++	- Existence of competitors - Cost of transportation	- Drink and sell it
G-4	Orange					+	+							+	+++	- Shortage of rainfall - Existence of competitors - Cost of transportation	- Give produce to relatives
G-5	Goat	+	+	+	+	+	+	+	+	+	+	+	+	+	+++	- Animal diseases - Lack of feed - Existence of competitors - Cost of transportation	- Ask a veterinarian to diagnose animals - Use medicinal leaves as feed
G-5	Pig	+	+	+	+	+	+	+	+	+	+	+	+	+	+++	- Same as above	- Same as above
G-5	Chicken	+	+	+	+	+	+	+	+	+	+	+	+	+	+++	- Same as above	- Same as above

Table 5 Results of Seasonal Calender at Suco Faturasa

(3) Activities related to Humand and Animal Diseases

NO	ACTIVITY	MONTH												Allotment of work		Problem	Solution	NOTE
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women			
E.	**Climatic condition and Natural Calamity**																	
E-1	Wind	++	++											X	X	The window destroys the crops	- Just go to the another place to find food	- *On January the wind destroys the corn and other crops.*
E-2	Rain	++	++	++	+ -	- -						+ -	+ -					
E-3	Landslide			+ -											X	Erosion	- Save and plant the seedlings of trees and bamboo, - Ask some NGOs to provide them with seedlings	
E-4	Food Shortage	++	+ -									+ -	+ -	X	X	Hunger	- Limit their meal to eat once a day	
E-5	Shortage of water								+ -	+ -	++					No Water	- Use another water source which is located in 500m from suco	
F.	**Human Disease**													X	X			
F-1	Diarrhea												++				- Go to the clinic/hospital - Take the tarditional medicine	- *Sometimes people are died by these diseases* - *There is a prevalence of the new disease especially in Aldeia Berlisu. The people get the foots inflamed with an acute pain. Up to date they cannot identify the name of the disease, which called as Samalere in Bobonaro District.*
F-2	Malaria						++	+ -	+ -	+ -	+ -	+ -	+ -					
F-3	Itch/Skin Disease					++	++	++										
F-4	Cough and Fever						++	++	++	++	+ -							
F-5	Rheumatism		+ -	+ -														
G.	**Animal Disease**													X	X			
G-1	Food Shortage for Animal								+ -	+ -	+ -	++					- Plant grass for the animals - Use the traditional medicines - Go to the Livestock(veterinarian).	
G-2	Cow/Bufallo (1) Neck Puffy						+ -	+ -										
G-3	Goat (1) Itch								+ -	+ -								
	(2) Stomach											+ -	+ -					
	(3) Eyes Disease			+ -	+ -	+ -												
G-4	Pig (1) Head Puffy and Body Shaking						+ -	++	+ -									
G-5	Chicken (1) Mouth,Eyes Injoury						+ -	++										
	(2) Head become black colour and Feces become white colour.						+ -	++										

Table 6 Results of Seasonal Calender at Suco Fadabloco

(1) Activities related to Crop Production

NO	ACTIVITY	MONTH												Allotment of work		Problem	Note
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women		
A	**Production of annual crops (Shifting cultivation)**																
A1	Land preparation (Cutting)						+	+						X	X	- Need to fence the farm	- The area for shifting cultivation is used for 1-2 years.
A2	Land preparation (Slashing)								+	+				X	X	- Lack of farm tools for land preparation	
A3	Land preparation (Burning)									+				X	X		
A4	Seed preparation							+	+	+				X	X	- Poor quality of seeds - Low fertility of soils	
A5	Planting of crops(for corn and other upland crops)										+	+	+	X	X	- Lack of tools for planting (seed basket or box)	
A6	Weeding (1st)											+	+	X	X	- Lack of time	
A7	Weeding (2nd)	+	+											X	X		
A8	Harvesting			+	+									X	X	- Lack of tools for harvesting	
B	**Other Farming Activities (Coffee)**																
B1	Land preparation (Clean grasses)			+										X	X		
B2	Planting trees	+											+	X	X		
B3	Planting shade tree	+											+	X	X		
B4	Harvesting					+	+							X	X		
B'	**Other Farming Activities (Mustards)**																
B'1	Land preparation (Clean grasses)	+	+	+	+	+	+	+	+	+	+	+	+	X	X	- Lack omaterials for watering and land preparation	
B'2	Planting in the rainy season	+	+	+	+											- Lack of seeds	
B'3	Planting in the dry season								+	+	+	+				- Lack of water in dry season	
B'5	Harvesting	+	+	+	+	+	+	+	+	+	+	+	+	X	X	Feeding damage to vegetables by animals	

(2) Harvesting Seasons of Major Agricultural Products

NO	ACTIVITY	MONTH												Allotment of work		Problem	Note
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women		
C	**Agricultural Crops**																
C1	Corn			+	+									X	X		
C2	Cassava	+	+	+	+	+	+	+	+	+	+	+	+	X	X		
C3	Orange					++	++	+	+					X	X		
D4	Coffee					+	+										

Table 6 Results of Seasonal Calender at Suco Fadabloco

(3) Traditional Activities

NO	ACTIVITY	MONTH												Problem
		1	2	3	4	5	6	7	8	9	10	11	12	
D	**Traditional activities**							+	+	+				- Need to shoulder some expenses (tua, rice and vegetables) - The groom's family needs to give money and animals to the bride's family.
D-1	Koremetan						+	+	+					
D-2	Wedding													
D-3	Church activities													
	- Easter			+	+									
	- Christmas	+											+	
	- Padroira santa cruz								+	+				
	- Rosary for hory mary					+					+			
	- Sacred heart of Jesus						+							
D-4	Customs for a new baby	+	+	+	+	+	+	+	+	+	+	+	+	
D-5	Funeral ceremony	+	+	+	+	+	+	+	+	+	+	+	+	- A family needs to arrange animals, money to buy rice, candle, and white clothe, and place for funeral.
D-6	Regulations of Uma Lisan	+	+	+	+	+	+	+	+	+	+	+	+	

(4) Natural Calamities and Others

NO	ACTIVITY	MONTH												Problem	NOTE
		1	2	3	4	5	6	7	8	9	10	11	12		
E.	**Climatic condition and Natural Calamity**														
E-1	Pest attack maize											+	+	- Maize production is adversely affected by pest/insect. - Wild animals cause feeding damage to crops in the farms without fence.	*-Not only is the insect attack serious, but wild animals cause severe feeding damage to crops.* *- Even oranges trees are attacked.*
E-2	Land slide	++	++	++								+	+	- Illegal cutting, forest fire, and collection stone result in the decline of the water-holding capacity of soils. - Holes and cracks made by large livestock animals (cattle, buffalo, and horse) freely grazed in hills/mountains induce the gully erosion.	*- The communities intend to plant trees and make the village regulations to prevent landslide.*
E-3	Forest Fire								++	+				- They do not have a practice of making firelines in land preparation under the shifting cultivation/rotation farming. - No forest gurd who controls forest fire exists in the village. - Illegal hunting often causes forest fires.	
E-4	Big wind	+	+									++	++	- Wind can not be controlled. - Strong winds often damage houses, roofs, planting crops and animals.	*- November and December are the windy months, but in 2011 the strong wind often occurred in January and February.* *- People avoid constructing a house on hill ridge where a strong wind always blows in.*
E-5	Rainfall	+	+									++	++	- Rainfall affects the farming activities, human health and animal deseases.	*- Rainfall pattern fluctuated and was not normal in 2010- 2011.*
E-6	Food Shortage	++											+	- Farms can not be cultivated during the rainy season.	
E-7	Shortage of water								++	++				- Water tanks constructed by Care International were broken.	*- People have to get down a hill uotp a stream to get water.* *- Rain water is used for domestic purposes.*
E-8	Availability of water	+	+									+	+		
F.	**Human Disease**													- There is no clinic in Suco. - Few persons know traditional cures.	
F-1	Malaria	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-2	Diarrhea													Rainy season	
F-3	Cough	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-4	Flu	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-5	Joint pain	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-6	High blood	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-7	Itch skin	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-8	Mental crazy	+	+	+	+	+	+	+	+	+	+	+	+	anytime	
F-9	Eyes red													Rainy and dry season	
G.	**Animal Disease**													- No staffs for livestocks. - Few person know traditional medicines and/or cures (e.g., use of the mashed taro leaves as an oral medicine or patch). - Diseases often outbreak in the rainy season.	*- Water and animal feed lack in the dry season.* *- Free grazing may cause animal diseases. It may be necessary to set a pen for animals and keep it clean always.* *The situations of pigs, horses, and goats are the same with Cattle.*
G-1	Cow														
	(1) Diarrhea								++	+					
	(2) Head ache														
	(3) Red eyes														
	(4) Get cold														
	(5) Flu														
G-2	Chicken														
	(1) Avian flu											+			
G-2	Pig														
	(1) Diarrhea	+	+												
	(2) Head ache	+	+												
	(3) Red eyes	+	+												
	(4) Get cold	+	+												
	(5) Flu	+	+												
G-3	Goat														
	(1) Diarrhea	+	+												
	(2) Head ache	+	+												
	(3) Red eyes	+	+												
	(4) Get cold	+	+												
	(5) Flu	+	+												
G-5	Horse														
	(1) Diarrhea	+	+												
	(2) Head ache	+	+												
	(3) Red eyes	+	+												
	(4) Get cold	+	+												
	(5) Flu	+	+												

Table 7 Result of Seasonal Calender at Suco Madabeno

(1) Activities related to Crop Production

NO	ACTIVITY	MONTH												Allotment of work		Problem	Note
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women		
A	**Production of annual crops(Shifting cultivation)**																
A1	Land preparation (Cutting)					+	+										The area for shifting cultivation is used for 1 - 2 year/s.
A2	Land preparation (Slashing)							+	+					slashing in uplands	slashing in lowlands		
A3	Land preparation (Burning)									+	+			preparation of fire lines	preparation of fire lines		
A4	Planting of crops (for maize and other crops)											+	+				
A5	Harvesting	+	+	+													
B	**Other Farming Activities (Coffee)**																
B1	Land preparation (Clean grasses)						+										
B2	Planting trees	+											+				
B3	Planting shade tree	+	+										+				
B'4	Harvesting					+	+	+	+	+							
B'	**Other Farming Activities (Vegetable)**																
B'1	Land preparation (Clean grasses)						+	+									
B'2	Land preparation						+	+									
B'3	Making water ways						+	+									
B'4	Burning							+									
B'5	Harvesting									+	+	+					

(2) Harvesting Seasons of Major Agricultural Products and NTFPs

NO	ACTIVITY	MONTH												Allotment of work		Problem	Note
		1	2	3	4	5	6	7	8	9	10	11	12	Men	Women		
C	**Agricultural Crops**																
C1	Corn			+	+									X	X	- Feeding damage caused by insect and animals, e.g., monkey, wild bird and wild pig. - Damage caused by landslide and wind	
C2	Cassava	+	+	+	+	+	+	+	+	+	+	+	+	X	X	- Damage caused by rodent, wild pig and pest	
C3	Taro								+	+	+				X	- Damage caused by pest	
C4	Sweet potato								+	+	+				X	- Damage caused by insect	
C5	Kontas								+	+	+				X	- Feeding damage by rodent	
C6	Banana	+	+	+	+	+	+	+	+	+	+	+	+	X	X	- Feeding damage by wild bird and rodent	
C7	Pumpkin			+	+									X	X	- Feeding damages by rodent and monkey	
C8	Cucumber			+	+										X	- Feeding damage by rodent	
C9	Tunis					+	+								X	- Damage by wild bird, insect and rodent	
C10	Fore keli (soy bean)					+									X	- Damage by wild bird, insect and rodent	
C11	Long bean			+	+										X	- Damage by pest	
C12	Red bean					+									X	- Damage by rodent, pest and wild bird	

NO	ACTIVITY	MONTH											
		1	2	3	4	5	6	7	8	9	10	11	12
D	**NTFP**												
D1~8	Kubili, Uhi, Kuasav, Maek, Koto mo ruk, Ai same, Balalak, and Lehe								+	+			
D9	Kinri								+	+			+
D10	Bani ben	+	+										
D11	Tua	+	+	+	+	+	+	+	+	+	+	+	+
D12	Singomas							+	+	+			
D13	Sekur					+	+	+	+	+			
D14	Talas Fuik	+	+	+	+	+	+	+	+	+	+	+	+
D15	Bolavas			+	+								
D16	Kasura	+	+	+	+	+	+	+	+	+	+	+	+
D17	Ainanas Aleten					+	+	+					
D18	Uf metan	+	+	+									
D19	Coffee					+	+	+	+				

Table 7 Result of Seasonal Calender at Suco Madabeno

(3) Traditional and Economic Aactivities

NO	ACTIVITY	MONTH												Problem
		1	2	3	4	5	6	7	8	9	10	11	12	
E.	**Economic activities**													
E-1	Government project worker $3	+	+	+	+	+	+	+	+	+	+	+	+	- It is difficult for the communities to cope with both farming and labor works
E-2	Other Projects	+	+	+	+	+	+	+	+	+	+	+	+	
E-3	Selling goods/products	+	+	+	+	+	+	+	+	+	+	+	+	
F.	**Traditional activities**													
F-1	Lia Mate (funeral ceremony)	+	+	+	+	+	+	+	+	+	+	+	+	Cost consuming
F-2	Lia Moris (engagement)								+	+				ditto
F-3	Uma ben (inaguration of uma lisan)								+	+				ditto
F-4	San batar (start of harvest season of corn)			+	+									ditto
F-5	Tara Bandu												+	ditto
F-6	Halo tuir udan (ceremony for raining)											+		ditto
F-7	Finadu (funeral ceremony)											+	+	ditto

(4) Natural Calamities and Others

NO	ACTIVITY	MONTH												Problem	Timing of the activities	NOTE
		1	2	3	4	5	6	7	8	9	10	11	12			
G.	**Climatic condition and Natural Calamity**															
G-1	Heavy wind	+	+	+	+									- Damage to house, crops and trees		
G-2	Rainfall pattern	++	+									+	++			
G-3	Landslide	+	+	+	+									- Damage to house, forest and road		
G-4	Dry/ Hot season									+	+			- Water shortage		
G-5	Forest Fire							+	+	+				- Damage to house and animals		- Illegal fire and cigaretteare often cause forest fire.
G-6	Food Shortage	+	+										+			- In the rainy season farmland can not be cultivated. - Money for buying food often runs out as the traditional ceremonies requires a lot of money. - Dried cassava and maize are used in the food shortage period, but children do not like to eat those foods since they are not palatable to the young generations.
G-7	Shortage of water								+	+	+					- People need to go down to the streams to get water. - They have private tanks. (Volume=5L)
G-8	Availability of water	+	+											- It is difficult to cultivate vagetables.		
H.	**Human Disease**													- People cannot work during sickness.		
H-1	Cough															
H-2	Flu														anytime	
H-3	Headache														anytime	
H-4	Diarrhea	++	+									+	++		Rainy season	
H-5	Joint pain														anytime	
H-6	Cold														anytime	
H-7	Dizziness														anytime	
H-8	Red eyes		+	+												
I.	**Animal Disease**															
I-1	Chicken (1) Avian flu					+								- If animals die, the community cannot get income.		The following factors have influenced the situations. - Lack of extensionists on livestock - Lack of knowledges on traditional medecine or cure for animals among the communities - Lack of vaccination
I-2	Pig Avian flu, Stomack stone, Roundwarm inside, and Diarrhea					+										
I-3	Goat Skin become white, Eyes become white, Skin itch	+	+													
I-4	Cow Get cold, Eyes become white, Diarrhea, Skin itch	++	+									+	++		Rainy season	
I-5	Horse Diarrhea and Skin itch	++	+									+	++		Rainy season	

Table 8 Results of Seasonal Calender at Suco Talitu

(1) Activitis related to Crop Production

NO	ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	Problem	NOTE (Timing of the activities)
A	**Production of annual crops(Shifting cultivation)**														
A1	Land preparation (Clearing of bushes and grasses)						+								
A2	Making firelines								+	+					
A3	Land preparation (Burning)									+	+				
A4	Planting											+			
A5	Weeding	+											+		
A6	Harvesting			+	+										
B	**Other Farming Activities (Coffee)**														
B1	Planting shade trees	+	+											1) Lack of farming tools 2) Lack of chemicals (medicine) necessary for processing 3) Malfunction of pulping machines 4) Lack of laborers (it causes the delay of harvest and damage of coffee cherries.)	
B2	Planting coffee trees (3-4 years after planting shade trees)	+	+												
B3	Cleaning grasses			+	+										
B4	Harvesting						+	+							
B'	**Other Farming Activities (Harosan)**														
B'1	Weeding (coffee/clove)				+	+								Shortage of agricultural tools	
B'2	Weeding (food crops)	+	+										+	Shortage of agricultural tools	
B'3	Building houses													Limited money	Depending on the necessity
B'4	Harvesting (coffee)						+	+	+					Difficult to help each other due to overlapping of the harvesting time	
B'5	Making terrace													Shortage of agricultural tools	Anytime
B'6	Clearing grass for new farms						+	+						Shortage of agricultural tools	
B'7	Burning									+	+			Shortage of persons who can control the fire	
B'8	Planting maize											+		Difficult to help each other due to overlapping of the planting time	
B'9	Building sacred/traditional houses													A conflict might sometimes take place if some households do not work together.	Anytime

(2) Harvesting Seasons of Major Aagricultural Products and NTFPs

NO	ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	Problem	Note
C	**Agricultural Crops**														
C1	Maize			+	+									1) Strong wind causes crop damage. 2) Rainfall fluctuates and is unstable. 3) Crops often have damage caused by rodent and monkey.	Since Tara Bandu was revivied and the village regulationss were in place, people have not killed wild animals. It results in the increase of feeding damage to crops.
C2	Cassava	+	+	+	+	+	+	+	+	+	+	+	+	1) Serious feeding damage is caused by pigs and rodent. 2) The less the farm is weeded, the more the crop (cassava) is given feeding damage by rodent.	- Cassava is planted in Aug. and Sep. - Cassava can be harvested any time from 1st to 5th year after planting. - After the harvest of cassava, maize is planted in the same plot - The area needs to be fenced to avoid cassava from feeding damage by pigs.
C3	Taro								+					Crop damage by worm and insects is often observed.	
C4	Banana	+	+	+	+	+	+	+	+	+	+	+	+	The root growth is often stunted by the shallow soils, which further slow the growth of suckers.	- Banana is planted in Dec. or Jan. and harvested from 6th - 9th month after planting. - The fruiting period varies with the conditions of the area, such as soils, rainfall, etc. - The yield is high in the 1st and 2nd year, but become less from 3rd year.
C5	Sweet potato						+		+					1) Late harvest caused by a shortage of laborers results in the lowering of the quality of the products. 2) Crops often have feeding damage caused by rodent.	There are two methods to plant sweet potato, "kuda isi" (plant cuttings in the rainy season) and "kuda kan" (plant seed tuber anytime).
C6	Pineapple	+	+						+	+	+	+	+		

NO	ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	NOTE (Timing of the activities)
D	**NTFP**													
D1-10	Koto mo ruk, Maek, Yam, Kuan, Lehe, Sigomas, Kaleic, Ai same, Balalak								+					
D11	Honey								+					
D12	Ai manas				+									
D13	Ai leten				+									
D14-17	Kamalae, Ginger, Rankuas, Kabura													Anytime
D18	Kaitubi												+	

Table 8 Results of Seasonal Calender at Suco Talitu

(3) Economic and Traditional Activities

NO	ACTIVITY	MONTH												Problem	NOTE (Timing of the activities)
		1	2	3	4	5	6	7	8	9	10	11	12		
E.	**Economic activities**														
E-1	Palm wine (Tua mutin) making													People often get drunk and fight with each other.	Every day
E-2	Firewood collection													Collection of firewood can cause forest degradation, which further cause soil erosion, landslide and water shortage.	Every day
E-3	Kiosk (small shop)													People often buy goods on credit at kiosk. Buyers are limited.	Every day
E-4	Production of "Karau kulit"(deep fried skin and fat of buffalo)													Karau kulit is a snack to go with palm wine, but the timings of production of both products do not match each other.	Timing not identified
E-5	Roof making (Ai laras)													Collection of Ai laras can cause deforestation, which further cause soil erosion, landslide and a shortage of water.	Every day
E-6	Stone collection													Stone collection can cause landslide.	Depending on the necessity and availability of laborers
F.	**Traditional activities**														
F-1	Sahu Batar (A traditional ceremony to be done before harvesting maize)			+	+									These ceremonies are cost-consuming, which can makes it difficult for the familites to pay tution fee for their kids and other expenses.	
F-2	Tur ai hun (A traditional ceremony to be done before planting)											+		During the ceremonies which take more than 1 week, children can not go to school.	
F-3	Hada Rate (Funeray ceremony)														Anytime
F-4	Koremetan (Ceremony to build a cemetery)														Anytime

(4) Natural Calamities and Others

NO	ACTIVITY	MONTH												Problem	NOTE (Timing of the activities)
		1	2	3	4	5	6	7	8	9	10	11	12		
G.	**Climatic condition and Natural Calamity**														
G-1	Wind in rainy seasons	+	+										+	It causes landslide, degradation of roads, and destroy of houses, gardens and farms.	
G-2	Wind in dry seasons								+	+				Strong winds and wildfres damage houses.	
G-3	Dry seasons							+	+	+				People are prone to get sick due to heavy dust in the air in the dry season.	
G-4	Forest fire								+	+	+	+		It damages to forest and causes a shortage of water.	
G-5	Erosion	+	+										+	It damages roads and farms.	
H.	**Human Disease**														
H-1	Malaria													1) Dispensary/clinic is located far from the communities.	Anytime
H-2	Cough													2) No access & transportation means to get to the dispensary/clinic.	Anytime
H-3	Diarrea													3) Health knowledge among the communities is limited.	Rainy season
H-4	Flu													4) Malnutrition prevails in the communities.	Anytime
H-5	Red eyes							+	+	+				5) Traditional medicine have cured the illness but many communities have forgotten	Dry season
I.	**Animal Disease**														
I-1	Diarrea (cow and pig)							+	+	+				1) No medicine 2) No vaccination,	- Cow: when cows eat young grasses - Pig : dry season
I-2	Skin diseases (cow)							+	+	+				3) No APS (Livestock agent organized by MAF),	Dry season
I-3	Worm (cow and pig)													4) No animal doctor.	Anytime
I-4	Sore throat (cow and chicken)														Anytime
I-5	Red eyes (cow and chicken)														Anytime
I-6	White eyes (cow)														Anytime
I-7	Flu (pig)							+	+	+					Dry season
I-8	Food shortage period							+	+	+	+			Many animals die or get sick due to a shortage of food.	
J.	**Others**														
J-1	Food shortage period (human)	+	+	+									+		
J-2	Water shortage								+	+	+	+		- Water sources are located very far from the residential areas. - Students are late for school as they have to fetch water at the water sources before school.	

Table 9 Results of Group Discussions with Male Group on Shifting Cultivation at Suco Faturasa

Theme	Discussions
Advantage and Disadvantage of Rotation Farming System	➢ Many people are currently practicing a rotation farming system, which uses the several plots for producing annual and biennial crops in a rotating manner, although they used to practice a shifting cultivation system before, in which forested areas used to be open for farming every year. ➢ There are two types of farming system in the village, i) rotation farming system and ii) fixed/permanent farming system. The former is a kind of derivation from the traditional farming system (shifting cultivation system) and therefore operated far from the residential area, while the latter is a farming system to use farms near from the houses. ➢ Under the current system, the communities plant annual crops (e.g., maize, cassava, sweet potato, beans, cow pea, and taro) mixed with biennial crops (e.g., banana and cassava) and occasionally with some orchard trees (e.g., orange and Jackfruit) in the same plot. After harvesting annual crops, the plot are fallowed/abandoned and use another plot for planting annual crops. The fallow plot is left untouched but used for production and harvesting of biennial crops. If any orchard trees are planted in a plot, such an area will not be used for producing annual crops under the rotation farming system, as the canopies of orchard trees planted in the plot hinder the growth of annual crops. <u>Advantage</u> ➢ The area used for the rotation farming system is generally fertile enough to produce annual crops (e.g., maize and beans) in the first year when it is opened. The soil fertility declines due to surface soil erosion during the first year's cultivation, so that annual crops can not be planed but only biennial/perennial crops can be grown in the area in the second year. ➢ In the first year, the area for the rotation farming system can generate good production. ➢ Land preparation for the rotation farming system, such as cutting/slashing trees and grasses and burning them, is less laborious than that for the improved fixed farming system, such as terrace making and cultivation. ➢ Although USC-CTL introduced the techniques on the improved fixed farming system, it seems to take time to make the lands fertile enough. ➢ The area under the rotation farming system is larger than the area for fixed farming. ➢ Land preparation in the rotation farming system is easier than that in the fixed farming one, while the former system requires more laborers in weeding than the latter system does. (Nevertheless, male participants did not point out the difficulties in weeding until the facilitator raised such an issue.) <u>Disadvantage</u> ➢ Under the rotation farming system, annual crops such as maize can not be planted in the second year, but only cassava and other biennial/perennial crops can be grown there. ➢ The area planted with perennial crops can not be used for annual cropping since perennial crops/trees develop their canopies. Another area need to be used for production of annual crops. ➢ Farming in sloping area causes the surface soil erosion and the production of annual crops gets lower from the second year. ➢ The participants showed their intention to introduce and expand the improved fixed/permanent farming system in stead of the rotation farming system in the future using the techniques introduced by USC-CTL. In fact, one of the participants told that they intended to disseminate the new techniques on the improved fixed/permanent farming system (such as terracing) to the neighboring villages.

Theme	Discussions
	➢ Weeding in the shifting cultivation farm is quite laborious. The farm should be weeded at least twice to trice a season, while the fixed farm require only one-time weeding because of the effect of cultivation.
Advantage and Disadvantage of the improved fixed / permanent farming	Advantage ➢ Plowing the land and incorporating grasses covered with the surface into soils make and keep the surface soils more fertile. ➢ Maize, beans, and other annual crops can be continuously planted and grown in the same area under the improved fixed/permanent farming system. ➢ In the Portuguese era, local people had practiced the fixed farming system putting animals into a fenced area to collect cattle dung and use them for farming as manure. Under such a faming system, the people were able to have good harvest of annual crops in the same area every year. ➢ Such a system was abandoned in the Indonesian era, since the government forced local people to stay at one place which was far from their own farms and fenced areas for animals. Hence, they had to abandon their permanent farms and practice shifting cultivation instead. ➢ We are keen to introduce and disseminate the following two techniques, i) making terraces and ii) application of organic fertilizer (such as compost introduced by USC-CTL). Disadvantage ➢ The production of maize in the newly established terraced farm is not as high as that in the first year of the rotation farming system. ➢ Although we understand the effectiveness of terracing in keeping soil fertility, the low production in the first year is one of the concerns. ➢ Compost application is essential, but there are few cattle/cows in the village. Only cow dung is suitable for manure. (Buffalo dung is not suitable for manure, although many households own buffalo in the village.)
Intention to continue or expand the rotation farming or improved fixed farming	➢ The male participants showed the intentions to reduce the area for rotation farming and expand the area for the improved fixed/permanent farms, because of the consideration of their advantages and disadvantages as well as the rules defined by the village regulations.
Practices of rotation farming	➢ The areas for rotation farming are clearly determined by local people. ➢ Each household has several places to use for rotation farming. According to the male participants, the number of plots for rotation farming ranges from 2 to 10. ➢ The average size of the plot is about 0.5 ~ 1.0 ha/plot. ➢ The average fallow period is about 3 to 5 years after abandonment. ➢ Used for the 1st year's cultivation under the rotation farming system, the area is fallowed with cassava for several years (3-5 years). ➢ All the areas used for farming are private land. There is no tenant or landless household in the village.
Land use and ownership	➢ There is no government land in the village. ➢ The area where church stands and its backyard are considered as the communal property. ➢ After the Tara Bandu ceremony, local communities made an arrangement with land owners to provide land use rights to all the communities in the village. Under the agreement, a person who gains a land use right from the land owner can use the areas

Theme	Discussions
	forever without charge or production sharing. The tenant can even plant perennial crops or trees in the lands from the owner. ➢ However, the land ownership of the areas of which the use rights are given to communities still belongs to the land owners. Hence, the land owners own the right to harvest honey available in the areas that belong to them.

Table 10 Results of Group Discussions with Female Group on Shifting Cultivation at Suco Faturasa

Theme	Discussions
Current Situation of Shifting Cultivation	- Since the village regulations were implemented in 2008, the community members have not conducted shifting cultivation in their localities.
Advantages / Disadvantages of Shifting Cultivation	<u>Advantage of shifting cultivation compared to the fixed farming</u> - The shifting cultivation is more productive, especially in maize production. <u>Disadvantage of shifting cultivation compared to the fixed farming</u> - The soil fertility in the farms seems to be low. - The fertile soils were washed out easily by wind and rain. - The crop could get easily damaged by animals. - It is hard for the community to find the new place for shifting cultivation. - The practice on shifting cultivation may cause forest fires/deforestation which affects the water resources and other natural resources as well as causes landslide in the locality. - It is difficult for the community to protect the crops from damages by animals as the farms are far from their houses.
Intention to Continue Shifting Cultivation and Expand Areas for Fixed Farms	- The community members are willing (or are keen) to stop shifting cultivation and continue/introduce the fixed farming. - The reasons why they prefer fixed farming are that: 1) fix farming can use the land more efficiently than shifting cultivation can; and 2) they have already acquired some skills on fixed farming, such as terrace making and compost making.
Advantages / Disadvantages of Fixed Farming	<u>Advantage of the fixed farming</u> - The land ownership of the farm is clear as the location of the farm is close to the dwelling. - It causes less damage to forests unlike shifting cultivation. - The communities can maintain rather intensively their farms owing to the proximity to houses. - It is not hard to get to the farm with agricultural tools and seeds. <u>Disadvantage of the fixed farming</u> - It takes time to establish a fixed farm. - Land preparation for fixed farming, especially terrace making, requires a number of laborers.
Farming Practices done by Harosan	- Under the harosan system (a traditional labor exchange or work sharing system), a group of 8 to 10 persons, which are family members or neighbors in general, work together for each other. - The women participants are willing to continue harosan to reduce their burden of farming. - Normally each group has an agreement on the works to be done by harosan. - Harosan has been often applied to the farming activities from land preparation to harvesting for maize, cassava, contas, taro and coffee. - In Fakurao, a group of eight households has been producing vegetables, such as lettuce, mustard, tomato, eggplants, chili, and onion using the harosan system.
Areas used for Shifting Cultivation / Specific Location for Shifting Cultivation	- A farming practice derived from shifting cultivation (which may be called "the rotation farming system") is practiced in the remote area within their aldeia, which have been used for shifting cultivation from their ancestors. - The area with sparse vegetation is more suitable for such a farming practice due to the easiness of clearing the area.

Theme	Discussions
	- Once *Chromolaena* dominates in the area, another area is used for farming. - Before 2008, the villagers worried that the area for farming was getting scarce as the area of *Chromolaena expanded.* - Some villagers use the lands that belong to other families or neighbors for production of annual crops.
Number of Areas or Size per Household	- The average area used by one HH for shifting cultivation or rotation farming was around 0.25 ha. - The number of plots that one HH own ranges from 1 to 4 plots depending on available labor in the family.
Period for shifting Cultivation in the Same Area / Average Fallow Period from Abandonment to the Next Use	- One plot can be used for maize production for one to three years. If the plot does not seem to maintain good production in the 3rd year, the farmer would move to other place. - The production of maize can be usually maintained by the 2nd cropping year in the same plot. - Normally, the farmers used to come back to the same plot in 4-5 years after its abandonment.
Specific Sign indicating the Possibility of Reuse of the Area	- The following are the sings that farmers are based on for site selection: a) The amount of dried grass to be burned for land preparation; and b) Growing condition of the crops left in the abandoned area.
Difficulties in Shifting Cultivation	- Available land for shifting cultivation or rotation farming is limited. - Due to the remoteness of the farms, it is hard to carry heavy loads e.g., agricultural tools, seeds and water, to the farms as well as to maintain the crops intensively. - The seeds could be damaged during the hauling to the site. - The seed of sweet potato needs to be selected at the site. Therefore, the farmers need to carry whole potato to the site. Selection of seeds at the site is also time-consuming comparing to the same near the dwellings since the number of persons who could work at the site is limited.
Others	- The fire lines are usually set up around the farm to control the fire in shifting cultivation / rotation farming.

Table 11 Results of Group Discussions with Male and Female Groups on Present Land Use at Suco Faturasa

<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Discussions with Male Group on Use of land</td><td>
➢ There is no landless farmers/villagers in Suco. Every household has 4-5 sites for either shifting cultivation or permanent farm. The estimated holding size is about 5 ha/HH.
➢ However, the productivity of land (quality of land) is not good in general. Therefore, many households need to use lands that belong to large land owners for shifting cultivation.
(Generally, villagers use their own lands for shifting cultivation. But those who have few productive areas sometimes face difficulties in using their lands for farming since they need to take 3~5-year fallow period after shifting cultivation.
➢ Accordingly, the lands owned by 75 % of households in the village are not much productive. In the case of Remehei, only 17 HHs out of 65 HHs own the productive areas. Thirteen (13) HHs of 47 HHs in Kaitas and five (5) households in Fakalau (63 HHs) have productive lands.
➢ In general, the large land owners are "clans" who have owned the lands since its ancestor. The clans owns many productive lands or lands in good condition.
➢ The "tenant farmers" do not need to pay the owner for the rent in cash nor even in kind. But the tenant can not be allowed to plant trees or perennial crops in the land.
➢ Normally, the land in the village can not be sold even to members in the village. (OR The villagers have no practice in selling his/her land to other villagers.)
➢ The land is inherited to the male line. (or inherited patrilineally.)
But there is also a case where some parts of lands of the household are given to his sister/daughter, when she as no land or less land to cultivation.) In this case the couple would stay in the village where her brother or father lives.
➢ There is no government land or communal land in the village.
➢ All the lands in the village are clearly distributed to the households in the village.
</td></tr>
<tr><td>Discussions with Female Group on Use of land</td><td>
➢ Land for cultivation is abundant and available everywhere in Suco Faturasa.
➢ The average land holding size in the village is estimated at 2 ha/HH, though some of families own the land more than 2 ha.
➢ When a community member needs land for cultivation, he/she can ass the heads of "clan family" in each aldeia (The heads of clan families in each aldeia are tabulated below.). The clan families whose ancestors fought again the Portuguese government as leaders to protect their lands are traditional and large-scale landlords in the village. A tenant (a family who rants land for farming) is allowed only to grow annual crops, but not to plant perennial crops (trees and fruits) or to construct houses.
<table>
<tr><th>Aldeia</th><th>Head of clan families</th></tr>
<tr><td>Fakulau</td><td>Mr. Tomas</td></tr>
<tr><td>Remehei</td><td>Mr. Ramiro Filipe</td></tr>
<tr><td>Kaitasu</td><td>Mr. Moises</td></tr>
<tr><td>Berelisu</td><td>Mr. Agostino Beremau</td></tr>
</table>
</td></tr>
</table>

Table 12 Results of Group Discussions with Male Group on Shifting Cultivation at Suco Fadabloco

Topics	Participants Views and Discussions
Definition of Shifting Cultivation and Permanent farming	➢ The participants in the session thought that they did not practice "shifting cultivation" any more. They thought their farming system was "semi-permanent farming," since some crops, such as cassava and banana, were left growing in the fallow/abandoned plots although they shifted a farm for maize production periodically one farm to another. ➢ The fixed farms are located relatively close to the homesteads of the communities, while those for "semi-permanent farming" are far from their houses. ➢ The same crops, such as maize, cassava, sweet potato, taro, yam, soy bean and red bean, are planted in the fixed farm and semi-permanent farm.
Advantage and Disadvantage of Shifting Cultivation	➢ The soils in the shifting cultivation farms are fertile enough to produce maize for one to three years. The advantage of shifting cultivation is to maintain the soil fertility even without application of fertilizer. ➢ On the other hand, the disadvantages of shifting cultivation are that: 1) the location of the plots for shifting cultivation are far from the houses. It takes more or less two hours from the houses to farms; 2) land preparation under shifting cultivation, which consists of tree cutting, slashing of grasses, collection of trees and grasses cut/slashed, making of fire-lines, and burning, is time-consuming as well as laborious; and 3) a field fire for land preparation might affect the neighboring villages, if it is not properly controlled.
Farming System under the "Semi-Permanent Farming"	➢ On average, one household has one to seven plots for semi-permanent farming. ➢ For example, one of the male participants in the session has four plots for the same. He currently uses them for i) coffee plantation, ii) pineapple, iii) cassava, and iv) kontas, taro and banana. ➢ The average size of the plot is 0.5~1.0 ha/plot. ➢ The farms are located within more or less two hours walk from the houses in general. Some households put up a small temporary shed in the farms so that the family members can stay in the farms during busy times.
Problems under the "Semi-Permanent Farming"	➢ The major problems under the "semi-permanent farming" system are that: 1) the farm is located far from the house; 2) annual crops will not grow any more when tree crops, such as coffee and fruit trees, planted in the plot establish their canopies; 3) production of cassava requires at least two years; and 4) crops, such as cassava, corn, sweet potato, pineapple, taro, and orange, get often damaged by rodent.

Table 13 Results of Group Discussions with Female Group on Shifting Cultivation at Suco Fadabloco

Theme	Discussions
Definition of Shifting Cultivation	➢ The participants commented that the communities in Suco Fadabloco did not practice shifting cultivation any more. ➢ A household plants annual and biennial crops (maize, sweet potato, taro, cassava, banana, etc.) in a farm/plot in the first year. After harvesting of annual crops, the farm/plot is left fallow and used for production of biennial crops. The household is to produce the same crops in another plot in the following year and to reuse the first plot or fallow plot in several years (when finishing one round of rotation). ➢ On the other hand, the farms used for crop production every year are called the permanent farms. ➢ The permanent farms are located closed to the residential areas, while those for rotation farming are located rather far from houses.
Features of Shifting Cultivation	➢ Annual and biennial crops (e.g., maize, cassava, sweet potato, taro, yam, soy bean and red bean) are planted in the farms for the short-term rotation farming. <u>Advantage of Shifting Cultivation</u> ➢ The advantage of shifting cultivation is to enable the farm to recover the soil fertility in the fallow period, so that the production of annual crops in the farm is rather high in the first year, although the soil fertility usually declines in the second year. <u>Disadvantage of Shifting Cultivation</u> ➢ On the other hand, the following disadvantages of shifting cultivation were pointed out by the participants. 1) The farms for shifting cultivation are generally far from the residential areas. It takes more than two hours. 2) There is not enough lands available to be used as new areas for farming. 3) Land preparation, such as cutting trees, cleaning wild grasses, etc., are time-consuming and laborious. 4) It is hard for the communities, especially women, to carry / haul farm products from the farm to house.
Intention to Continue Shifting Cultivation	➢ The participants showed their intention to continue the short-term rotation farming and increase the number of plots for the same, so that they could maintain/improve their livelihoods and support their families. However, there seem to be no land available for expansion of their farms.
Others	➢ All the lands in Suco Fadabloco are owned privately. ➢ Availability of lands for farming is one of the factors that made the communities practice the short-term rotation farming.

Table 14 Results of Group Discussions with Male Group on Present Land Use at Suco Fadabloco

Theme	Discussions
Land holding status	➢ All the households in the village own enough lands for farming. ➢ There are some abandoned lands especially in Aldeia Rieu. The abandoned lands are privately owned by local communities but anyone, even people from the neighboring villages, can use them for animal grazing. ➢ One household owns one to seven farm plots on average.
Existence of Communal land and Government land	➢ There is no government land in the village. ➢ Each aldeia sets a certain area apart from private lands to produce crops for offering to church. Any household who needs a farm to produce upland crops (e.g., maize and cassava) can use a part of the communal land only for planting annual crops.
Existing rules on land use	➢ Any lands in the village can not be sold to anyone. ➢ As long as an owner of the land agrees on the use of his/her land, anyone, even a person from the outside, can use the land but for production of annual crops only. ➢ Traditionally, there is a need to consult with suco leaders when the land is rent to other households. ➢ There is no regulation on the use of the lands in the village.
Customary / Traditional rules	➢ Local communities traditionally kill animals when opening a new farm. ➢ In the Portuguese era, all households in the village used to kill animals before cropping with praying for a good harvest. They also used to kill animals before and after harvesting annual crops to give thanks to God for a harvest. ➢ The land is inherited along the male line. In case a household has only daughters but one of them keeps staying in the village, she will be able to inherit the land. In case there is no one who is eligible to inherit the land, the land will be inherited by any relatives.
Any disputes / conflicts among local communities	➢ There have been many cases of crop damages caused by animals. Such cases have been settled through a discussion between the related families. ➢ Crop damages caused by rodent and snake in the upland crop farms are often observed in the village. ➢ There has been no land dispute in the village.

Table 15 Results of Group Discussions with Female Group on Present Land Use at Suco Fadabloco

Topics	Participants Views and Discussions
Sufficiency of land among villagers	✓ The participants feel that there are sufficient lands for the communities to use for farming in the village. ✓ Accordingly, all the households have their own land.
Average land holding size	✓ The persons who own 5-7 ha are considered as large land owners, while those who have 0.5–1 ha can be categorized as small land owners. In general, the public servants or those engaging in some projects of NGOs can not cultivate a large-sized farm due to the time constraints.
Existence of communal lands/government lands	✓ There is no communal/government land in the village.
Any rules governing the land use in the village/possibility of renting private land which belong to other villagers for farming	✓ There is no written regulation in the village at present, but the following unwritten-cum-traditional rules/norms passed by word of mouth exist in the village. The communities in the village generally follow the rules. - If anyone, even a person from other village, needs to use a part of the areas in the village for production of annual crops, he/she can use a land with the permission of an owner of the land but only for planting annual crops. No benefit or production sharing is required. - If anyone in the village wants to build a house or permanent facility in a land owned by other household, he/she need to pay an owner of the land for the permission. - Anyone who takes farm products from a farm owned by other household shall obtain the permission from an owner of the farm. ✓ A person who rents the land for running a kiosk along the road pays US$ 30-50/month. (The maximum amount of the rental fee is US$ 100/month).
Possibility of outsiders' renting/using private lands	✓ At present, no one outside the village has rented/used any lands in the village.
Any issues in land use	✓ The land is traditionally inherited by male family members in a family. ✓ If a family has only daughters, the land would be inherited by its nephews. ✓ The communities can clearly define the boundaries of lands as there are recognizable land marks, such as flowers, trees, fences, stones, and crops (e.g., cassava), on the boundaries.

Table 16 Results of Group Discussions with Male and Female Groups on Shifting Cultivation at Suco Madabeno

<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Comparison between Shifting Cultivation and Permanent Farming</td><td>➢ Characteristics of shifting cultivation and permanent farming in the villages were discussed and compared as follows:
<table>
<tr><th>Items</th><th>Shifting Cultivation</th><th>Permanent Farming</th></tr>
<tr><td>Production</td><td>Good harvest of maize can be expected from the farm under shifting cultivation.</td><td>Harvest of maize in the permanent farm is expected low, but the farm can produce other upland crops, such as cassava and beans.</td></tr>
<tr><td>Farming practices</td><td>➢ Major farming practices under shifting cultivation are: i) slashing and cutting trees and grasses, ii) burning the stuff slashed in the area, iii) planting, iv) weeding, and v) harvesting.
➢ The farm tools used in farming are: i) pickle, ii) hoe, and iii) katana (manual grass cutter).
➢ Weeding in the farm under shifting cultivation is easier than that in the permanent farm.</td><td>➢ Major farming practices in a permanent farm are: i) slashing grasses, ii) cultivation, iii) planting, iv) weeding, and v) harvesting.
➢ The farm tools used in farming are: i) pickle, ii) hoe, iii) katana (manual grass cutter), and iv) iron stick.
➢ It is difficult to control weeds in the permanent farm.</td></tr>
<tr><td>Disadvantages</td><td>Shifting cultivation may cause: i) deforestation, ii) removal of big trees, iii) shortage of water, iv) landslide, v) forest fire, and vi) increase of crop damage by rodent.</td><td>Less production</td></tr>
<tr><td>Size per plot</td><td>0.5 ~ 1.0 ha/plot</td><td>0.2~0.4 ha/plot</td></tr>
<tr><td>Number of plot per household</td><td>2~several plots (depending on the availability of areas as well as family laborers)</td><td>1 plot per family</td></tr>
<tr><td>Farming system</td><td>➢ Use the same areas with a certain fallow period in a rotating manner.
➢ In case a household has enough lands and laborers, the family would plant shade trees and coffee seedlings in the farm before abandoning the area and clear forest for a new farm so that they could increase coffee produce while maintaining maize production.</td><td>➢ Use the same area without any fallow period.</td></tr>
<tr><td>Volume of seeds</td><td>24 kg of maize seed</td><td>2 kg of maize seeds</td></tr>
</table></td></tr>
<tr><td>Characteristics of Shifting Cultivation</td><td>➢ The area with black soils and many litters is selected for a newly opened farm.
➢ When the height of the weed covering the fallow area becomes more than 2 meter, the area can be used for farming.
➢ Shifting cultivation is done only in the private farm.
➢ Households that can not produce enough food crops often work in Dili as a casual laborer.</td></tr>
<tr><td>Intention to continue or expand shifting cultivation</td><td>➢ Local communities need to continue shifting cultivation, and if anything, like to expand the farm under shifting cultivation to produce sufficient volume of maize.
➢ Woods cut in shifting cultivation can also be used for materials for fencing and constructing houses.</td></tr>
</table>

Theme	Discussions
Problems in Shifting Cultivation	➢ There have been disputes over land in which households who operate shifting cultivation use the part of the area that belongs to other households. ➢ A household can not open or expand the farm under shifting cultivation due to the shortage of laborers in a family. ➢ The shortage of farm inputs, such as seeds and katana (a tool for cutting grasses), also causes difficulty in the expansion of the farm. ➢ The lack of knowledge on upland farming hinders local communities from increasing the production of upland crops, especially maize.

Table 17 Suco Results of Group Discussions with Male Group on Present Land Use at Suco Madabeno

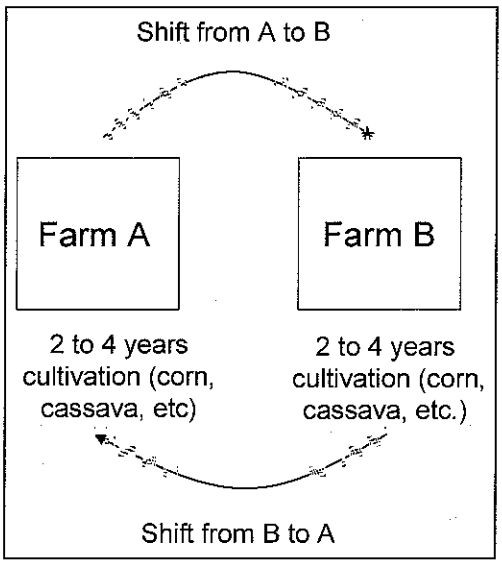
Theme	Discussions
Land holding status	➢ All the households in the village own enough farm lands for farming. ➢ There is no landless or tenant household in the village.
Existence of Communal land and Government land	➢ All the lands in the village belong to either households or kinship/clan groups in the village. ➢ The areas used for Uma Lisan and traditional activities are regarded as common lands for the respective kinship/clan groups. ➢ There has been no government land since the Portuguese era.
Existing rules on land use	➢ Tara bandu regulations of the village have been in effective since October 2010. ➢ The regulations were developed by the village leaders and local communities with the assistance from CALITAS Australia in March 2010. Having had 2-week discussions on the regulations, the village leaders finalized the regulations. The regulations were submitted to the Sub-district office for approval. ➢ The main purposes of the Tara bandu regulations are to encourage households in the village to respect another persons' property and protect plantations and farms from any damages. ➢ Accordingly, the Tara bandu regulations stipulates that i) no one can rent the land; ii) anyone from the outside can not use the land in the village; and iii) communities in the village can not use the land in the neighboring villages. ➢ The land shall be inherited through the male line. In case a family has only daughters and daughters get married with those from other villages, the land would be inherited by any male relatives.
Outlines of Tara Bandu Regulations	➢ The following acts are prohibited by the Tara bandu regulations. - Any activities causing forest fire - Illegal cutting - Any activities causing land dispute - Tree cutting around water sources - Tree cutting along the roads - Tree cutting without permission from the government and suco leaders - Killing animals without any reasons - Sale of firewood - Free animal grazing that would cause crop damage - Disregard of the Tara bandu regulations ➢ If anyone violated the regulations, the suco council would resolve the issue according to the regulations. ➢ The parties interested shall make effort to solve a case between the parties at first. In case the case can not be settled by themselves, it should be dealt with at suco level in accordance with the Tara bandu regulations. ➢ The Tara bandu regulations in the village were made in a written form so that communities in the village could be reminded of the regulations anytime. ➢ Chef de suco visits each aldeia to monitor the implementation of the Tara bandu regulations periodically. ➢ The suco leaders in the village have organized the monitoring meeting five times so far. PNTL and the staff from the sub-district administrative office participated in the meetings. ➢ The leaders and people in the village were inspired by the village regulations of Suco

Theme	Discussions
	Tohumeta to develop their own village regulations in writing.
Intention to Introduce a Future Land Use Plan and Protect Forests	➢ The participants showed their willingness to protect forests, especially lulic forests, in the village. In fact, many of them accepted the idea of the integration of a future land use plan which would specify forest land to be protected with the Tara bandu regulations. ➢ The participants even agreed with the idea to protect forests in the catchment of the Bemos river, especially the watershed from the water intake of the water supply system. ➢ They expressed their intention to cooperate with the JICA project.

Table 18 Results of Group Discussions with Female Group on Present Land Use at Suco Madabeno

Topics	Participants Views and Discussions
Status of Land Ownership in the Village	➢ All the lands in the village are owned by the communities privately. Most of the households own large area, but some of them have only small land insufficient to produce farm products to support their families. ➢ There is no government or communal land in the village.
Average Size of Land	➢ The participants determined the average size of lands for each land use as follows: 1) Land for house: 6m x 6m 2) Permanent farm: Same as the size of basket ball coat in school yard 3) Shifting cultivation (New farm): about 1 ha 4) Land for grazing animals: Same as the size of basket ball coat in school yard
Basic Rules on Land Use	➢ Tara Bandu was revived in 2010 in the village and has been effective since the Tara Bandu ceremony in October 2010. ➢ The village leaders often give the communities instructions to use the lands according to the Tara Bandu regulations since the ceremony. ➢ The Tara Bandu regulations stipulate that any animal causes feeding damage to crops can be killed by an owner of the damaged farm. The owner of the animal shall also compensate the owner of the farm for the crop damage. ➢ Any disputes over the boundaries of lands shall be settled by the mediation of Chef de Suco. ➢ The incidence of disputes/conflicts over the lands has drastically declined since the Tara Bandu ceremony. ➢ Households who have a shortage of food can use the lands owned by other households with permission of the land owner, but only for cropping annual crops, as perennial crops, such as, coconut and other tree crops, planted in the field shall be considered as the property of the land users. There is no payment or production sharing between the land owner and tenant/land user for the use of land on a temporary basis. ➢ Accordingly, it is possible to rent the land to outsiders (people from the outside) only for producing annual crops, although there has been little cases in fact. ➢ No one in the village has sold the land even to those living in the village so far. ➢ The land is inherited along the male line. If a household has two sons or more, the land will be split equally between sons. Daughters do not inherit the land in general as they get married into husbands' families. ➢ In case a household has no son and only a/ daughter/s, one daughter can inherit the land as long as she lives in the village with or without her husband. ➢ One household has six to seven children (sons or daughters) on average.
Major Issues on Land Use	➢ Major reasons for disputes observed in the village are related to: i) boundaries between two lands/farms; ii) use of other's land without the permission of the land owner; and iii) animal grazing in other's land without the permission of the land owner.

Table 19 Results of Group Discussions with Male and Female Groups on Shifting Cultivation at Suco Tlitu

<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Types of Crops planted under Shifting Cultivation and Permanent Farming</td><td>➢ Maize, cassava and beans are the major crops planted in the farms under shifting cultivation, and other crops, such as taro, Fehuk, bean (Fore, Fore Keli), red bean (Koto), and banana are also mixed with the major crops in the farm.
➢ On the other hand, maize, cassava, taro, fehuk, root crops, banana, aidili, and flowers are generally cropped in the farms under permanent farming.</td></tr>
<tr><td>Farming System under Shifting Cultivation</td><td>➢ The communities do not literally practice shifting cultivation, which is open forests for farming and move to another forested area for annual cropping.
➢ In general, the communities use a few or several plots for farming in a rotating manner. Under the current system, maize, cassava, beans, and other crops are simultaneously planted in the farm but only annual crops (e.g., maize and beans) are harvested in the first year. Biennial or perennial crops, such as cassava and banana are left in the farm for another one to three years.
➢ The following illustration shows an example of a household who has only two plots for shifting cultivation. In such a case, both areas are kept used for agricultural production even during the fallowing period, since the growing period of cassava is one to three years. (Technically, this practice shall be called “a short rotation system of maize, cassava and other upland crops.)
 
</td></tr>
<tr><td>Advantages and Disadvantages of Shifting Cultivation and Permanent Farming</td><td>➢ Advantages and disadvantages of shifting cultivation and permanent farming were assessed as tabulated below.
<table>
<tr><th>Factor</th><th>Shifting cultivation</th><th>Permanent cultivation</th></tr>
<tr><td>Labor requirement</td><td>Very High
(Land preparation requires a number of people, especially in cutting big trees)</td><td>Low
(only a few persons are needed for land preparation)</td></tr>
<tr><td>Material/tools needed</td><td>- Hoe (Baliu)
- Knife (Katana)
- Ax (Aisuak)
- Iron bar (Tuoik)</td><td>- Knife (Katana)
- Ensada
- Karaku oilku,
- Ai suak
- Iron bar</td></tr>
<tr><td>Types of crops planted</td><td>- Crops planted in the farm are limited as compared to those in the permanent farm since the farm is located far from their houses.</td><td>- Many crops can be planted in the farm owing to its proximity.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Theme</th><th colspan="3">Discussions</th></tr>
<tr><td></td><td colspan="3">
<table>
<tr><td>Advantages</td><td>- Soils in the farm are fertile enough to produce a high yield of crops.
- Ashes after burning trees and grasses fertilize the soils.
- It is easy to control weeds in the farm.</td><td>- The farm is located near from houses in general.
- Many types of crops can be planted.</td></tr>
<tr><td>Disadvantages</td><td>- Shifting cultivation may cause water shortage, landslide, and surface soil erosion.
- Land preparation is very laborious and time-consuming.
- It is difficult to control a field fire.
- Crops can be damaged by pests and rodents.</td><td>- It is difficult to control weeds in the farm.
- Soil fertility in the farm is rather low.
- The farm needs to be used every year.</td></tr>
<tr><td>Distance</td><td>- It takes one to four hours from the houses to get to the farms. (Hence, the communities build a small hut in the farm to stay in the farm to protect farm products from any damages.)</td><td>- The farm is close from the house.</td></tr>
</table>

➢ The average number of the plots owned by one household for shifting cultivation ranges from two to five.
➢ The average size of the farm is estimated based on the amount of maize seeds used in the farm as follows.
Large plot: 24 kg/plot (4 acre or1.6 ha), Small plot: 6 kg/plot (1 acre or 0.4 ha)</td></tr>
<tr><td>Willingness to Continue Shifting Cultivation</td><td colspan="3">➢ Most of the participants do not intend to continue shifting cultivation any more because: i) no virgin land/forest is available for shifting cultivation; ii) family laborers for shifting cultivation are limited; iii) they have coffee plantations/vegetable gardens which can generate cash income to support their livelihoods; and iv) some of them engage in salaried jobs.</td></tr>
</table>

Table 20 Results of Group Discussions with Male and Female Groups on Present Land Use at Suco Talitu

Theme	Discussions
Land Ownership and Tenancy Condition	➢ Most of the households in the village have their own land. ➢ Some of the households in the village rent farms from other households to grow staple crops, such as maize and cassava. However, they are not allowed to plant perennial crops and trees in the rented lands. In general, a tenant can use the same land from one to five years. The size of the rented land varies from a tenant to another tenant.
Present Land Use in the Village	➢ The lands in the village are currently used as i) permanent/fixed farms, ii) farms for shifting cultivation, iii) grazing fields, iv) Eucalyptus forests, and v) communal lands managed by suco.
Government Land and Communal Land	➢ There is no government land in the village. ➢ The lands in the village are currently used as i) permanent/fixed farms, ii) farms for shifting cultivation, iii) grazing fields, iv) Eucalyptus forests, and v) communal lands managed by suco. ➢ There is a communal land located at Fatulana in Aldeia Talitu. The area is covered with regenerating forests. The area was used to be used for a demonstration plot for the government project before, and the participants also proposed to use the area for the same in the new JICA project. ➢ The communal land should be used for the sake of the communities in the village.
Traditional Rules	➢ Tara Bandu is not effective in the village at present, but the village has traditional rules on the use of natural resources. Accordingly, the communities in the village observe the traditional rules/regulations. ➢ Land disputes over the boundaries between two lands sometime take pace in the village. The village leaders have intervened in disputes and settled the issues. ➢ Dispute of boundary between the two land owners sometimes take place in the farmland, in which Suco leaders often intervene to settle the issues through dialogues.

Table 21 Results of Group Discussions with Male Group on Major Natural Resources for Livelihood Improvement at Suco Faturasa

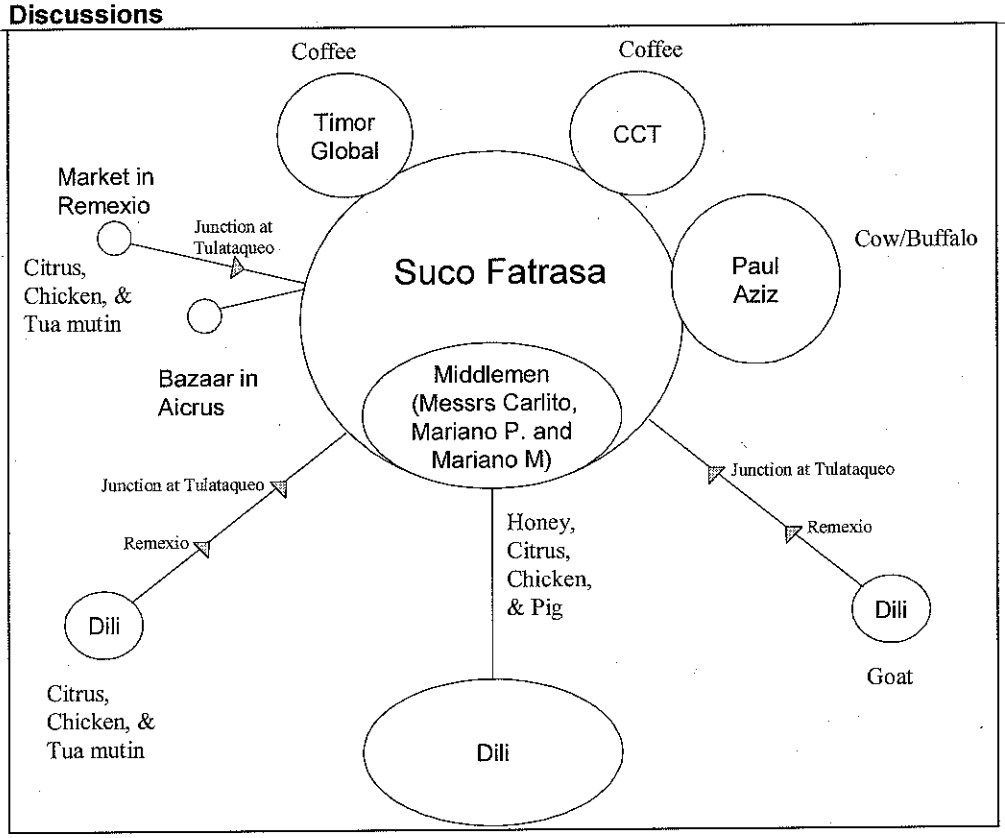
<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Resources in locality</td><td>Please refer to the attached table.</td></tr>
<tr><td>List of major resources/ agricultural products important for livelihood development</td><td>➢ Important resources and products for their livelihoods are listed below.
- Maize, Cassava, Sweet potato, Peanut, Tubers (Kontas and Talas), Beans, Pigeon peas (Tunis), Soybeans, Pumpkin, Banana, Upland rice, Vegetables (eggplant, tomato, Brea), Markiza, White pumpkin, Squash, Chili, Wild tubers (Kumbili, Maek, Kuan)
- Fruits (jackfruit, ,mango, pineapple), Citrus (orange and lemon), Coconut
- Turmeric (Kinur), Ginger, Honey, Ai clila duku, Tamarindo, Ai dark, Bamboo shoot, Tua mutin, Wild pig, Dear (Rusa), Forest fruit (Uhak), Squirrel (Laku), Monkey, Meda, Snake, Coffee, River prawn, Eel (?), Wild chicken, Pigeon (Pobu), Eagle.
- Cattle/Cow, Buffalo, Goat, Pig, Dog, Chicken (including egg), Horse
(Those in bold letters were considered important.)
➢ The five most important resources/products are:
- Coffee, Chicken, Citrus, Cattle&Buffalo, Pig</td></tr>
<tr><td>Pair-wise ranking among the important resources/ agricultural products</td><td>➢ Important resources and products for their livelihoods are listed below.
<table>
<tr><th></th><th>Coffee</th><th>Chicken</th><th>Citrus</th><th>Cattle/Buff</th><th>Pig</th></tr>
<tr><td>Coffee</td><td></td><td>Coffee <1</td><td>Coffee <2</td><td>Coffee <3</td><td>Coffee <4</td></tr>
<tr><td>Chicken</td><td></td><td></td><td>Chicken <5</td><td>Cattle/Buff <6</td><td>Pig <7</td></tr>
<tr><td>Citrus</td><td></td><td></td><td></td><td>Cattle/Buff <8</td><td>Pig <9</td></tr>
<tr><td>Cattle/Buff</td><td></td><td></td><td></td><td></td><td>Cattle/Buff <10</td></tr>
<tr><td>Pig</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
➢ The reasons for selection are as follows:
<1: The price of coffee is higher than that of chicken. Hence, coffee can improve economic conditions of households.
Drinking coffee inspires them.
<2: The price of coffee is higher than that of chicken. Hence, coffee can improve economic conditions of households.
Coffee can be sold at the village.
Citrus must be brought to Dili for sale. Furthermore, citrus often get damaged during transportation to Dili.
<3: Coffee is the primary means to earn money for buying daily necessities.
<4: Coffee has more important value.
<5: Chicken can be sold anytime and its price is also good.
Citrus can be harvested only once a year.
<6: Chicken is in high market demand.
But cow/buffalo is also considered important, because:
- High marketing price; and
- Necessity of traditional ceremony.
<7: Pig has high economic value.
Pig can be used for a traditional ceremony.
<8: The price of cow/buffalo is high.
Cow/Buffalo is used for a cultural ceremony.
<9: Same as above.
<10: Same as above.</td></tr>
<tr><td>Current</td><td>➢ Major agricultural commodities are currently marketed in the following manners.</td></tr>
</table>

Results of RRA Survey at Suco Faturasa

Group Discussions with Male Group on Major Natural Resources for Livelihood Improvement

Theme	Discussions

practices in marketing major commodities



Commodities	Main Buyers (Marketing Outlets)	Place of sale
Coffee	CCT (2006) and Timor Global (2007) <1	4 aldeias of suco
Honey	Middlemen (Messrs Carlito and Mariano) in the village. <2	- ditto -
Citrus	The majority are sold to the middlemen (Messrs Carlito and Mariano) in the village. The rest are sold at the bazaar/market in Aicrus and Remexio.	4 aldeias of suco Aicrus and/or Remexio
Tua Mutin	Sold at the markets in Dili and Remexio, bazaar in Aicrus, and to members of the village.	Dili, Remexio Aicrus 4 aldeias of suco
Chicken	Middlemen (Messrs Carlito, Mariano P. and Mariano M) in the village.	4 aldeias of suco
Goat	Sold to communities living in Dili.<3	Dili
Cow/Buffalo	Butcher/Slaughterer (Mr. Paul Aziz) <4	Suco
Pig	Middlemen (Messrs Carlito, Mariano P. and Mariano M) in the village.	4 aldeias of suco

Note:

<1: There was no buyer coming to the village before 2004.

<2: They started buying honey from 2000. Honey was sold at Dili before 2000.

<3: The current price of goat is lower than that during the Indonesian era.

<4: Mr. Aziz sends one staff here to find cow and negotiate with owners when buying cow.

Problems/Issues in Marketing

- Existence of competitors (There are many products in the market when they sell their produce.) in marketing cassava, citrus, mango, pineapple, jackfruit, banana, etc.
- High transportation cost (Because of high transportation cost and low selling price, they do not gain any profit or lose by selling their products.)
- Poor accessibility (because of lack of transportation facilities and poor road condition)

Transportation cost

Start - End	Means <1	Cost	Remarks

Theme	Discussions

Faturasa-Tulataqueo	on foot	None	1 hr 20 min walking
Tulataqueo -Remexio	Public bus	US$ 0.5/person US$ 0.5/bag US$ 1.0/goat	There is no service during the rainy season. It takes 3 hrs on foot.
Remexio -Dili	Public bus	US$ 1.5/person US$ 1.0/bag US$ 2.0/goat	It takes 8 hrs on foot.

Note: The principal transportation means in the suco is a small public bus.

Table 22 Results of Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement at Suco Faturasa

<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Resources in locality</td><td>
➢ The women participants (four women) identified five principal resources important for their daily life, namely, i) Land; ii) Water; iii) Forest; iv) Grass; and v) Wood.

➢ The participants further identified the locations where those resources available in each aldeia (sub-village) as tabulated below.

<table>
<tr><th>Resources</th><th>Fakulau</th><th>Remehei</th><th>Kaitasu</th><th>Berelisu <1</th></tr>
<tr><td>Land</td><td>Over the area (?)</td><td>Over the area (?)</td><td>Over the area (?)</td><td>-</td></tr>
<tr><td>Water</td><td>Rihau, Raimertu, Airikua, Aieran, Titkoin, Maunkair, Semok, Manumata, Hunloko, Raitoho, Uhululi, Fatuvou, Remanaru, Fakulau</td><td>Australia Kedei, Maundelo, Kaea, Likenu, Erbuburlaran, Mulalan</td><td>Aitane, Umaki, Waimeran, Barino, Kudaluhan</td><td>-</td></tr>
<tr><td>Forest</td><td>Uhululi</td><td>Lemosuk, Ai metalau, Kaea, Banetar, Terlete, Hautle, Likenu, Taroke, Kamasik, Ailuan, Reliku, Aieran</td><td>Aitane</td><td>-</td></tr>
<tr><td>Grass</td><td>Uhululi, Remanaru, Fakulau</td><td>Ai metalau, Maunaru, Manulima, Oreda, Aikaslalan, Erbuburlaran, Taroke</td><td>Lausero</td><td>-</td></tr>
<tr><td>Wood</td><td>Remanaru</td><td>Maunaru, Hautle, Oreda, Aikaslalan</td><td>Aitane, Kudaluhan</td><td>-</td></tr>
</table>
Note: <1 There was no information about Aldeia Berelisu since no one participated in the discussion.

➢ Findings obtained through discussions made by the participants are highlighted as below.

Water: A number of sources of water (both natural spring and tapped water) are located in the food of the hills. Hence, families living around ridges of hills and mountains need to come down and climb up a steep hillside whenever they fetch water. Accordingly, women in a household fetch water for cooking and other domestic purposes trice a day. Bathing and washing clothes are done at the sources of water.

Forests: Firewood and other forest products (such as timber) are distributed mainly in Aldeia Remehei. There is no customary rule/regulation in the village to restrict the collection of firewood and forest products or to protect forest/woodland from overexploitation by firewood collection. Community members even those living in the other aldeias can collect firewood and forest products in Remehei. On average, one family collects firewood every day or every other day. Recently, the location of forest/woodland for firewood collection is being changed due to the decrease of available eucalyptus stands.

Grasses: Grassland is used for grazing livestock as well as collecting roofing materials. Free grazing is a common practice in raising animals. Owners of livestock check and count their animals only once a week. Like forest/woodland, grassland for grazing has declined and been insufficient for raising animals in the village, especially during the dry season.
</td></tr>
<tr><td>List of major resources/ agricultural products important for livelihood development</td><td>
➢ Important resources and products for their livelihoods are listed below.
- Maize, Cassava, Potatoes, Tubers (Talas, Kontas), Pigeon pea (Tunis), Red beans, Peanut, Pumpkin, Beans, and Ai same
- Water, Trees, and Land

➢ The five most important resources/products are:
- Water, Land, Trees, Maize, Cassava

➢ Use of the above-listed resources are summarized below.
</td></tr>
</table>

Results of RRA Survey at Suco Faturasa

Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement

Theme

Discussions

Resources	Usage of Resources
Water	Used for cooking, washing, showering, watering, drinking, and animal raising. Used as construction materials mixed with cement.
Land	Used for farming and as bases for houses and vegetation
Cassava	Eaten boiled, fried and roast Used for animal feed Used for making cassava chips and tapioca
Maize	Eaten as a staple diet Used for animal feed

Pair-wise ranking among the important resources/ agricultural products

Important resources and products for their livelihoods are listed below. Results of Pair-wise ranking

	Water	Land	Trees	Maize	Cassava	Total	Rank
Water		Water <1	Water <1	Water <1	Water <1	4	1
Land			Land <2	Land <2	Land <2	3	2
Trees				Maize	Cassava <3	0	5
Maize					Cassava <3	1	4
Cassava						2	3

- The reasons behind the judgements are as follows:

<1: The villages selected "Water" as the most important resource considering that it can be used for multiple ways, such as drinking, cooking, and watering.

<2: They also judged "Land" the second important resources, since it is a base for forests and other vegetation, agricultural crops, and houses.

<3: The score of "Cassava" was higher than that of "Maize" because it can be stored for several years in the field.

<4: Although the participants gave "Trees" the lowest priority, they also mentioned that it is necessary for them to protect "Trees" because of its important functions.

Current practices in marketing major commodities

- Cassava and maize are used for only home consumption.
- The following products and resources were selected as those sold outside the village.

Resources	Main Buyers (Marketing Outlets)
Coffee	A Chinese living in Dili visits the village to buy coffee beans.
Honey	Honey is sold in Dili mainly to people living in Dili.
Peanut <1	Peanuts are packaged and sold at the school or market in Remexio.
Orange	Oranges are sold at the bazaar in Tulataqueo.
Chicken <2	Chicken is sold in Dili to people living in Dili.
Egg <2	Eggs are sold to Sunli Company (Chinese-Timor Company) at the village.
Vegetables	Vegetables are sold to the Halilaran market in Dili every week or every two week.

Note: <1 Peanuts are sold after being shelled, roasted, and packaged. The processing and marketing of peanut are women's work.

<2 Raising chickens and picking eggs are women's work, while raising relatively big animals, such as cattle, goats and pigs, are under men's responsibility.

- Coffee, peanut, orange and honey can bring community members cash income just once a year, while other products such as chicken, egg and vegetables can generate cash income several times.
- The following diagram shows marketing flows of the major agricultural commodities.

Results of RRA Survey at Suco Faturasa

Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement

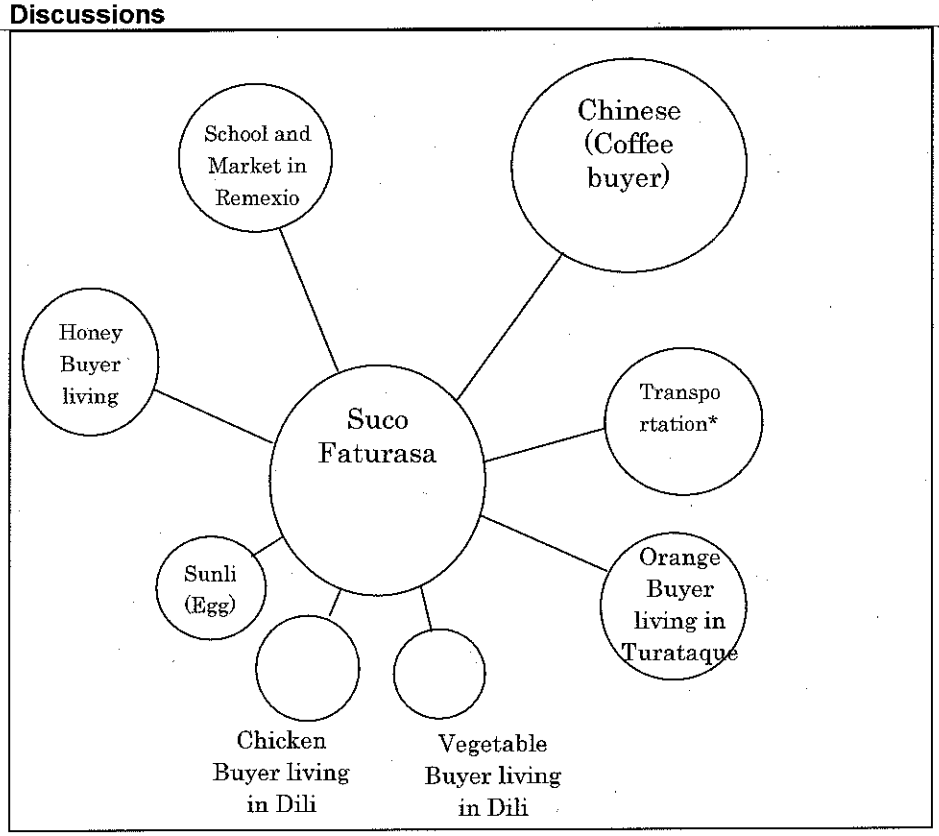
Theme	Discussions
	
Problems/Issues in Marketing	➢ Difficulty in transporting marketable commodities to the respective markets - Community members must walk for 5 km with products to take public transportation from Tulataqueo. - Due to poor road conditions, there is no vehicle to get to the village especially during the rainy season. ➢ Lack of marketing competitiveness of the products - It is difficult for them to sell their farm products (such as orange and vegetables) in the peak harvesting seasons, since there are many produce coming from other areas in the market.
Others	➢ There is no cooperative and other collective form for marketing farm products in the village.

Table 23 Results of Group Discussions with Male Group on Major Natural Resources for Livelihood Improvement at Suco Fadabloco

Theme: Important agricultural products and natural resources for villagers' livelihoods by male and female

➢ The male participants selected important products/resources in the village classifying the resources into six categories such as 1) fruit, 2) horticulture, 3) plantation, 4) animal, 5) wild animal and 6) forest production.

Categories	Resources
1) fruit	Maize, peluk, cassava, kontas and coto
2) horticulture	Modo, lis, sabraca, nunes and tomato
3) plantation	Coffee, kami, orange, papaya and mango
4) animal	Buffalo (karau metan), karau metan, horse, pig and goat
5) wild animal	Manu huik, monkey, meda, laku and rusa
6) forest production	Ai ru, Ai bubur, Kakeu, Au and Papulu

➢ The participants further selected the five most important resources in the village among those listed above. The resources selected are 1) coffee, 2) orange, 3) pineapple, 4) vegetables and 5) mango.

Pair-wise ranking among the important resources/ agricultural products

➢ The important resources and products for their livelihoods are evaluated by using the pair-wise ranking method as tabulated below.

	Coffee	Orange	Pineapple	Vegetable	Mango	Total	Rank
Coffee		Coffee<1	Coffee<1	Coffee<1	Coffee<1	4	1
Orange			Orange<3	Vegetable <2	Orange<3	2	3
Pineapple				Vegetable <2	Mango<3	0	5
Vegetable					Vegetable <2	3	2
Mango						1	4

➢ The reasons behind the judgments are as follows:

<1: "Coffee" is the first important resources since it can be sold at the better price than others.

<2: "Vegetables" are the second important resources, since they can be sold for a long period.

<3: "Orange" is more important than "Mango," since its price is higher than that of Mango.

Current practices in marketing major commodities

➢ The following products and resources were sold outside the village.

Resources	Main Buyers (Marketing Outlets)	Price sold	Amount of product sold
Coffee (Arabica)	- A Chinese middleman (Mr. Akeu) visits the village to purchase the coffee. (CCT and NCBA used to buy the coffee before.) - The villagers also go to Dili by public transportation to sell coffee parchment	- USD 0.25 /kg for cherry - USD 1/25 /kg for parchment	- Approximately 500 kg/season (50 kg x 10 times) are sold by one household in Dili.
Vegetable	Vegetables are brought and sold to the middleman in Hariraran Market in Dili.	- USD 0.50 /bundle	- About 50 – 100 bundles are sold by one household in the harvest season.
Orange	The products are brought to and sold in Dili by themselves.	- USD 1/bundle (USD 100-150 /harvest from 1 tree)	- About 50-100 bundles are sold by one household in the harvest season.
Mango	Same as orange	USD 1 /bundle	Same as orange
Pineapple	Same as orange	USD 1 /fruit	40 fruits/season

Theme	Discussions
	➢ The villagers use two ways to carry the products/commodities to Dili, namely: - One hour walking to Remexio and then taking the public transportation to Dili, which costs 1 USD/person - Two hour walking to Liquidoe and then taking the public transportation to Dili, which costs 2.5 USD for person with additional charges for the products ➢ The following diagram shows the marketing flows of the major commodities.
Others	➢ There is no cooperative or other collective form for marketing the products in the village.

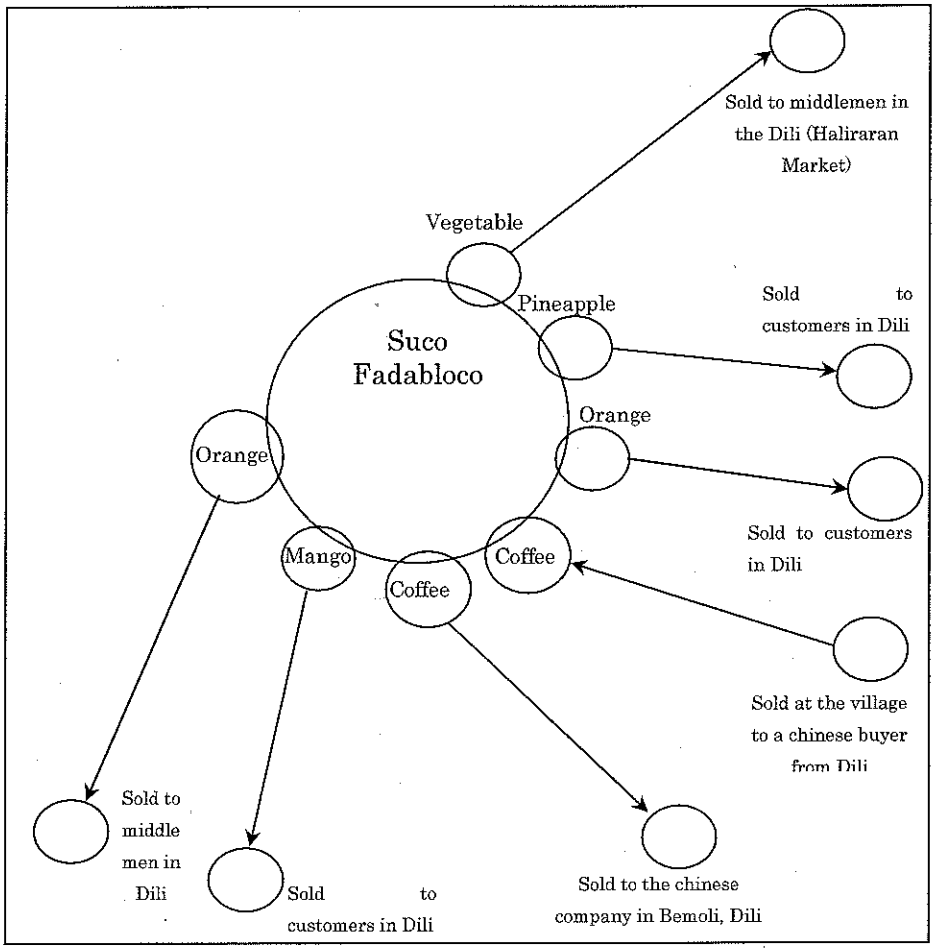


Table 24 Results of Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement at Suco Fadabloco

Theme	Discussions
List of important agricultural products and natural resources for villagers' livelihoods by female	Agricultural products ➢ Agricultural products important for their livelihoods are listed below. - Maize, Cassava, Sweet potato, Potato, Taro(*Talas*), Edible canna (*Kontas*), Red beans, Long beans, Pumpkin (*Lakeru*), Chayote (*Lakeru mutin*), Kidney beans, Soy beans, Peanuts, Salt beans, Mustard leaf, Lettuce, Cabbage, Chinese cale, Kankun, Watercress, Slender amaranth Carrot, Tomato, Cucumber, Eggplant, Shallot, Onion, Garlic, Loofah, Chili - Jackfruits (vegetable, fruits, for roast), Sour sop, Tangerine orange, Pineapple, Calamondin, Kaffir lime, Pomelo (*Jambua*), Banana, Papaya, Mango, Guava, Avocado, Java apple (*Jumbu air*), Pomegranate, Apple, Loquat, Plum, *Kaiju*, Passion fruit, Coconut, - Coffee, *Tua* : Fermented sap of various palms , Betel nut ➢ Livestock animals important for their livelihood are listed below. - Chicken, Duck, Pig, Dog, Goat, Cat, Buffalo, Cow, Horse Natural Resources ➢ Forestry products important for their livelihood are listed below. - White gum(*Ai bubur*), Casuarina (*Ai kakeu*), Timor mountain gum (*Ai ru*), Source tree (*Ai samtuk*), Toon (*Ai saria*), Tamarind (*Sukaer*), Sandlewood(*Kameli*), Narra(*Ai na*), Goomar teak (*Teka mutin*), *Teka metan*, Steruculia **foetida** (*Ai nitas*), Kapok tree (*Ai lele*), Banyan (*Ai hali*), *Tua metan*, Maccasar oil tree (*Ai dak*), Golden bamboo (*Au oro*), Fine bamboo (*Fafulu*), Giant bamboo (*Au betun*), Rattan (*Rotan*), Devil tree or White cheesewood (*Ai hanek*) ➢ Non-timber products important for their livelihood are listed below. - Devil's tongue (*Maek*), Greater yam (*Kumbili*), Wild yam (*Kuan*), Long yam, Scarlet runner bean (*Koto moruk*), Yam beans, Arrow root (*Ai same*), Tua mutin, Wild papaya, Wild banana, Wild mango, Guava, - Honey, ➢ Wild animals important for their livelihood are listed below. - Wild chicken, Deer, Wild pig, Monkey, Raccoon, Opossum, Python, Fruit bat, Eel, River shrimp, *Toke* lizard, *Teki* lizard
The order of five most important natural resources and the reasons for order	➢ The five most important products in i) staple crops, ii) vegetables, iii) fruits, iv) forestry products, and v) livestock animals were selected as follows. Staple Crops 1. Maize, 2. Cassava, 3. Taro, 4. Sweet potato, 5. Edible canna Vegetables 1. Mustard, 2. Onions and garlic, 3. Lettuce, 4. Papaya, 5. Tomato Fruits 1. Oranges, 2. Coffee, 3. Pineapple, 4. Passion fruit, 5. Banana, 6. Mango Forestry products 1. *Au betan*, 2. *Ai ru*, 3. *Tua mutin*, 4. *Fafulu*, 5. *Ai sarina*, 6. *Ai kakeu*, 7. *Ai samtuk* Livestock animas Chicken, 2. Pig, 3. Goat, 4. Cow, 5. Horse ➢ In total 28 items were selected as the most important products for their livelihoods. ➢ Among the 28 items, the participants selected the following seven products for further evaluation. . 1. Coffee, 2. Oranges, 3. Pineapple, 4. Vegetables, 5. Chicken, 6. Tua mutin, 7. Pig, ➢ The reasons for order 1. Those products actually give benefits to villagers. 2. They eat maize everyday but maize can not be sold at the market. 3. Cassava can also not be sold in the market. 4. The products listed above were selected from the viewpoint of marketability.
Results of the pair-wise	The results of the pair-wise ranking of the selected important products are given below.

Results of PRA Survey at Suco Fadabloco

Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement

Theme

Discussions

ranking of agricultural products

	Coffee	Orange	P-apple	Veggies	Chicken	Tua	Pig	Total	Rank
Coffee		Orange<1	Coffee<2	Veggies<3	Chicken<4	Tua <5	Pig <6	1	5
Orange			P-apple< 7	Veggies<3	Chicken<4	Tua <5	Pig<6	1	5
P-apple				Veggies<3	Chicken<4	Tua <5	Pig<6	1	5
Veggies					Veggies<8	Tua <9	Veggies<8	5	2
Chicken						Tua <9	Chicken<10	4	3
Tua							Tua<9	6	1
Pig								3	4

- The results of the ranking revealed that tua was considered as the most priority product, followed by vegetables, chicken, and pig.
- The reasons behind the judgments are as follows:

<1: The production and price of orange are good. Coffee can harvest only once a year.
<2: Every household has coffee plantation. Coffee is marketable and its price is good.
<3: Vegetables can be harvested throughout a year, coffee can harvest only once a year.
<4: Chicken can be sold throughout a year, but coffee can harvest only once a year.
<5: Tua can be harvested throughout a year and its price is good.
<6: Pig can be sold throughout a year.
<7: The price of pineapple is better than that of orange.
<8 Vegetables can be sold at a good price and many buyers buy vegetables in the markets.
<9 Tua can be harvested every day.
<10 Chicken is smaller than pig and its breeding period is shorter than that for pig.

Major marketing outlets/buyers of the important products/resources

The following products and resources are sold outside the village.

Products	Main Buyers (Marketing Outlets)
Tua	Buyers come to houses to buy.
Vegetables	They are sold at the Fahisoi in Remexio, and the markets in Dili.
Chicken	ditto
Pig	Large pigs are sold at home and small ones are brought to the Fahisoi in Remexio and/or Dili for sale.

- Local communities use sacks, baskets/small sacks, and yokes to carry vegetables, chicken, and pig, respectively.
- Transportation cost is high. It costs $3.5 for one way and $7 for a round trip.
- The prices of products are almost the same with those at the Fahisoi and Remexio markets.

The following diagram shows the marketing flows of the major agricultural commodities.

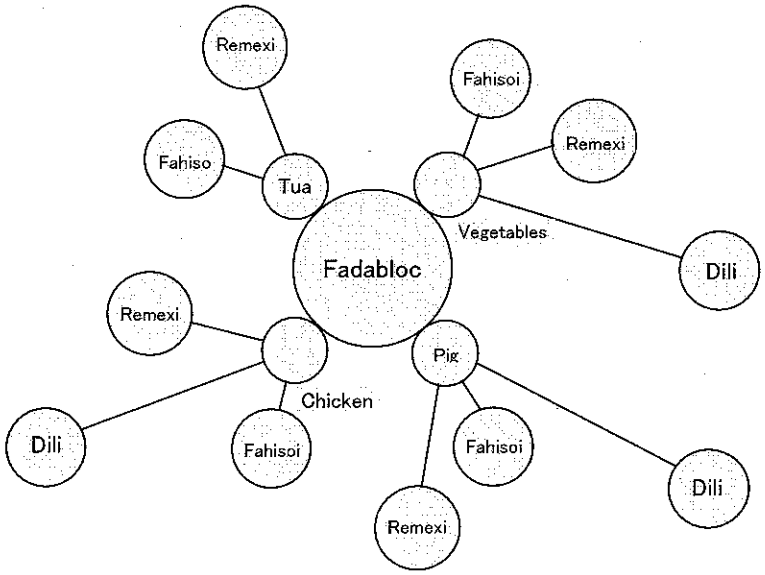


Table 26 Results of Group Discussions with Female Group on Major Natural Resources for Livelihood Improvement at Suco Madabeno

Theme: List of Important Agricultural Products and Natural Resources for the Livelihoods of the Village

Discussions

➢ Important agricultural resources for their livelihoods are as follows.
- Maize, Cassava, Sweet potato, Taro(Talas), Edible canna (Kontas), Yam beans (Singomas), Red beans, Pumpkin (Lakeru), Chayote (Lakeru mutin), Kidney beans, Mustard leaf, Letuce, Carrot, Tomato, Cucumber, Eggplant, Chili
- Jackfruits (vegetable, fruits, for roast), Sour sop, Tangerine orange, Mandarin orange, Calamondin, Kaffir lime, Pomelo (*Jambua*), Banana, Papaya, Java apple (*Jumbu air*), Coconut,
- Coffee, Betal leaf, *Tua* : Sugar palm , Candle nut

➢ Important natural products for their livelihoods are as follows.
- Devil's tongue (Maek), Greater yam (Kumbili), Wild yam (Kuan), Scarlet runner bean (Koto moruk), Red and white beans (Lehe), Arrow root (Ai same)

➢ The participants from Aldia Desmanehata and Aldia Remadati confirmed the existence of all the resources listed.

➢ The average yields of the major important agricultural products and resources are as fallows.

Resources	Yield	Resources	Yield
Maize	5-10 buckets/ year	Pomelo	4-5 buckets/ year
Cassava	2 buckets/ week	Banana	10 bunches/ year
Sweetpotato	1 buckets/ week	Papaya	1 buckets/ month
Taro	1 bucket/12 weeks	Java apple	Only few
Edible canna	1 bucket/ week	Coconut	Not so much
Yam beans	1 bucket/ week	Coffee cherry	10-20 sacks/ year
Pumpkin	50 fruits/ year	Betel leaf	120 bundles/ week
Chayote	3-10 buckets/ year	Tua	10×5l/ week
Mustard leaf	40-50 bundles/2 weeks	Candle nut	Not s much
Cucumber	2-3 buckets/ year	**NTFP**	
Jackfruit for vegetable	10 fruits/ year	Devil's tongue	30 buckets/ year
Jackfruit for fruit	20 fruits/ year	Greater yam	30 buckets/ year
Jackfruit for roast	5 buckets/ year	Wild yam	20 buckets/ year
Sour sop	0.5 bucket/ year	Scarlet runner bean	2 sacks/year
Tangerine orange	10 buckets/ year	Red and white bean	2 sacks/year
Kaffir lime	2-3 sacks/ year	Arrow root	30 buckets/year

Most Important Natural Resources for their Life

➢ The five most important resources/products are: i) Land (soil), ii) Water, iii) Forest, and iv) Grasses.

➢ The reasons behind the order of the resources are:
1. The land produces agricultural products and natural resources which they eat, use for animal feeds, and sell for cash income.
2. Water can be used for drinking and domestic purposes. It is also used for watering crops and animals.
3. Forests provide firewood, shade for coffee, and sources of wild products.
4. Grasses are used for cattle feed.

Most Important Agricultural Products

➢ The participants selected the following five agricultural products as the most important agricultural products.
- Maize, Cassava, Sweet potato, Coffee, Vegetables

➢ The important agricultural products were further ranked by using the pair-wise ranking method as shown below.

	Maize	Cassava	Sw potato	Coffee	Vegetables	Total	Rank
Maize		Maize <1	Maize <1	Maize<1	Maize <1	4	1
Cassava			Cassava<2	Cassava <2	Cassava <2	3	2

Sw potato				Sw potato<3	Sw potato <3	2	3
Coffee					Coffee <4	1	4
Vegetables						0	5

- The reasons behind the judgments are as follows:

<1: Maize is the most important staple crop and can not be replaced with other crops, such as cassava.

<2: Cassava is consumed every day.

<3: Sweet potato can also be used as a staple crop.

<4: Coffee is the major cash crop to earn cash income.

Major Market Outlets/Buyers of the Important Products

- Maize is used only for home consumption.
- The following products and resources are sold outside the village.

Products	Main Buyers (Marketing Outlets)
Coffee	Coffee (cherries or beans) is sold to Timorese middlemen who visit the village. The middlemen come to the village twice or trice a month and purchase one to three sacks of coffee. The purchase prices of cherry and parchment are US$ 0.3/kg and US$ 1.5/kg, respectively.
Sweet potato, cassava, vegetables, taro, sayote, cucumber,	They are sold at the roadside stand or at the Halilaran and Taibesi markets in Dili.
Betal leaf, tua	They are sold in the Aileu market.

- If they cannot sell the products at a high price or sell out all products, the remnants will be used for home consumption.
- Transportation cost (Mini truck) is rather expensive. (Madabeno – Dili: US$ 1.5/person/way and US$ 0.5/sack/way and Madabeno – Aileu: US$ 1.5/person/way and US$ 0.5/sack/way)
- Aldeia Ismori has one truck.

  As the communities in the village produces the same products at the same time, they can not sell the products at a high price.

- The following diagram shows the marketing flows of the major commodities.

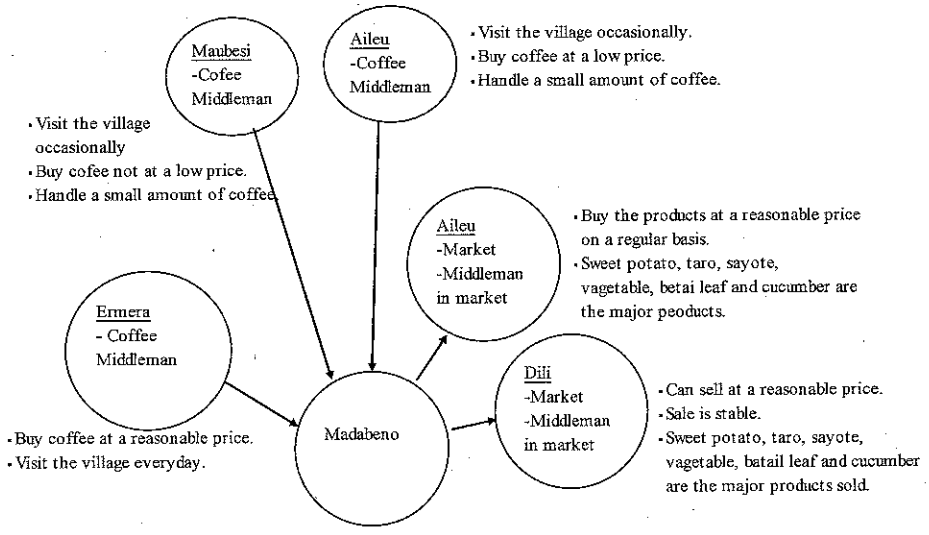


Table 27 Results of Group Discussions with Male and Female Groups on Major Natural Resources for Livelihood Improvement at Suco Talitu

List of major agricultural and forest products important for livelihood development

➢ The participants identified the following 12 agriculture and forest products as important resources for their livelihoods.

Products	Area	Harvesting season	Frequency	Harvesting volume
Coffee	4 Aldeias	Jun. –Jul.	30 times/yr	10-100 sacks/HH(Cherry) 4-80 sacks/HH (parchment)
Clove	Talitu and Quelae	Aug.-Sep.	60 times/yr	4-70 sacks/HH
Pepper	4 Aldeias	Nov.-Jan.	30 times/yr	1.5-6 sacks/HH (white)
Vegetables	Talitu, Fatukuhun, Casa Manatutu	All the year	12 times/yr Once a month	10-100 stick/HH (100-200 bundles/stick)
Pineapple	Talitu, Fakutuhun, Quelae	Aug.-Feb.	Everyday during the harvesting season	100-1,000 pcs/HH
Banana	4 Aldeias	All the year	5-10 times/yr	5-10 bundles/HH
Tua mutin	4 Aldeias	All the year	Twice a day (Everyday)	1,000-2,500 lit/HH
Cassava	4 Aldeias	All the year	Once/Twice a week	10-20 sacks/HH
Sweet Potato	4 Aldeias	Jun.-Jul.	Once a week during the season	1-10 bascket/HH
Maize	4 Aldeias	Mar.-Apr.	1 time/yr	5-25 bundles/HH
Kabura (Wild vegetables)	4 Aldeias	All the year	Once a week	1-2 sticks/HH
Aimanas Aileten (Wild chili)	4 Aldeias	Oct.	1 time/yr	1-2 baskets/HH
Firewood <1	4 Aldeias	All the year	Every day	1,000-2,000 bundles/HH
Timber <2	Talitu, Fakutuhun, Quelae	All the year	1~10 days/yr (10 poles/day)	10-100 poles/HH

Remarks: <1 Old coffee trees, branches of Ai ru, and dead/fallen trees in Ai ru/Samutuku forests are used for firewood.
<1 Ai ru trees are used for timber.

➢ Vanila was not considered as an important crop since its cultural practice was complicated and laborious. The participants intended to stop the production of vanilla.

List of major resources important for their life

➢ In addition to the agriculture and non-timber forest products, the participants also assessed how the natural resources were important for their life.

Natural resources	Use
Water	Drinking, Cooking, Washing, Watering vegetables and trees, and watering animals and fish ponds
Land	Farming, Housing, Cemetery, Paddy field, and Plantation
Forest	Animal grazing, Collection of fire wood, Construction of house, Collection of honey, Provision of water, and place of wildlife

➢ The village allocates part of forests in Aldeia Fakutuhun for animal grazing. People in Talitu, Quelae and Fakutuhun have used the same for free grazing. People in Casu Manatutu do not have many animals and therefore, they tether animals to a pole or tree.

➢ Natural resources have affected the living conditions of the communities in the village as shown below.

- There is no water supply or piping system in the village. Communities use bamboo to

conduce water from water sources.
- The volume of water in the water sources would be reduced in case of a long drought.
- Landslides have affected the farms and houses in the village.
- A strong wind sometimes causes damage to plantations and houses.
- A long drought makes trees shed their leaves.
- The volume of water at the water sources has been affected by tree cutting.
- The forest fires have reduced the habitats of wild life.

Five Most Important Resources to the Livelihoods of communities

➢ The participants evaluated the identified agricultural products and natural resources relevant to their livelihoods and selected the five most important products/resources as listed below.
- Coffee
- Clove
- Maize
- Cassava
- Vegetables

➢ Pepper was not selected as it was only available in Aldeia Talitu and it required the intensive maintenance.

➢ The participants further evaluated the five most important products using a pair-wise ranking method. The results of the assessment are shown below.

Products	Coffee	Clove	Maize	Cassava	Vegetables
Coffee		Coffee <1	Maize <2	Cassava <3	Coffee <4
Clove			Maize <5	Cassava <6	Vegetables <7
Maize				Cassava <8	Maize <9
Cassava					Cassava <10
Vegetables					

➢ The reasons behind the evaluations in each comparison are as follows.

<1 Coffee is planted in all the aldeias. It is the main source of income for almost all the families. Clove can be harvested only once a year.

<2 Maize is more important than Coffee, as it is one of the main staple crops for local communities.

<3 Cassava is also one of the main staple crops. Communities can harvest cassava and its leaves throughout a year. Cassava leaves can be used for animal feed.

<4 Vegetables are mainly for home consumption, but some can be sold to support the family.

<5 Maize is a main staple crop and consume the produce throughout a year. Although clove can be sold at a high price, it takes long time for them to produce clove and Aldeia Fatukhun is not suitable for clove production.

<6 The reasons are the same as those written in <3

<7 Vegetables can be grown in a short period of time (for 1.5 months). They can be consumed and sold to earn income.

<8 Same as <3

<9 Maize can grow even under the condition of less water.

<10 Same as <3

Current practices in marketing major commodities

➢ The current marketing practices for the important agricultural products are summarized below.

Coffee

Items	Summary
Major buyers	CCT, Timor Global, Other middle men
Place of selling	Sold at each aldeia
Transportation	Communities bring coffee to the main road.
Volume sold	20-50 sacks/HH/yr in the form of Cherry and 5-60 sacks/HH/yr in the form of parchment
Remarks	There is no mechanical pulping machine in the village and the village lacks water for pulping and places for drying. Since communities use only manual pulping machines at present, they can not produce a big amount of parchment.

Clove

Items	Summary
Major buyers	CCT, Timor Global, Other middle men
Place of selling	At CCT or Timor Global (The products are brought to CCT or Timor Global.) At Village
Transportation	Communities use the public transportation to bring clove to CCT and Timor Global. CCT or Timor Global comes to the village to pick up the produce.
Volume sold	4-50 sack/HH/yr
Remarks	The price of clove would be high if the produce is sold at CCT or Timor Global, but the price would be low if CCT or Timor Global picks up the produce at the village.

Vegetables

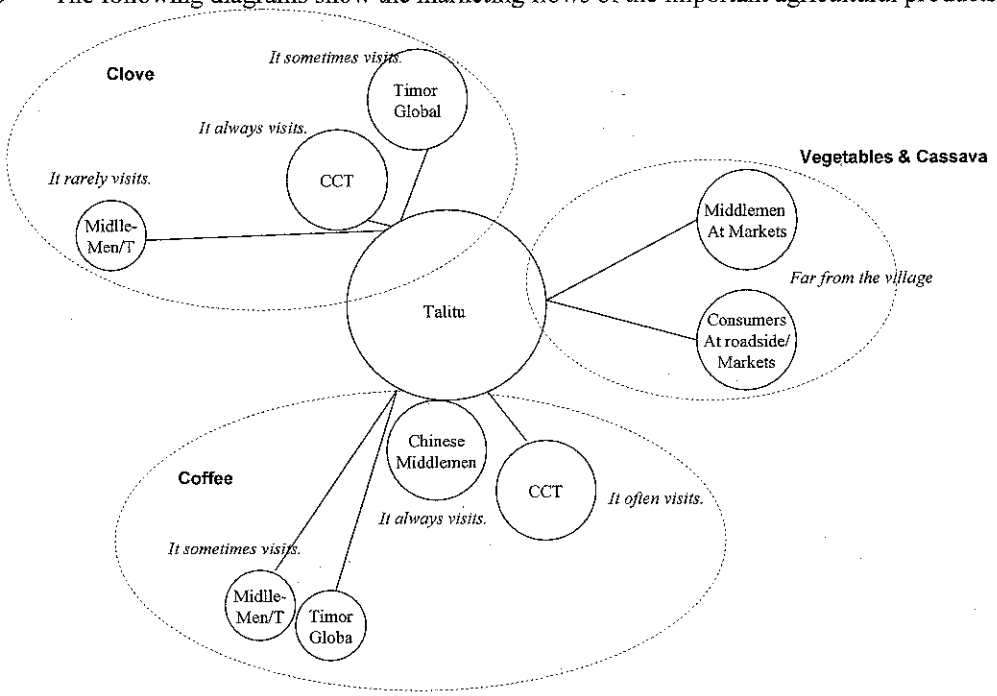
Items	Summary
Major buyers	Middlemen (at the markets), Consumers
Place of selling	Sold at the main road or brought to and sold at the markets in Dili (Becora, Tainbesi, and Halilaran)
Transportation	Communities bring vegetables to the main road or the markets on foot. They sometimes use the public transportation.
Volume sold	4 times/week (48 times/year) 480 sacks/yr (Max)
Remarks	People in Aldeia Fatukhun use the public transportation to carry the produce to Dili.

Cassava

Items	Summary
Major buyers	Middlemen (at the markets), Consumers
Place of selling	Sold at the markets in Dili (Becora, Tainbesi, and Halilaran)
Transportation	Communities bring cassava to the markets on foot. They sometimes use the public transportation.
Volume sold	10-20 bundles/HH/yr
Remarks	Cassava leaves can also be sold.

Marketing Flows

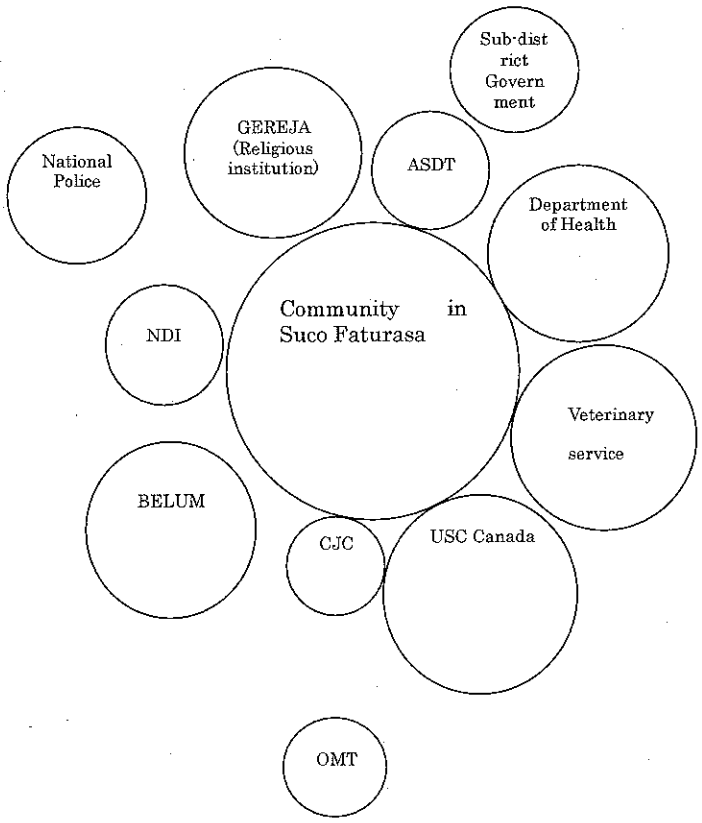
- The following diagrams show the marketing flows of the important agricultural products.



- CCT always comes to the village to buy coffee and clove and its buying prices are rather good. CCT uses its own transportation means to carry the produce.
- The prices of coffee in 2010 are US$ 0.25/kg in cherry and US$ 1.25/kg in parchment.
- The prices of clove at the farmgate in 2010 are US$ 5 /kg to CCT and US$ 4.5 /kg to Timor Global. The selling price of the same to the middlemen is lower.
- Middlemen buys vegetables/cassava in bulk (sack), while the volume of vegetables/casaba sold to consumers is small.
- In 2010, a sack of casaba is sold at US$ 5 /sack at the markets in Dili, while cassava leaves are sold to consumers in Dili/at roadside at US$ 0.25/3 bundles.

Table 28 Results of Venn Diagram of Existing Institutions working in Suco Faturasa

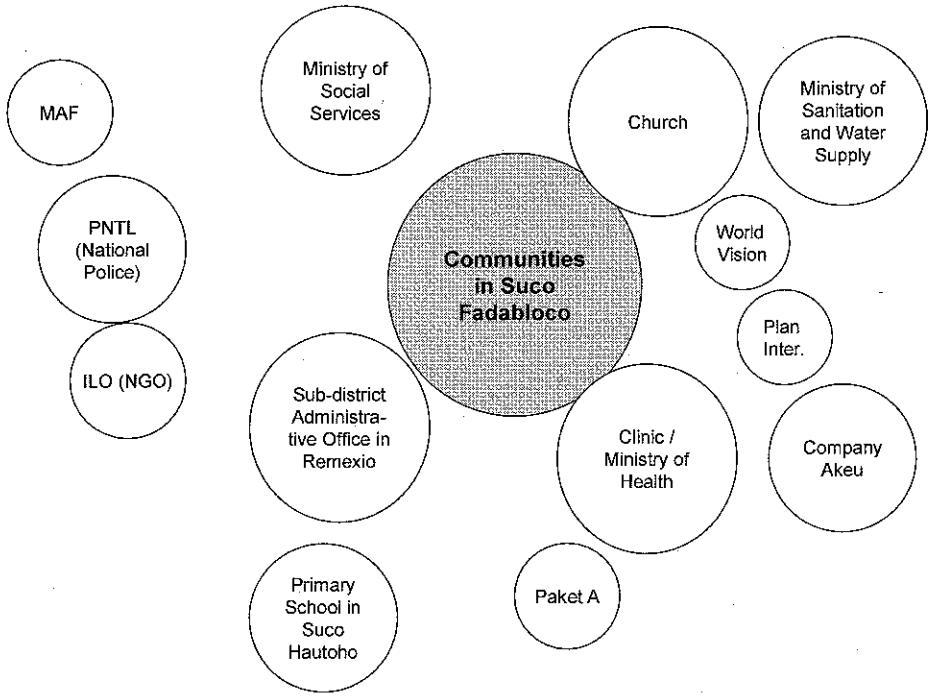
Theme	Discussions
Venn diagram	➢ A venn diagram showing the existing institutions/organizations in Suco Faturasa was drawn through a group discussion with the participants of RRA as shown below.



- ➢ "ASDT" is one of the political parties in East Timor to which some villagers in Suco Faturasa belong.
- ➢ "NDI" (National Development Institute supported by USAID) is an organization that has worked mainly for capacity development of local leaders of the village, while "BELUM" is an NGO that has been working for horticulture (vegetables/fruits) development.
- ➢ "CJC" (Youth organization) and "OMT" (Women's group) are the village organizations in Suco Faturasa.
- ➢ "GEREJA" means a group of the people who gather and pray together at the church.
- ➢ "Veterinary service" indicate a person who is a member of Suco Faturasa and was trained on veterinary services. He presently functions as a community veterinarian. Community members can receive veterinary services including vaccinations of MAFF through him.
- ➢ "Department of Health" is working at a clinic constructed by UNICEF in 2003.

Table 29 Results of Venn Diagram of Existing Institutions working in Suco Fadabloco

Theme	Discussions
Venn diagram	➢ The participants identified a total of 13 organizations/institutions relevant to their life /livelihoods and developed the following venn diagram considering the importance as well as proximity of the identified organizations/institutions from the village.



- ➢ Church often visits the village and encourages them to work for the future of the community and plant trees.
- ➢ Clinic is important for the health of the households in the village. Although there is no clinic in the village, they can request a clinic in Suco Hautoho to come to the village.
- ➢ The village leaders visit the sub-district administrative office in Remexio twice a month. If there is a problem in the village, the leaders ask the sub-district administrative office to solve such a problem.
- ➢ Ministry of Social Solidarity provides the pensions to aged persons and services to disable people in the village.
- ➢ Ministry of Sanitation and Water Supply provides water supply systems to the village, but its services and visit to the village are limited.
- ➢ "Akeu" is a Chinese trading company who has bought coffee beans from the communities in the village. Akeu has also supported the village by repairing the road to the village and providing rice to households who have a shortage of food.
- ➢ World Vision has been implementing a project and therefore visited the village twice a week. However, its project targets only the limited number of households (12 households per aldeia) in the village.
- ➢ ILO used to implement a road rehabilitation/construction project to improve a road to the village.
- ➢ PNTL is located bet far from the village, but it visits the village every week. It can also be called for in case any problems and/or criminal cases take place.
- ➢ There is no primary or secondary school in the village. Hence, children in the village go to primary school in Suco Hautoho and secondary school at the capital of Remexio Sub-district.

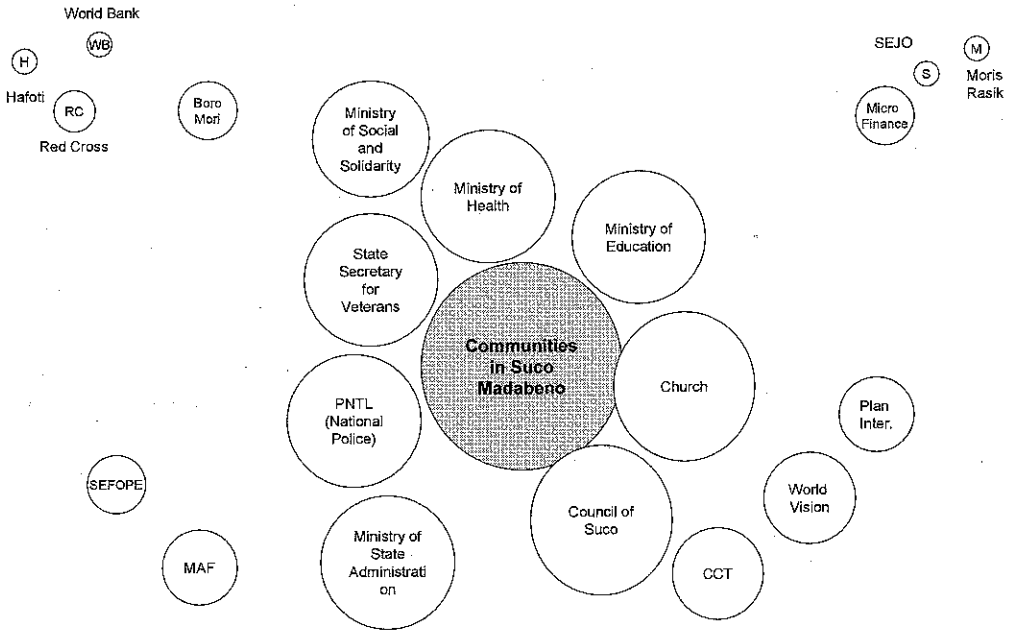
Results of PRA Survey at Suco Fadabloco

Venn Diagram of Existing Institutions

Theme	Discussions
	➢ MAF is important for improvement of agricultural production, but their visit to the village is limited. ➢ "Paket A" provides a literacy education to households in the village.

Table 30 Results of Venn Diagram of Existing Institutions working in Suco Madabeno

Theme	Discussions
Venn diagram	➢ The participants identified 21 organizations/institutions relevant to their life and developed the following venn diagram considering the importance as well as proximity of the identified organizations/institutions from the village.

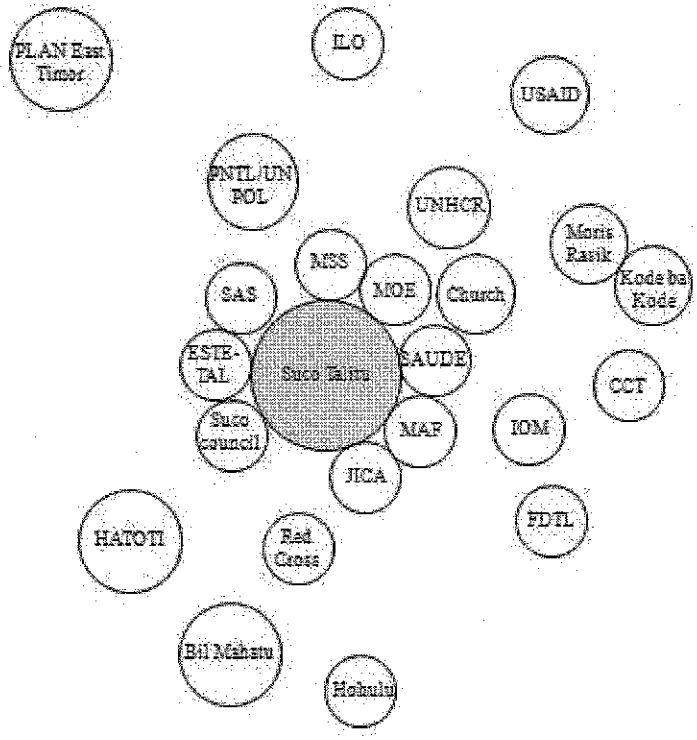


- ➢ Council of Suco is very close to the communities and the communities can get information of the council.
- ➢ Church is also very close to the communities and also important for their life, as it gives guidance to the communities. Besides, it also counts the population of the village, provides baptism certificates and other documents, and rehabilitates the school in the village.
- ➢ Ministry of Education pays salaries to teachers and provides materials and snacks to students.
- ➢ Ministry of Health constructed a health center and has implemented a program of SISCA, which is a health program for mother and children including the provision of food stuff (e.g., cooking oil and maize).
- ➢ State Secretary for Veterans provides the pension to war veterans in the village and allocate some budget to the village for organization of village ceremonies.
- ➢ PNTL looks after the security in the village. There would be internal fightings in the village without PNTL.
- ➢ Ministry of State Administration pays salaries to the members of suco council and provides budget support to the village for events and ceremonies in the village.
- ➢ Ministry of Social Solidarity gives the pensions to aged persons and scholarships to children in the village.
- ➢ CCT provides seedlings (coffee, casuarinas, and clove) to the communities and purchase coffee from them every year.
- ➢ World Vision assisted the communities in the establishment of vegetable nurseries in two (2) aldeias in 2005. It restarted the same activities with the provision of mustard seeds last year (2010).
- ➢ Plan International has worked in two (2) aldeias for establishment of nursery schools, rehabilitation of water systems, and establishment of a library from 2009.

Theme	Discussions
	➢ MAF provides seedlings of trees and animal vaccination services to the communities. ➢ State Secretary for Labor (SEFOPE) provides skill training and job opportunities by implementing a US$ 3 project in the village. However, it is not easy for the communities to attend the training courses, since the courses are organized at Dili. ➢ Micro Finance has worked in four (4) aldeias from 2005. It is a semi-government organization supported by ADB with the aim of providing a small scale credit to the communities. However, the main users of the scheme are the government staff who can recieve salary on a monthly basis. ➢ Boro Mori constructed toilets in all the aldeias in 2010, but only the limited number of households were able to receive the service. ➢ Red Cross disseminated the information of health and sanitation to the communities and installed water systems in one aldeia. ➢ Hafoti (Local NGO) have provided coffee pulping machines and corn shelling machines to the communities in two (2) aldeia between 2009 and 2010. However, there has been no follow up by Hafoti and the machines provided are presently out of order. ➢ State Secretary for Youth and Sports (SEJO) allocates a budget for a sport event to the youth group in the village. ➢ World Bank constructed water tanks in four (4) aldeias in 2000. There has been no activity by this organization since then. ➢ Moris Rasik is a local institution for micro credit that have been providing its services in all the aldeias since 2005. It is, however, not easy for the communities to use Moris Rasik since the application form to be filled up is complicated and collection of debts by Moris Rasik is strict.

Table 31 Results of Venn Diagram of Existing Institutions working in Suco Talitu

Topics	Participants Views and Discussions
Plenary discussion on existing institution on 02/03/2011	➢ The participants identified xxx organizations/institutions relevant to their life and developed the following venn diagram considering the importance as well as proximity of the identified organizations/institutions from the villages.



- Suco council is the village administrative organization and provide information to the communities.
- MSS (Ministry of Social Solidarity) provides the pensions for the elders, veterans, and disables.
- SAS (Department of Sanitation and Water Supply) provided water supply systems in three aldeias in the village, but the communities need more support.
- ESTATAL (Ministry of State Administration) supports the suco council as well as the communities in the village providing training courses and giving honorarium to the suco council.
- SAUDE (Ministry of Health) arranges for a mobile clinic services (SISICA) for mother and baby.
- MOE (Ministry of Education) built schools and has provided facilities to schools and salaries to teacher.
- MAF: Ministry of Agriculture and Fisheries supports the village through extensionists, but so far there has been no substantial activity.
- JICA can support the livelihood improvement and agricultural development in the village.
- Church has provides the health services and advice to the communities in the village.
- UNHCR provided foods and goods during the turmoil.
- FFDTL (Falentil Defense Force of TL) made an assessment of the village, but there has been no follow-up.
- PNTL/UNPOL can be called when any problems happen in the village.

Topics	Participants Views and Discussions
	➢ Red Cross installed a water tank in aldeia Casa Manatutu. ➢ IOM helped refuges come back to the village. ➢ HAHOTI is a national NGO that has introduced a micro credit scheme and provided training courses on food processing to the communities. ➢ Moris Rasik has run a micro credit scheme in four aldeias but the users of the scheme are limited. ➢ Bili Mahatu constructed schools and provided job opportunities to the communities in the construction. ➢ Kode ba Kode and Hohulu are the same with Bili Mahatu. ➢ CCT has brought coffee seedlings to the village, but up to the main road. However, CCT has not informed Chef de Suco of their activities. ➢ ILO has sometimes provided so-called US$3 project to the village. ➢ USAID gave chairs to the village and conducted skill training for the youth. ➢ Plan International constructed a water supply system in one aldeia.

Table 32 Results of Plenary Discussions on Customary Rules on Natural Resource Management in Suco Faturasa

<table>
<tr><th>Theme</th><th>Discussions</th></tr>
<tr><td>Existing Rules</td><td>
➢ There are three types of rules governing the activities of villagers, namely, i) Adat, ii) Local regulations of Suco, and iii) Government Regulations.
➢ Adat is the local tradition of Suco, such as customary practices in getting engaged/married and those in having family death. A group of Lianain, composed of Chef de Suco, Chef de Aldeias of four aldeais (sub-villages), Representative of church and Elders in suco, plays an important role in following such traditional practices.
➢ The local regulations of suco are rules resolved by the village council. Chef de suco is responsible for its implementation.
➢ The Decree on Community Authorities (No. 5/2004) is the government regulation that defines the roles and responsibilities of the local authorities in suco.
➢ The following are given by the participants as roles and responsibilities of the local authorities of Suco.
- Establish a base of the government of RDTL at suco level;
- Oversea and manage public infrastructure/facilities (road, school, clinic, and environment) in suco;
- Organize a general meeting among members of suco; and
- Resolve any issues/conflicts within in suco.
</td></tr>
<tr><td>Any existing cases in which those rules were implemented</td><td>
<table>
<tr><th>Cases</th><th>Mediator</th><th>Means</th></tr>
<tr><td>Crop damage by animals</td><td>Chef de Suco
Lianain</td><td>- Killed animals that caused damage to crops
- Compelled an owner of animals to pay money for damage</td></tr>
<tr><td>Coffee damage by animals due to forest fire</td><td>Chef de Suco
Lianain</td><td>- Compelled an owner of animals to pay money for damage
- Compelled an owner of animals to replant coffee</td></tr>
</table>
➢ There have been no case where the above rules were implemented for deforestation caused by forest fire.
</td></tr>
<tr><td>Any rules / regulations on natural resource management</td><td>
➢ There is no government regulation relating to natural resource management at present.
➢ There is a customary rule to control the harvest of honey, but there is no customary rule to control the exploitation of other resources.
➢ The capacity of the local authority of suco (suco council) is not sufficient to develop a regulation governing other resources.
➢ Tara Bandu was effective in protecting forests and other natural resources during the Portuguese era, but it was disregarded during the Indonesian occupation.
➢ Therefore, the government of Timor-Leste tries to revive Tara Bandu.
</td></tr>
<tr><td>Reasons for increase of forest fires in the Indonesian era</td><td>
➢ There were few forest fires during the Portuguese era, mainly because:
- The government enforced its law strictly;
- People were treated as slaves;
- There was a community police in each suco (a total of 15 policies in district) to monitor the day-to-day activities of suco; and
- Burning was not a common practice for grazing.
➢ Many forest fires had taken place during the Indonesian occupation, because:
- There were regulations to control fires, but the law enforcement of the government was not strict;
- The Indonesian army was the one who burned forests to fight against guerrollas;
- There was no community police in suco;
</td></tr>
</table>

Theme	Discussions
	- People did not make fire lines (clearing the edges of the field) when burning the fields; - Burning became a common practice for grazing; and - People were not fully aware of the negative impacts of forest fires. ➢ There are still many forest fires observed after the independence in 2002, because: - People practice shifting cultivation for farming; - There is no government regulation made by the government with new regulations governing natural resource management; and - Burning is one of means to prevent the expansion of the special weed (Chromolaena). - Chef de Suco tries to stop community members from burning the areas for shifting cultivation and grazing. But he can not change their practices.
Necessary interventions to protect forests	➢ Revival of Tara Bandu ➢ Formulation of local regulations to control the harvest of forest products. ➢ According to the representative of the suco (one of the members of Suco Council), they plan to revive Tara-Bandu i) to protect environment as well as forests, ii) to control domestic violence, iii) to reduce free grazing, and iv) to eradicate crimes (especially robbery/steal). ➢ In order to control free grazing, they are also planning to define the areas for grazing and segregate the grazing areas from those to be protected.
What is Tara Bandu all about?	➢ Outlines of Tara Bandu - It orients community members to protection of properties of suco and community members and control not only the use of natural resources but also criminal activities. - All community members must follow the rules defiend by Tara Bandu. - A person who violates the rules (A violator) is fined one head of cow for the penalty. - When the period of Tara Bandu ends, the council of suco (Lianain) calls all community members at one place and organizes a ceremony to announce the end of Tara Bandu. ➢ Process of Tara Bandu - The council of suco organizes a general meeting with the participation of community members to announce the implementation of Tara Bandu. - Participants in a general meeting discuss the subjects to be prohibited by Tara Bandu and fines to be imposed on a violator. - If someone breaks the rules, a violator shall be fined one head of cow. - If a violator does not submit (or kill) his/her animal, Chef de Suco will take legal stepts to punish the violator legally. ➢ Period of Tara Bandu - Effective period of Tara Bandu is basically the same with the assignment period of Chef de Suco. - However, the prohibition of harvesting/hunting is defined by hanging the subject of prohibition for a certain period. ➢ Monitoring - All community members are responsible for monitoring the day-to-day activities in suco.
Reasons for ineffectiveness of Tara Bandu	➢ The Indonesian Government prohibited community members from putting the symbol of prohibition, since the Government suspected it to be the sign to guerrillas to provide them foods/crops. ➢ The Indonesian Government also forced community members to say at once place and prohibited them from going to forests.
Result of implementation of village regulations	➢ The villagers have followed the village regulations since the regulations were in place in 2008.. ➢ The changes observed by the villagers are: 1) no forest fires has taken place; 2) crop damage caused by animals has declined and animals have been separated from farms; and, 3) no illegal cutting has been reported.

Theme	Discussions
Some improvement required for village regulations	➢ There have been some cases of crop damage caused by animals coming from other villages. For instance, some stray animals/cattle from Suco Turataqueo damaged the crops in Aldeia Berliso. According to USC-CTL, which has also supported Suco Turataqueo in the development of the village regulations, the area allocated for animal grazing in Suco Turatagueo is adjacent to Aldeia Berliso. USC-CTL will facilitate the discussion between sucos to settle the issue. ➢ The current regulations should specify who must bear the cost for the arbitration. (This was a controversial topic among the villagers in the session and it was agreed that this should be discussed in the sessions of participatory land use planning in Macy 2011.) ➢ The regulations should also specify the right to kill animals entering farms/damaging crops. For instance, if the same animal damaged crops in the farm more than 3 times, such an animal should be killed. It is better to specify the type of animals to be controlled under such a new article.
Difficulties in implementation of village regulations	➢ The participants requested to extend the existing fence by 1 km to fully protect their farms from animals in the grazing area.
Effectiveness of the future land use map	➢ The community has discussed how to control shifting cultivation in accordance with the future land use map, and the land owner in the village decided to allow the villagers who had no land ownership to use parts of his lands as permanent farms without charge. Consequently, all the villagers have several plots to use for permanent farming at present.

Table 33 Results of Plenary Discussions on Customary Rules on Natural Resource Management in Suco Fadabloco

Theme	Discussions
Existing Rules	<u>In the Portuguese era:</u> ➢ In the Portuguese era, Tara Bandu was effective in regulating the use of natural resources by local communities in the village. ➢ Tara Bandu prevented local people from cutting trees illegally and entering the someone's area without permission. ➢ Accordingly, people were not allowed to cut trees without permission from the owner of the trees/land. If someone cut trees illegally, s/he would be fined. ➢ Tara Bandu was not written, but the rules in Tara Bnadu had been inherited from their grand parents. ➢ Lianain was the one who solved/mediated the issue and determined the penalty/fine. <u>In the Indonesian era:</u> ➢ The rules implemented in the Portuguese era were not implemented in the Indonesian times. Many local people thought that they could cut trees and burn forests since the Indonesian army did the same. ➢ During the Indonesian times, the Indonesian government/army restricted local people's activities since there were guerrillas in the forest. <u>At present:</u> ➢ At present, many people have forgotten the rules of Tara Bandu. ➢ One of young participants stated that "We haven't seen or discussed the regulations yet, but the story of the Portuguese era told by the old folks in the session seems better than that of the Indonesian era, as the Indonesian army/government did whatever they liked without considering the traditional regulations." ➢ Chef de Suco and Chef de Aldeia have agreed to follow the regulations given by the Government, but local communities have not followed/observed the regulations.
Village Structure on Natural Resource Management	➢ In the Portuguese era, the head of lisans (kinship groups/clans) was responsible for natural resource management in the respective territories. ➢ In the Indonesian time, the chief of village (Kepala Desa) had the overall responsibility for natural resource management. ➢ At present, Chef de Suco with the support from Chefs de Aldeia takes the leading role in natural resource management.
Government or Communal Land	➢ There is no government land in the village. ➢ Each aldeia has a kind of communal land to produce the offerings to church.
Dispute over Natural Resources	➢ There is no dispute or conflict over the land as well as other natural resources in the village.
Intention to Introduce the Village Regulations	➢ Chef de Suco said in the session, "The Village should develop its own regulations to control the natural resources in the village, and we do not have to wait until the national government gives the regulations." ➢ Other participants also commented that: - The village regulations should be developed through a series of dialogues between/among the communities; and - The village regulations should be based on the ideas that come from the communities. ➢ The participants further discussed whether the village regulations should be developed at

Theme	Discussions
	suco level or aldeia level. The highlights of the discussions is summarized below: - The village regulations should be prepared by each aldeia since any problems should be first discussed at aldeia level. If the regulations were developed at aldeia level, many communities would be involved in the process of making the village regulations. - It should be difficult for the village leaders to settle an issue if each aldeia has the different regulations. - Many households in the village might not have interest in the discussions on the village regulations, even when the meetings are organized at aldeia level. It would be therefore more realistic and efficient to make the regulation at suco level. ➢ Finally, it was agreed that the village regulations should be developed at suco level.

Table 34 Results of Plenary Discussions on Customary Rules on Natural Resource Management in Suco Madabeno

Theme	Discussions
Customary Norms	In the Portuguese Era: ➢ There were two types of rules in the village, namely i) Tara Bandu regulations, which were the common rules in the village and ii) rules defied by each uma lisan (head of a kinship group/clan). The former mainly defined the rules over the use of natural resources in the village, while the latter governed the behavior of family members. ➢ Each uma lisan had the rules but the contents of the rules were more or less the same. ➢ Tara Bandu in the Portuguese era was very strong and everyone in the village observed its rules. Anyone who violated the rules must be punished/fined. It was also believed that animals owned by a person who did not follow the rules would be killed by the supernatural force. In the Indonesian Era: ➢ The effectiveness of Tara Bandu regulations became very week since the communities were not allowed to gather for a meeting and many uma lisans were destroyed/burned by the Indonesian army. ➢ The Indonesian army burned and cut the forests. ➢ The communities considered they could cut and burn trees, even sacred trees, and hunt wild animals for selling. They seemed to be able to do whatever they liked. ➢ Uma lisan did not function as most of them were burned. ➢ Any natural resources in the village were used and exploited by anyone. There was no one or no system to control and regulate the natural resources in the village. At present: ➢ After the independence in 2002, the communities realized that they needed to re-establish the traditional/customary rules. In 2004, they decided to ban the use of weapons/firearms. ➢ In 2010, the communities also re-developed Tara Bandu regulations in writing. The new regulations define not only the rules on natural resource management but also social norms in the village. ➢ The rules / banned activities defined the current Tara Bandu regulations include: i) do not burn forests, ii) do not cut trees, iii) do not practice slash and burning without consultation with local leaders, etc. ➢ At the same time, the regulations of uma lisan were also revived along with the rehabilitation (building) of uma lulic. ➢ The regulations of uma lisan can be considered as "house rules" of each kinship group. For instance, one of the regulations is to clarify who are the blood relatives to avoid the intermarriage.
Ceremony of Tara Bandu	➢ In the Tara Bandu ceremony, the following activities are carried out. - Kill animals; - Determine and announce the activities to be banned; and - Pray to God. ➢ The symbols of the banned activities are hanged up from a pole or tree which stands in the center of the village.
Traditions on Uma Lisan	➢ Some sacred things, such as sacred sword, sacred stone, sacred tools are stored in uma lisan. The communities that belong to the same uma lisan gather at uma lisan and pray to the sacred things. ➢ The traditional rules have been inherited from the ancestors. ➢ The rules of uma lisan define the people's behaviors. If someone violates the rules, the

Theme	Discussions
	person who violated the rules would be cursed.
Village Structure / Roles and Functions of Village Leaders on Natural Resource Management	➢ The tasks of the council of suco are to: i) prevent dispute/conflict over land and other natural resources, ii) protect natural resources from illegal exploitation, and iii) solve any issues and dispute/conflict in the village. ➢ When a dispute takes place in the village, the issue shall be handled by lianain in Aldeia. In case the issue can not be solved, the council of suco takes over it. (There has been no case handled by the council of suco sofar.) ➢ Disputes over the land, especially the boundaries of two lands, are the major issues that have taken place in the village. ➢ There are two types of lianain in the village, i) lianain appointed by Chef de Suco at each aldeia to solve any issues in Aldeia and ii) traditional adats (or elders) of each uma lisan, who solves family issues and pray to God for the family or kinship group.
Government Intervention on Natural Resource Management	➢ The communities in the village need to get permission from the Sub-district Administrative Office to cut trees for housing. ➢ The Sub-district Administrative Office issued a letter to instruct the communities to protect forests in the village. In fact, the Sub-district Administrative Officer participated in the Tara Bandu ceremony in 2010. ➢ Church also encourages the communities not to cut trees in the village in the mass. ➢ PNTL controls the cutting of trees and issues authorization to cut trees.
Government /Communal Land	➢ There is no government land in the village. ➢ All the areas in the village basically belong to households or kinship groups/clans.
Dispute / Conflict over Natural Resource Management	➢ Issues observed in the village are: i) land disputes mainly related to the boundaries of farm; ii) use of the water source between the people in Aisirimou and those in Madabeno; and iii) crop damage caused by animals. ➢ In general, the issues taking place in the village are solved at aldeia level. ➢ The issue on the use of water source between Aisirimou and Madabeno has not been solved yet. The water source is located in Suco Aisirimou and flows into Suco Madabeno. The people in Suco Aisirimou insists that those in Suco Madabeno are not allowed to use the water source.
Current Village Regulations in the Village	➢ The Tara Bandu regulations were developed in writing in October 2010. ➢ They are effective in regulating the activities of the communities, and therefore, the number of thief, illegal cutting, and crop damage by animals has declined. In addition, there has been no forest fire since the Tara Bandu ceremony. ➢ Accordingly, any animal that causes three-time feeding damages to crops can be killed by an owner of crops damaged. ➢ Crop damages by livestock animals shall be reported to the police. ➢ The village leaders have evaluated the effectiveness of the Tara Bandu regulations every three months.
Willingness to strengthen the Village Regulations and Future Land Use Plan	➢ The village leaders and other participants in the PRA session showed their willingness to enforce the Tara Bandu regulations. ➢ They accepted the idea to strengthen the village regulations and develop a future land use plan of the village.

Table 35 Results of Plenary Discussions on Customary Rules on Natural Resource Management in Suco Talitu

Theme	Discussions
Customary Norms	➢ Sacred places, such as sacred land (Rai lulic), sacred forest (Ai laran lulic), and sacred water source (Be matan lulic) have existed in the village since the Portuguese era. ➢ The following traditional ceremonies/practices have been held in the village since the Portuguese time. - Kuru Be Lulic: Fetch water at the sacred water source and soak maize seeds in the fetched water before planting maize. - Kuda batar: Kill a/ animal/s before planting maize. - Sau batar: Kill a/ animal/s before harvesting maize. - Hakiak animal Kill a/ animal/s when use the sacred forest for animal grazing. . ➢ No one has disturbed or used the sacred places without the traditional ceremonies, since communities have been taught about the stories of the lulic. ➢ If there is a dispute or case taking place in the village, the related families with Chef de Aldeia have a dialogue to solve the issue at the sacred place. ➢ Tara bandu in the Portuguese era was strong enough to regulate the activities of communities in the village. ➢ Tara bandu banned: i) activities causing forest fire, ii) illegal cutting, iii) steal of agricultural products from the farms, iv) harvesting prawns/shrimps in the river before the harvesting season, v) harvesting betal nut and tua before the harvesting season, and vi) harvesting maize before the ceremony of "Sau Batar." ➢ Although Tara bandu was effective during the Indonesian times, its effectiveness was not as strong as that of the Portuguese era. ➢ Accordingly, Tara bandu still exists in the village, but its effectiveness is still weak although it seems stronger than that of the Indonesian era.
Village Structure	➢ In the Portuguese era, the village was led by Liurai (Small King), followed by i) assistant of Liurai, ii) Chef Povoacao (Chief of Aldeia), iii) Capitan Major (Lianain), and iv) Cabaronda (Suco Police). Liurai managed and solved the issues in the village following the customary rules and Tara bandu. ➢ The village structure was replaced with the Indonesian village structure in the Indonesian era, which consisted of i) Kepala Desa (Chief of Village), ii) Secretary of Desa (Secretary of Village), ii) Rukun Tetanga (Chief of Aldeia), iii) Rukun Keluarga (Chief of hamlet), iv) LKMD (Representatives of village organizations), and v) LMD (Lianain). ➢ The current suco structure are: i) Chef de Suco, ii) Chef de Aldeia, iii) Representative of women, iv) Representative of the youth, and v) Conselho de suco (Lianain).
Government Intervention on Natural Resource Management	<u>In the Portuguese Era:</u> ➢ Any person who violated the rules of Tara Bandu was fined or forced to work for pulic/Liurai/Sub-district Administrator. ➢ A person who was not able to pay tax to the Government or work for Liurai/Sub-district Administrator was beaten with whip. ➢ No one touched the area claimed by the Sub-district Administrator. ➢ There were two rules in the Portuguese era, the customary rules in the village and those given by the Government. <u>In the Indonesian Era:</u> ➢ The Indonesian military burned forests to fight the guerrillas and used the area for whatever

Theme	Discussions
	they wanted. Since the Indonesian military disregarded the rules of Tara bandu, the effectiveness of Tara bandu became weak among local communities. ➢ Villagers were forced to move and gathered at certain places by the Indonesian government. They were not able to access to their own lands and and water sources that they used to use during the Portuguese era. ➢ The Indonesian government implemented an agroforestry program providing seedlings to local communities. In a sense, the government tried to increase the vegetation cover by introduction of agroforestry systems but at the same time destroyed the forest by burning the areas. At Present: ➢ The government set the signboard showing "do not cut/burn forest" to protect forest from deforestation. ➢ Although the village leaders have advised the communities to follow/observe the rules of Tara Bandu, many of them have not followed them. It seems that they still do whatever they like.
Government and Communal Land	➢ In the Portuguese era, many lands in the village were used by Liurai and the Sub-district Administrator. Communities in the village worked in their farms as laborers. There was an area used by church. ➢ In the Indonesian times, there had been no new demarcation of communal land. ➢ There is a communal land or the land that does not belong to anyone in Aldeia Fatukhun.
Dispute / Conflict over Natural Resource Management	➢ There is no dispute over natural resource management in the village. ➢ The government program used the communal land in Fatukhun and planted seedlings in there. The young people from Crist Rei as well as other young people in the village pulled out and/or damaged seedlings planted in there. Chef de Suco requested the sub-district administrator and police in Laulara to settle the issue. ➢ A water source located in Aldeia Fatukhun is used by communities from the neighboring villages (Suco Cotulau and Suco Aisirimau). Communities in Fatukhun gave up using such a water source and decided to use another source in Remexio. ➢ Crop damages caused by animals have been often observed.
Village Regulations in the Village	➢ The village has the rules on crop damage caused by animal in writing. They are a kind of judicial precedents decided by the suco leaders to solve the issues on crop damages in the village. ➢ An animal causing feeding damage to crops could be killed by the owner of the farm and the meat would be shared by the owner of the animal and that of the farm. ➢ In Aldeia Fatukhun, the occurrence of crop damage by animals has declined since the rules were in place. ➢ Nevertheless, there are still many households grazing their animals freely in the village.
Willingness to making the Village Regulations and Future Land Use Plan	➢ The village leaders and other participants in the PRA session showed their interest in making the village regulations and a future land use plan of the village. ➢ They accepted the idea to develop the village regulations and a future land use plan of the village simultaneously by themselves. ➢ They further suggested the involvement of lianain and elders in the process of making the village regulations.

Members of the Working Group for PLUP in Suco Fadabloco and Roles and Responsibilities of the Members

Name	Position	Responsibilities
Chef de Suco	Group Leader	➢ Organize with the members to participate in the discussion process ➢ Organize the meetings/discussion of the group ➢ Provide information to the members ➢ Coordinate with sub district administrator ➢ Coordination to organize the Tara-bandu ceremony ➢ Report the progress of implementation of village regulations to the sub-district administrator
Secretary of Village	Vice Group Leader	➢ Organize the meeting of the group when the group leader is absent or can not function as a leader. ➢ Take notes of discussions in the meeting. ➢ Draft the village regulation in writing with the members and submit to the group leader
Chef de Aldeia (4 persons)	Member	➢ Report any issues relevant to land use to the team leader ➢ Give ideas in the discussion processes ➢ Participate in Tara-bandu ceremony ➢ Monitor the implementation of village regulations ➢ Participate in the monitoring meeting to be conducted in aldeia and suco level ➢ Disseminate information to other community members and/or members of the relevant groups ➢ Participate in discussions at the meeting of the group.
Lianain	Members	
Representative of Women's group (2 persons)	Members	
Catekista	Members	
Youth leaders (2 persons)	Members	

Members of the Working Group for PLUP in Suco Maddabeno and Roles and Responsibilities of the Members

1. Members of the Working Group

Aldeia	Name	Position/Appointment
Manehalo	Francisco Rodrigues Joao de Oliveira Jose Mau da Silva Julio Amaral	Chef de Suco Chef de Aldeia Lianain at suco level Secretary of village
Lismori	Zeca Soares Armano Lourdes Pedro de Jesus	Chef de Aldeia Suco councilor Community member
Bilimhatu	Egas Gomes Manuel Soares Paulino Timlman Domingos Guterres	Chef de Aldeia Lianain in Aldiea Suco police Community member
Desmanehata	Alberto dos Santos Jose da Costa Duarte da Costa	Chef de Aldeia Lianain in Aldiea Suco police
Remapati	Alexandre Baptista Celestino da Silva Antonio A. Carvalho	Chef de Aldeia Lianain in Aldiea Community member
Manefoni	Alcino Carvalho Manuel Sarmento Manuel Barreto	Chef de Aldeia Suco councilor Lianain in Aldeia

2. Roles and Responsibilities of the Group Members

Position	Position in Group	Roles and Responsibilities
Chef de Suco	Group Leader	➢ Lead the work of the group ➢ Coordinate with Chef de Aldeia for the work ➢ Lead the meeting ➢ Make and implement a plan together with local communities ➢ Monitor the activities in each aldeia ➢ Remind the group members of the responsibilities of the members and the activities ➢ Provide information and briefing of the village to the visitors ➢ Pay attention to the members ➢ Coordination with NGO and government office ➢ Organization of tara bandu ceremony ➢ Overall responsibility for implementation of the village regulations ➢ Be responsible for settlement of any issues in the village in coordination with chef de aldeia. Lianain, and suco councilor.
Secretary of Village	Co-group leader	➢ Take notes in the meeting and share the memos with the group members ➢ Act as a chief when the chief can not function. ➢ Provide information to the members. ➢ File documents ➢ Act as a moderator in the meeting ➢ Assist the chief in the fulfillment of his tasks and responsibilities ➢ Coordinate with other members for meetings
Secretary of Village	Member	➢ Receive information for the chief of the group and disseminate it to local communities in the respective aldiea ➢ Lead the meeting at aldiea level ➢ Make report to chief of the group ➢ Provide information of the respective aldeias to the chief of the

Position	Position in Group	Roles and Responsibilities
		group ➢ Responsibility for implementation of the village regulations in the repective aldeias ➢ Be responsible for settlement of any issues in the respective aldeias in coordination with Lianain, and suco councilor.
Lianain (Aldeia level and Suco level)	Member	➢ Solve the problems in the communities at both levels ➢ In case the issue can not be solved at aldeia level, the issue should be raised to suco. Lianain at suco level handle such an issue. In case the issue can not be solved even at suco level, the issue should be brought to the Sub-district Administrative Office. ➢ Assist the chief of the group and chef de aldeia in the dissemination of the information ➢ Share his knowledge and experience in reviewing the village regulations. ➢ Provide advice and input to the Working Group in
Suco councilor	Member	➢ Make a plan for the village together with Chef de Suco and resolve the issues raised to suco together with Lia Nain at Suco level. ➢ Provide advice in the implementation of the village regulations
Suco Police	Member	➢ Look after the community's plantations ➢ Raise communities' awareness of the village regulations ➢ Report any violated cases to chef de aldeia and chef de suco
Community	Member	➢ Participate in the meetings ➢ To be involved in any kind of activities

General Rules of the members

- Actively participate in the meetings and discussions
- Be time-punctual (Respect the time agreed upon by the members)
- Do not make any personal attack in discussion
- Follow/obey the group leader
- Follow the agenda agreed on
- Meetings will be effective with the attendance of the majority of the members and agreement among the members on the effectiveness of the meetings.
- Inform Chief of the Group of his absence with a reason whenever the member can not attend the meeting.
- Fulfill the respective roles and responsibilities of the members.

Members of the Working Group for PLUP in Suco Talitu and Roles and Responsibilities of the Members

Name	Position	Responsibilities
Chef de Suco	Group Leader	➢ Coordinate with Chef de Aldeia and Halarae for the activities/meetings of the group. ➢ Organize the meeting of group. ➢ Facilitate the members' discussions in the meeting. ➢ Evaluate the process of the group work. ➢ Receive and disseminate information to the members. ➢ Manage the group's time for its activities. ➢ Organize a monitoring meeting at suco level on a monthly basis to implement the village regulations.
Secretary of Village	Vice Group Leader	➢ Organize the meeting of the group and facilitate the members' discussions in the meeting when the group leader is absent or can not function as a leader. ➢ Take notes of discussions in the meeting. ➢ File all documents. ➢ Delegate his responsibilities to one of the members of the group when he can not engage in the group activity.
Chef de Aldeia (4 persons)	Member	➢ Disseminate information given by the group leader to the members and communities in the respective aldeias. ➢ Organize the meeting at aldeia level and facilitate discussions in the meeting. ➢ Assist the group leader in regulating/controlling activities of local communities in the respective aldeias in the implementation of the village regulations. ➢ Mobilize local communities for the group activities, such as meetings, Tara Bandu ceremony, etc.
Lianain	Members	➢ Settle any issues taking place at suco level.<1 ➢ Prepare a report to Chef de Suco when the issue is solved. ➢ Prepare a report to Sub-district Administrator when the issue is not solved at suco level.
Representative of Women's group (2 persons)	Members	➢ Provide information to other women in the village.
Catakista	Members	➢ Provide information to local communities through the church activities.
Youth leaders (2 persons)	Members	➢ Provide information to youth members in the village.
Members	Members	➢ Assist Chef de Aldeia in the provision of information to local communities in the respective aldiea. ➢ Participate discussions in the meeting of the group.

<1

Any issues shall be first handled by Chef de Aldeia, Uma Lisan and Counsel of Elders at aldiea level. In case the issue can not be solved at aldeia level, the issue should be handled at suco level. At suco level, the counsel of suco and Lia Nain should discuss such an issue.