

ANNEX 2
OVERALL EVALUATION

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ANNEX 2 OVERALL EVALUATION

1. **Benchmark and Evaluation Survey**

In order to evaluate the impact of the pilot projects, questionnaire survey was made twice, one at the beginning of the pilot projects (benchmark survey), and one at the end of the pilot projects (evaluation survey). Contents of the surveys are summarized in the table below. Details about technical specifications are shown in Attachment.

	Benchmark Survey	Evaluation Survey
Objectives	To confirm the present situation before the project implementation	To confirm the present situation after the project implementation To investigate the impacts of the pilot projects by comparing the results of the surveys
Survey Area*	Xezatzan Bajo (Chimaltenango) Panyebar (Sololá) Palestina (Quetzaltenango)	Xezatzan Bajo (Chimaltenango) Panyebar (Sololá) Palestina (Quetzaltenango)
Period	January to February, 2002	November, 2002
Number of sample	Xezatzan Bajo20 Panyebar20 Palestina20	Xezatzan Bajo20 Panyebar20 Palestina19
Methodology	1. Questionnaire Survey	1. Questionnaire Survey 2. Key informant Interview
Issues of survey	1. Questionnaire Survey 1) General Information 2) Income and Expenditure 3) Housing condition 4) Education (literacy) 5) Health and Alimentation, Medical condition 6) Gender situation 7) Problems and intention	1. Questionnaire Survey 1) General Information 2) Income and Expenditure 3) Housing condition 4) Education (literacy) 5) Health and Alimentation, Medical condition 6) Gender situation 7) Problems and intention 8) Specific questionnaires are added for each project. 2. Key informant interview 1) Income condition of the community 2) Living condition of the community 3) Environmental condition of the community 4) Daily time schedule of community people 5) People's participation and attitude towards community activities 6) Gender issue 7) Other overall matters

*: Pachum in Totonicapán is excluded from the survey area because of security reason.

2. Results of the Surveys

Results of the surveys are explained in the following sections. It should be noted that numerical comparison of the result would not show significant impact of the pilot projects, since the timing of the evaluation survey is too early. Besides, sample number is not large enough for the data to be statistically valid. Therefore, the figures shown here should be considered as a reference to see the impact of pilot projects.

2.1 Xeatzan Bajo

2.1.1 Result of Questionnaire Survey

(1) General

Average number of household member and major occupation are as follows.

	Benchmark Survey	Evaluation Survey
1) Average number of household member	5.5 persons	5.3 persons
2) Major occupation in the community	Farmer80% Skilled labor.....5%	Farmer.....95%

(2) Income and Expenditure

(Q)

	Benchmark Survey	Evaluation Survey
1) Annual income		
a) Farm income*	2,570.00	3,013.33
b) Non-farm income	4,420.00	230.71
c) Total income	<u>6,990.00</u> (std.3,766.75)	<u>3,244.05</u> (std.1,444.06)
2) Annual Expenditure		
a) Food	2,560.00	3,142.50
b) Clothing	2,040.00	1,643.75
c) Education	250.00	401.25
d) Other	2,200.00	883.81
e) Total expenditure	<u>7,050.00</u> (std.3,768.39)	<u>6,071.31</u> (std.1,946.96)
3) Balance	<u>-60.00</u>	<u>-2,827.26</u>

*: Farm income shows only cash income earned from farming activity.

(3) Average Land Holding

(cuerda)

	Benchmark Survey	Evaluation Survey
1) Own land	5.63 (0.66 ha) (std.2.81)	5.58 (0.65 ha) (std.5.00)
2) Rent-out	0.15 (0.02 ha) (std.0.67)	0.00 (0.00 ha) (std.0.00)
3) Rent-in	1.93 (0.23 ha) (std.2.48)	3.42 (0.40 ha) (std.5.36)
4) Net holding (1-2+3)	7.41 (0.87 ha) (std.3.53)	9.00 (1.05 ha) (std.7.11)

(4) Living Condition

	Benchmark Survey	Evaluation Survey
1)Average number of house	1.10 houses/family	3.28 houses/family
2)Average number of radio	0.85 unit/family	1.12 unit/family
3)Major source of water	Public water supply.... 100.0 %	Public water supply40.0 % River water45.0 %
4)Major toilet facility	Non-flush toilet..... 95.0%	Non-flush toilet.....55.0% Pit.....30.0 %
5)Major lighting energy	Public Electricity..... 100.0%	Public Electricity100.0%

(5) Education

	Benchmark Survey	Evaluation Survey
1)Person who can read Spanish*	90.0%	78.0%
2)Parents' intention on education for their children	Until Junior high..... 50.0% Until 6 th grade of elementary..... 31.3%	Above Junior high85.0% Until Junior high.....10.0%
3)School attendance of children	Every day 100.0%	Every day.....100.0%

*: Since interview was made mostly to the male household head, the percentage of those who can read Spanish became higher than expected.

(6) Health Condition

	Benchmark Survey	Evaluation Survey
1)Major sickness often observed in the family	Fever 20% Respiratory disease..... 15.8% Stomach problem 5.3% Diarrhea 5.3%	Fever55% Respiratory disease.....30% Stomach problem.....10% Diarrhea5%
2)Major medical care in case of sickness or injury	Pharmacy 35% Health center 30%	Health center.....42% Private clinic.....30%

(7) Gender Aspect

		Benchmark Survey	Evaluation Survey
1)Work-sharing			
a) Housekeeping	Male	0.0 %	0.0 %
	Female	100.0 %	82.0 %
	Both	0.0 %	18.0 %
b) Agricultural work	Male	77.5 %	68.0 %
	Female	0.0 %	0.0 %
	Both	22.5 %	32.0 %
2)Decision -making			
a) Children's education	Male	0.0 %	5.0 %
	Female	5.0 %	11.0 %
	Both	95.0 %	84.0 %
b) Money spending	Male	25.0 %	42.0 %
	Female	0.0 %	0.0 %
	Both	75.0 %	58.0 %

(8) Problems and Intentions

	Benchmark Survey	Evaluation Survey
1) Agriculture	Water shortage.....90% Low selling price.....80% Lack of capital.....55%	Low selling price.....100% Damage by pest, diseases.....74% Limited market.....47%
2) Environment	Deforestation.....65% Degradation of water quality 50% Decrease of discharge from spring.....25%	Deforestation.....95% Decrease of water level in river.....53% Soil erosion.....47%
3) Infrastructure	Lack of irrigation facility ..100% Poor road condition.....80% Insufficient electricity supply55%	Poor road condition.....95% No cooking stove.....95% Insufficient potable water.....42%
4) Health	Insufficient medicine and equipment80% No permanent medical staff ..60% Poor quality of potable water 25%	Insufficient medicine and equipment100% No permanent medical staff ..95% Poor nutrition74%
5) Intention (needs for assistance)	Irrigation facility95% Market for agricultural products.....65% Technical assistance for agriculture.....45%	Drainage89% Road79% Toilet.....37%

2.1.2 Result of Key Informant Interview

The results of key informant interview are summarized as follows and details are shown in Appendix 2.

<i>Topic</i>	<i>Opinions</i>
1. Income condition	- Transportation cost for purchasing thread is reduced. - Cultivation in dry season became possible. - Production cost of huipil is decreased. - The community has opportunity to negotiate as a group. - Inadequate organization and knowledge lead to loss.
2. Living condition	- Health condition is expected to improve. - We worry about the cost for maintenance of sterilizer. - Taste of water might be changed due to sterilizer.
3. Environmental Condition	- Same as before. No change is observed.
4. Daily time schedule	- Women can save time to purchase thread. - Too many meetings were made for the projects. - Not all the community people attended to meetings even it would be their benefit. - It seems that the benefit of the project is limited for small group or the benefit is too low to cover whole community.
5. People's attitude to community activities	- The community spend more time to community activities - More people is participating in community activities - The community came to have more committees organized - People become more aware of problems in the community. - It seems that some of the people do not completely agree about the projects in the community.

6. Gender issues	<ul style="list-style-type: none"> - Women have more chance to participate. - Women have presence in the organized committees in the auxiliatura. - Women can increase the income for the family. - Women committee can decide for their own. - The traveling to Patzun is decreased. - The women willingness of working is decreasing because of committee problem. - Insufficient knowledge for management and lack of trust among the beneficiaries. - Although community criticizes the committee, people are interested in participation.
7. Other overall matters	<ul style="list-style-type: none"> - The previous projects affect in bad way the work in the actual projects. - Lack of capacity for new leaders or lack of leaders.

2.2 Panyebar

2.2.1 Result of Questionnaire Survey

(1) General

Average number of household member and major occupation are as follows.

	Benchmark Survey	Evaluation Survey
1) Average number of household member	5.5 persons	6.5 persons
2) Major occupation in the community	Farmer 55 % Skilled labor..... 10 % Others..... 25 %	Farmer.....60 % Farmer with other job ...10 % Trader.....10 % Others.....20 %

(2) Income and Expenditure

(Q)

	Benchmark Survey	Evaluation Survey
1) Annual income		
a) Farm income*	2,710.00	3,047.50
b) Non-farm income	9,990.00	9,285.00
c) Total income	<u>12,700.00</u> (std.7,478.5)	<u>12,332.50</u> (std.8,320.01)
2) Annual Expenditure		
a) Food	6,360.00	5,292.00
b) Clothing	2,400.00	2,047.37
c) Education	1,140.00	1,136.88
d) Other	2,520.00	1,588.10
e) Total expenditure	<u>12,420.00</u> (std.7,903.2)	<u>9,734.60</u> (std.5,715.26)
3) Balance	<u>280.00</u>	<u>2,597.90</u>

*: Farm income shows only cash income earned from farming activity.

(3) Average Land Holding

(cuerda)

	Benchmark Survey	Evaluation Survey
1) Own land	13.1 (0.94 ha) (std.12.1)	19.6 (1.41 ha) (std.23.45)
2) Rent-out	0.8 (0.05 ha) (std.3.4)	0.5 (0.03 ha) (std.1.26)
3) Rent-in	1.5 (0.10 ha) (std.3.6)	0.3 (0.02 ha) (std.0.67)
4) Net holding (1-2+3)	13.8 (0.99 ha) (std.14.1)	19.4 (1.40 ha) (std.22.94)

(4) Living Condition

	Benchmark Survey	Evaluation Survey
1)Average number of house	1.05 houses/family	2.25 houses/family
2)Average number of radio	1.0 unit/family	1.15 unit/family
3)Major source of water	Public water supply..... 95.0 %	Public water supply100 %
4)Major toilet facility	Non-flush toilet..... 70.0%	Non-flush toilet.....60 %
5)Major lighting energy	Public Electricity..... 80.0%	Public Electricity100 %

(5) Education

	Benchmark Survey	Evaluation Survey
1)Person who can read Spanish*	80.0%	90.0 %
2)Parents' intention on education for their children	Until Junior high..... 42.0 % Until 6 th grade of elementary..... 32.0 %	Above Junior high80.0 % 3~4 th grade of elementary10.0 %
3)School attendance of children	Every day 87.0 % Every 2 days..... 13.0 %	Every day.....95.0 %

*: Since interview was made mostly to the male household head, the percentage of those who can read Spanish became higher than expected.

(6) Health Condition

	Benchmark Survey	Evaluation Survey
1)Major sickness often observed in the family	Respiratory disease 35 % Stomach problem 26 % Diarrhea 25 % Dengue/Malaria 25 %	Fever30 % Stomach problem.....20 % Diarrhea10 % Dengue/Malaria10 %
2)Major medical care in case of sickness or injury	Pharmacy 26 % Health post 47 % Private clinic 26 %	Health post.....75 % Private clinic.....15 % Other10 %

(7) Gender Aspect

		Benchmark Survey	Evaluation Survey
1)Work-sharing			
a) Housekeeping	Male	0.0 %	0.0 %
	Female	98.8 %	97.5 %
	Both	1.2 %	2.5 %
b) Agricultural work	Male	83.8 %	80.8 %
	Female	1.2 %	0.0 %
	Both	15.0 %	19.2 %
2)Decision -making			
a) Children's education	Male	15.0 %	75.0 %
	Female	0.0 %	15.0 %
	Both	85.0 %	10.0 %
b) Money spending	Male	35.0 %	60.0 %
	Female	0.0 %	0.0 %
	Both	65.0 %	40.0 %

(8) Problems and Intentions

	Benchmark Survey	Evaluation Survey
1) Agriculture	Low selling price.....70% Lack of capital.....60% Poor quality of produces35% Lack of agricultural knowledge35%	Damage by pest & disease75% Low selling price.....70% Water shortage.....45% Lack of capital.....35%
2) Environment	Deforestation.....75% Degradation of water quality in rivers25% Decrease of water level in rivers.....25% Soil erosion.....25%	Deforestation.....90% Increase of garbage & waste 45% Decrease of water level in rivers.....40% Soil erosion.....35%
3) Infrastructure	Poor road condition65% Insufficient potable water supply60% Insufficient school facility.....15%	Poor road condition95% Insufficient potable water supply55% Insufficient school facility.....50%
4) Health	Insufficient medicine and equipment80% No permanent medical staff ..70% Lack of toilet in house35%	Insufficient medicine and equipment80% No permanent medical staff ..80% Unleanness around public water source35%
5) Intention (needs for assistance)	Technical assistance for agriculture25% Road20% Drainage20% Market for agricultural product.....20%	Road95% Drainage55% Market for agricultural product.....35% Soil conservation.....30%

2.2.2 Result of Key Informant Interview

The results of key informant interview are summarized as follows and details are shown in Appendix 2.

<i>Topic</i>	<i>Opinions</i>
1. Income condition	<ul style="list-style-type: none"> - Better quality of plants and products may contribute to income.. - Diversification of crops would lead to other income source. - It will take time until we can enjoy the benefit of the coffee projects. - It is expected to have better water without cost.
2. Living condition	<ul style="list-style-type: none"> - Availability and quality of water were improved. - Better hygiene and health conditions, especially for the children. - The chloride might be harmful
3. Environmental Condition	<ul style="list-style-type: none"> - Better conditions of seedling production are established by installation of greenhouses. - Application of agro-chemicals is made only inside the greenhouse. Therefore, contamination of soil and water is reduced. - Less contamination of the water. - There would be negative impact if projects were inadequately utilized.
4. Daily time schedule	<ul style="list-style-type: none"> - People have little time availability due to productive activities. - Implementation of projects affected the schedule of daily activities.
5. People's attitude to community activities	<ul style="list-style-type: none"> - Most of people participate actively in the Project. - More cooperation among community people is observed. - Only at the beginning, a lot of participation was seen. - Not all of the people participated with the same interest.

6. Gender issues	<ul style="list-style-type: none"> - There is availability of working. - More participation is observed. - With these projects, they open up more rooms for women to participate. - Women can give more opinion. - Some of women are not accustomed to participate. - Little availability of time due to their home responsibilities. - Insufficient knowledge. - There is no change. It is same as before. - There wasn't an specific project for women
7. Other overall matters	-

2.3 Palestina

2.3.1 Result of Questionnaire Survey

(1) General

Average number of household member and major occupation are as follows.

	Benchmark Survey	Evaluation Survey
1) Average number of household member	5.25 persons	6.74 persons
2) Major occupation in the community	Farmer 85 % No work 10 %	Farmer53 % Farmer with other job ...32 %

(2) Income and Expenditure

(Q)

	Benchmark Survey	Evaluation Survey
1) Annual income		
a) Farm income*	3,400.00	830.00
b) Non-farm income	6,190.00	7,310.00
c) Total income	<u>9,590.00</u> (std.4,452.61)	<u>8,140.00</u> (std.4,470.09)
2) Annual Expenditure		
a) Food	4,500.00	2,880.00
b) Clothing	1,930.00	1,510.00
c) Education	130.00	240.00
d) Other	2,800.00	2,550.00
e) Total expenditure	<u>9,360.00</u> (std.4,355.73)	<u>7,180.00</u> (std.3,291.6)
3) Balance	<u>230.00</u>	<u>960.00</u>

*: Farm income shows only cash income earned from farming activity.

(3) Average Land Holding

(cuerda)

	Benchmark Survey	Evaluation Survey
1) Own land	8.4 (0.37 ha) (std.9.1)	8.56 (0.37 ha) (std.12.15)
2) Rent-out	0.0 (0.00 ha) (std.0.0)	0.0 (0.00 ha) (std.0.0)
3) Rent-in	20.8 (0.91 ha) (std.20.5)	0.0 (0.00 ha) (std.0.0)
4) Net holding (1-2+3)	29.2 (1.28 ha) (std.23.7)	8.56 (0.37 ha) (std.12.15)

(4) Living Condition

	Benchmark Survey	Evaluation Survey
1)Average number of house	1.05 houses/family	1.15 houses/family
2)Average number of radio	1.22 unit/family	1.00 unit/family
3)Major source of water	Public water supply..... 70.0 % Well..... 30.0 %	Public water supply84.2 % Well.....10.0 %
4)Major toilet facility	Non-flush toilet..... 90.0 %	N.A.
5)Major lighting energy	Public Electricity..... 100.0 %	Public Electricity 84.2 %

(5) Education

	Benchmark Survey	Evaluation Survey
1)Person who can read Spanish*	80.0%	52.6%
2)Parents' intention on education for their children	Until Junior high..... 50.0 % Until 6 th grade of elementary..... 35.0 %	Until junior high31.6 % Above junior high.....26.3 % Until 6 th grade of elementary26.3 %
3)School attendance of children	Every day 94.0 %	Every day.....84.2 %

*: Since interview was made mostly to the male household head, the percentage of those who can read Spanish became higher than expected.

(6) Health Condition

	Benchmark Survey	Evaluation Survey
1)Major sickness often observed in the family	Fever 45 % Respiratory disease..... 30 % Stomach problem..... 20 %	Diarrhea45 % Fever40 % Stomach problem.....35 %
2)Major medical care in case of sickness or injury	Pharmacy 60 % Health post..... 25 %	Health center.....58 % Pharmacy26 %

(7) Gender Aspect

		Benchmark Survey	Evaluation Survey
1)Work-sharing			
a) Housekeeping	Male	0.0 %	0.0 %
	Female	100.0 %	100.0 %
	Both	0.0 %	0.0 %
b) Agricultural work	Male	88.8 %	48.7 %
	Female	0.0 %	7.0 %
	Both	11.2 %	39.5 %
2)Decision -making			
a) Children's education	Male	15.0 %	16.0 %
	Female	0.0 %	74.0 %
	Both	85.0 %	10.0 %
b) Money spending	Male	40.0 %	79.0 %
	Female	0.0 %	16.0 %
	Both	60.0 %	5.0 %

(8) Problems and Intentions

	Benchmark Survey	Evaluation Survey
1) Agriculture	Low selling price.....60% Lack of capital.....60% Lack of irrigation.....50%	Lack of capital.....63% Damage by pest & diseases...53% Inadequate application of agro-chemical.....37%
2) Environment	Deforestation.....75% Soil erosion50% Decrease of water level in rivers.....20%	Deforestation.....74% Decrease of water level in wells74% Decrease of water discharge from spring.....53%
3) Infrastructure	Insufficient potable water supply60% Poor road condition50% Insufficient electricity supply 35%	Irrigation facility68% Marketing facilities63% Insufficient potable water supply53%
4) Health	No health post60% Insufficient medicine and equipment45% No permanent medical staff ..35%	Insufficient medicine and equipment79% Poor nutrition74% No health center68%
5) Intention (needs for assistance)	Irrigation facility55% Tech. assistance for agriculture45% Road improvement.....30%	Tech. assistance for agriculture74% Marketing of agricultural products63% Health center47%

2.3.2 Result of Key Informant Interview

The results of key informant interview are summarized as follows and details are shown in Attachment.

<i>Topic</i>	<i>Opinions</i>
1. Income condition	<ul style="list-style-type: none"> - Inadequate handling of medicine prices - Potato can be kept to sell at higher price. If potatoes are not stored well it can get lost. - We worry about the cost of the service provided by the implemented projects.
2. Living condition	<ul style="list-style-type: none"> - There are medicines in the community now and at lower price. - Better conditions of hygiene and health. - Better control of illnesses. - Insufficient knowledge regarding use of some medicines - The MPUs are closed sometimes. - There are some medicines not available in MPU so there is still necessity of purchase in private pharmacies.
3. Environmental Condition	<ul style="list-style-type: none"> - Quality of water is improved. - Inadequate use of the water. - Less contamination is observed since less chemicals are used for potato production. - Inadequate use of chemical can contaminate the environment.
4. Daily time schedule	<ul style="list-style-type: none"> - People can save time because they have medicines in their community. - When the pharmacies are closed, people have to go to the urban area - They participated in activities without any change of normal schedule. - Little availability of time for people to work in community activities.
5. People's attitude to community activities	<ul style="list-style-type: none"> - More people participated as the projects proceeded - There are still resistances to participation in community activities.

6. Gender issues	<ul style="list-style-type: none"> - There is more possibility for women to participate. - Some have the opportunity to work for their community now. - There was no specific project for the women that generates significant direct benefit - They're not sufficiently prepared to participate in this type of projects. - Women have very little time to participate in the additional activities.
7. Other overall matters	<ul style="list-style-type: none"> - More support should be given in others aspect, for example like commercialization - It is important to have medicines in the community at lower price. - More medicine should be handled and preparation for it is necessary.

2.4 Overall Evaluation by Community

Since the monitoring period of the pilot projects was quite limited, more time will be required to evaluate properly overall condition of each community. However, impacts of projects observed at this moment may be assessed as follows.

(1) Xeatzan Bajo

1) Economic Aspect

It is observed that basis for income generation is developed both for women and men. However, careful supervision is necessary for attaining improvement of income condition.

2) Social Aspect

Organization is strengthened by the implementation of project. Positive impact was observed in women's participation in decision making, capacity building. Besides, existence of the thread shop improved communication both inside community and with surrounding communities.

3) Technical Aspect

Due to the high intention of farmers, introduction of new crop was smoothly accepted. On the other hand, it is observed that more basic training was necessary for women (ex. bookkeeping, stock control, etc.) before developing their marketing skill.

4) Overall

In general, sufficient positive impact was observed. Major reason for this would be existence of strong leader and organization, active participation of MAGA, NGO, and clear decision making system.

(2) Panyebar

1) Economic Aspect

The projects does not reach the stage of providing the economical benefit. Due to the severe condition of coffee market and the nature of project, the projects have not provided immediate benefit.

2) Social Aspect

Project implementation could not derive positive impact in terms of organization strengthening. Major reasons would be complicated structure of the community, non-existence of influential leader and

opportunistic behavior of community people.

3) Technical Aspect

Although the implemented projects are technically acceptable for community people, significant development was not observed yet. It would be analyzed that the weakness of the organization in the area hinders smooth transfer of the technical knowledge. The major reasons for this are also attributed to weak organization and opportunistic behavior of the people.

4) Overall

Since the projects have just started, its implementation did not reach the level to see the sufficient positive impact yet. Major reasons for insignificant impact at this moment are considered as follows.

- Weak organization structure
- No existence of strong leader and clear decision making system
- Opportunistic behavior of community people
- Severe economic condition in coffee production

(3) Pachum

1) Economic Aspect

Introduction of improved stove and sauna reduced consumption of firewood and indirectly contributed to the positive economic effect.

2) Social Aspect

Since the project targeted to each household, no significant impact was not provided in terms of organizational or social aspect.

3) Technical Aspect

Since the technology of improved stove is generally known in Guatemala, its introduction to the community was quite acceptable and people also could absorb the knowledge.

4) Overall

Although there was only one project in this community, sufficient positive impact was observed. The community has neither strong organization nor strong leader. However, the nature of the project is targeting individual household rather than organization. Therefore, it did not affect the effect of project as usually worried.

(4) Palestina

1) Economic Aspect

Positive impact was partly observed like the case of MPU. In case potato-related project, it depends totally on how many of farmers apply those techniques in the future.

- 2) **Social Aspect**
There is no organizational structure in the community or in the micro-basin. People usually communicate with the mayor directly. Therefore, from the viewpoint of organizational development, positive impact was not attained. On the other hand, training of auxiliary pharmacist and operation of MPU developed women's capacity, self-confidence and business mind. Besides, communication with surrounding communities was improved by the establishment of MPU. The political conflict in this area is a big obstacle for development of the community.
- 3) **Technical Aspect**
Some of farmers are thinking of applying potato storage and/or use of certified potato seed introduced in the projects. In addition, health promoter can cope with basic health problems in the community. From these points, it can be said that the projects had positive impact in technical aspect.
- 4) **Overall**
Positive impact was observed in general. The major reasons are that most of the projects matched with the needs of the communities and targeted for unspecified number of people such as the case of MPU. In addition, since the communities were strongly coordinated by the mayor, weak organization of the communities did not affect much in project implementation except the case of mini-irrigation.

2.5 Observed Impacts

Since the timing of evaluation survey is too early and sample number was quite limited, information for investigating multiple effect and secondary effect could not be obtained sufficiently to make qualitative analysis. However, following points were observed as positive effect by project implementation.

(1) Organization strengthening through project implementation

Under the mini-irrigation project in Xeatzan Bajo, it was observed that the beneficiaries' association was strengthened especially in terms of negotiation power. Before the project, people sold their produce to middlemen and accepted the conditions given by them. After the project, on the other hand, the association obtained more information on various types of contract and negotiated with contractors regarding selling conditions. And they actually succeeded in setting minimum price for selling their produce and in obtaining technical assistance on the production of Zucchini and French bean since it was the first time for them to cultivate.

(2) Improvement of communication with other communities

It was observed that Municipality community health activity plan improved

inter-community communication. Because of large price difference between usual pharmacy and MPU, people outside of the community also came to buy medicine. So far, people from 5 caserios outside of the project area (El Carmen, Buena Vista, etc.) came to buy medicines at MPUs. Since people from outside of the community came more often to the community, more communication become possible among the people compare to the previous conservative situation. Besides, the drastically lower price of medicine can contribute not only to the people's health in and around the project area but also to the reduction of medical expense of them.

Also in the case of thread shop in Xeatzan Bajo, people come to the shop to buy threads from outside of the community. Accordingly, the shop becomes a sort of place to exchange information and chatting for women in and around the community. This setting improves communication not only in the community but also among the communities.

(3) Development of business mind

In the plan of revolving fund for hand weaving in Xeatzan Bajo, the committee member started thinking about diversifying their business of their shop, for example, selling snacks, soft drinks, daily goods and so on. In case of MPU in Palestina, health promoters became more careful about their sale amount of medicines and started paying attention on how much they can earn at which month. In Panyebar, with introduction of pulping machine, farmers started to find markets of pulped coffee by themselves by contacting several dealers in addition to the information from the JICA Study Team. These tendencies can be considered as a good sign that the people start thinking about their income more carefully. In other words, business mind has been developed after implementation of the projects.

(4) Multiplier effect of projects

It was observed that people who migrate to the coastal area also buy medicines for their migration. This fact can be analyzed from two factors. One is about people's awareness towards hygiene condition in the coastal area. This awareness was developed through the series of training programs under the plan for migrant people to the coastal area. Another factor is improved availability of medicines. This was attained by establishment of MPUs and by sale of medicines at drastically low price under the Municipality community health activity plan. Improved availability of medicines combined with people's awareness contributed more effectively to improvement of health condition of the

people in Palestina. From this points of view, it can be said that these two projects had multiplier effect or complementary effect each other.

ATTACHMENT

Technical Specification for Benchmark Survey

1. Objectives

The purposes of this benchmark survey is to collect data of community people in the 3 communities in 3 provinces in order to monitor and evaluate the impact of the pilot projects.

2. Project Area

The project areas are the 3 selected communities that locate in 3 provinces as shown below.

Communities	Municipality	Province
Xeatzan Bajo	Patzun	Chimaltenango
Panyebar	San Juan La Laguna	Solola
Palestina*	Palestina de Los Altos	Quetzaltenango

*: It consists of 5 communities, Los Perez, Los Diaz, Sector I, Los Cabrera and Los Morales

3. Scope of works

- (1) Sample: 20 samples/community x 3 communities = 60 samples
- (2) Methods of sampling and survey
 - (a) Sample farmers' households shall be selected by purposeful sampling.
 - (b) Sample shall be taken both from the beneficiaries of the pilot projects and non-beneficiaries of the projects.
 - (c) The distribution of the samples shall be as follows. Sample beneficiaries should not necessarily be the beneficiaries for only one project exclusively. He or she could be the beneficiaries for several projects at the same time. However, all the projects should be covered.

Community	Project	Sample Number
Xeatzan Bajo	Plan of revolving fund for hand weaving thread	} 15
	Mini-irrigation project	
	Non-beneficiaries	5
Panyebar	Coffee production improvement plan	} 15
	Coffee processing plan for workload reduction	
	Rehabilitation plan for drinking water system	
	Non-beneficiaries	5
Palestina	Potato storage plan*	} 15
	Mini-irrigation project	
	Plan for migrant people to the coastal area	
	Municipality community health activity plan	
	Non-beneficiaries	5

*: Any potato farmers in the five communities would be considered as the beneficiaries

- (d) The benchmark survey shall be performed using the questionnaire form.
- (3) Items to be interviewed (Details are shown in the Questionnaire Form)

Q-1 General Information

Q-2 Income and Expenditure

- Q-3 Housing condition
- Q-4 Education
- Q-5 Health and Alimentation, Medical condition
- Q-6 Gender situtation
- Q-7 Problems and intention of the community

(4) Data input

- (a) All the data collected through this questionnaire survey should be inputted in the work sheet using Excel 97 according to the numerical orders defined in the above questionnaire forms.
- (b) The work sheet for data input should be divided into several files so that the files will not be broken down.
- (c) Data shall be input according to the number attached to each answer box shown in the Questionnaire forms.
- (d) In case that an interviewed farmer does not fall under some questions and answer sheet will be blanked, it should be clearly indicated by “-” or “/” and distinguished from 0 value. All the answer boxes should be filled up and nothing should be left blank.
- (e) Inputted work sheets should be printed out and data for all the items should be checked by comparing the printed worksheets with the filled questionnaires.

(5) Data Processing

- (a) Inputted data shall be processed and the following figures shall be given for all calculable items in the questionnaire forms into the summary sheet.
 - The number of samples
 - Total Value
 - Maximum value
 - Minimum value
 - Mean value
 - Standard deviation
- (b) Based on the data inputted, the average family budget for the last one year has to be prepared.

(6) Report

The final report shall be prepared in Spanish. Following materials and documents shall be submitted together with the final report to the Engineer:

- Filled up questionnaire forms
- Inputted work sheet (one hard copy and 2 sets of diskettes)
- Diskettes of final report (2 sets)

4. Schedule

The expected period of the work is approximately 1.7 months. Tentative working schedule is shown below.

Activity	December	January				February	
	4th	1st	2nd	3rd	4th	1st	2nd
Preparatory work and training*							
Survey 1 (Xeatzan Bajo)							
Survey 2** (Panyebar)							
Survey 3** (Palestina)							
Data input and arrangement							
Reporting							

*: Training of enumerators.

** : Before starting the survey, the team should visit the site with a member of JICA study team for introducing the member to the community people.

5. Staffing

Following staff shall be included in the study.

1) Team Leader: 1 person

The leader will be in charge of supervising all the activities. It is necessary for him to have sufficient experience in socio-economic survey and to have background of economics or sociology.

2) Enumerator: 4 persons

The enumerators have to have experience of socio-economic survey by questionnaire. It is necessary for them to have basic understanding about statistics such as calculation of mean, standard deviation and so on.

3) Supporting Staff: As required

Supporting staff may be included for the data inputting and arrangement.

**The Benchmark Survey for
the Verification Study on
Sustainable Rural Development for
The Reduction of Poverty in the Central Highland Region
of the Republic of Guatemala**

QUESTIONNAIRE FORM

Sample No.:
Date:
Name of enumerator:

Q-1 General Information

1.1 Name of Head of Household: **1**

1.2 Address:

Aldea/Caselio **2**

Municipio: **3**

Departamento: **4**

1.3 Family size, Education, Occupation (Except for families living outside)

	(1) Relationship to head*	(2) Gender (✓ in a box)	(3) Age	(4) Education (✓ the number)						(5) Occupation**		
				None 1	Elementary 2	Junior high 3	Senior high 4	University 5	Others 6			
(1)	Head	M, F	5	6	1	2	3	4	5	6	7	8
(2)	9	M, F	10	11	1	2	3	4	5	6	12	13
(3)	14	M, F	15	16	1	2	3	4	5	6	17	18
(4)	19	M, F	20	21	1	2	3	4	5	6	22	23
(5)	24	M, F	25	26	1	2	3	4	5	6	27	28
(6)	29	M, F	30	31	1	2	3	4	5	6	32	33
(7)	34	M, F	35	36	1	2	3	4	5	6	37	38
(8)	39	M, F	40	41	1	2	3	4	5	6	42	43
(9)	44	M, F	45	46	1	2	3	4	5	6	47	48
(10)	49	M, F	50	51	1	2	3	4	5	6	52	53
(11)	54	M, F	55	56	1	2	3	4	5	6	57	58
(12)	59	M, F	60	61	1	2	3	4	5	6	62	63

* Code:	1. Spouse	4. Parents	7. Siblings (incl. in law)
	2. Children	5. Parents in law	8. Not applicable
	3. Grandchildren	6. Grandparents	

** Code:	1. Farmer	4. Trader	7. School teacher
	2. Government staff	5. Restaurant/shop keeper	8. Student
	3. Skilled worker (ex. albanil)	6. Farmer w/ other job	9. None

1.4 Projects participated

Xeatzan Bajo	Mini-irrigation Project	64
	Plan of Revolving Fund for Hand Weaving Thread	65
	Non-beneficiaries	66
Panyebar	Coffee production improvement plan	67
	Rehabilitation Plan for Drinking Water System	68
	Coffee Processing Plan for Workload Reduction	69
	Non-beneficiaries	70
Palestina	Potato storage plan	71
	Mini-irrigation Project	72
	Municipality Community Health Activity Plan	73
	Plan for Migrant People to the Coastal Areas	74
	Non-beneficiaries	75

Q-2 Income & Expenditure

2.1 Annual Income by Source

Items	Monthly	Yearly
(1) Farm Income	1	11
(2) Non-farm Income	2	12
1) Salary from other occupations	3	13
2) Wages from working on other farm	4	14
3) Wages as casual worker	5	15
4) Earnings from cottage industry	6	16
5) Earnings from livestock products	7	17
6) Receipt of gifts and remittance	8	18
7) Rent for farm land	9	19
8) Other non-farm income	10	20

2.2 Annual Living Expences

Items	Monthly	Yearly
(1) Foods	21	29
(2) Clothing	22	30
(3) House maintenance and repair	23	31
(4) Education	24	32
(5) Medical care	25	33
(6) Expense for energy	26	34
(7) Loan Repayment	27	35
(8) Other	28	36

- 2.3 Are there any members who go out of the community for working? 1) Yes, 2) No **37**
- if yes,
- How many persons **38**
- How long 1) several months, 2) more than 6 months, 3) more than 1 year **39**
- How often 1) Every year, 2) Once in 2 years, 3) very rare **40**
- To where 1) within the municipality, 2) within the same Province, 3) to the Cities **41**

2.4 Land-ownership

(Cuerda)

Land Category	(a)* Net Holding Area	(b) Own Land	(c) Rent-out	(d) Rent-in
(1) Agricultural land	42	43	44	45
(2) Tree crop	46	47	48	49
(3) Homestead	50	51	52	53
(4) Other	54	55	56	57
(5) Total Area	58	59	60	61

* (a) = (b) - (c) + (d)

Q-3 Housing and Living Condition

- 3.1 How many house building do you have in your homestead area ? **1**
1. Only one 3. Three houses
2. Two houses 4. More than three
- 3.2 What are the main material of the house wall ? **2**
1. Concrete (block) 3. Wood
2. Adobe 4. Tinplate
- 3.3 How many radios do you have in your home? **3**
- 3.4 How many T.V. do you have in your home? **4**
- 3.5 Do you have any following type of transportation for your family ? **5**
1. Car (Pick-up) 3. Bicycle
2. Motorcycle 4. None
- 3.6 What is the source of drinking water ? **6**
1. Spring 3. Tube well
2. River 4. Public water supply (Tap water)
- 3.7 What type of toilet facilities do you use? **7**
1. Pit 3. Flush toilet
2. Non-flush toilet 4. None
- 3.8 What type of energy do you use for lighting ? **8**
1. Kerosene/oil 3. Generator 5. None
2. Electric (public) 4. Others
- 3.9 What type of energy do you use for cooking ? **9**
1. Firewood w/o stove 3. Kerosene/oil 5. LP gas
2. Firewood w/ stove 4. Charcoal 6. Other

Q-4 Education

- 4.1 Can you read Spanish ? 1. Yes, 2. No **1**
- 4.2 Can you write Spanish ? 1. Yes, 2. No **2**
- 4.3 Up to which grade do you want your children to complete? **3**
1. No need to go to school 3. 3~4th grade of elementary 5. Junior high school
2. 1~2nd grade of elementary 4. 6th grade of elementary 6. Above junior high school
- 4.4 How frequent do your children attend school ? **4**
1. Everyday 3. Once or twice in a week
2. Every 2 days 4. Very rare to go
- 4.5 Can your children read Spanish? **5**
1. Yes, all of them, 2. Yes, some of them, 3. None of them
- 4.6 Can your children write Spanish? **6**
1. Yes, all of them, 2. Yes, some of them, 3. None of them

Q-5 Health, Alimentation, and Medical Condition

- 5.1 What kind of sickness do you often observe and how frequent is it?
- 1) Diarrhea **1**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 2) General Stomach Problem **2**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 3) Fever **3**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 4) Respiratory Disease **4**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 5) Dengue / Malaria **5**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 6) Other (Specify: _____) **6**
1. Very often 2. Often 3. Rare 4. Very rare 5. None **7**
- 5.2 What kind of medical care when you observe above mentioned sickness or injury ? **8**
1. Go to Health Center / Pc 3. Go to Pharmacy 5. Use household medicine
2. Go to private clinic 4. Go to Traditional faith healer 6. Do nothing
- 5.3 How often do you go to health center, post, or private clinic times/year **9**
for medical treatment per year?
- 5.4 How often do you go to pharmacy ? times/year **10**

Q-6 Gender Situation

6.1 What kind of work are you in charge of in your family?

1) Preparation of meal	M, F, B	1
2) Washing dishes	M, F, B	2
3) Washing clothes	M, F, B	3
4) Cleaning of house	M, F, B	4
5) Taking care of children	M, F, B	5
6) Agricultural work	---	
a) Land preparation	M, F, B	6
b) Planting/Seeding	M, F, B	7
c) Taking care	M, F, B	8
d) Harvesting (including transportation of harvested crop)	M, F, B	9
7) Non-agricultural work	M, F, B	10

M: Male, F:Female, B: Both male and female

6.2 Please describe the heaviness of each work.

1) Preparation of meal	5, 4, 3, 2, 1	11
2) Washing dishes	5, 4, 3, 2, 1	12
3) Washing clothes	5, 4, 3, 2, 1	13
4) Cleaning of house	5, 4, 3, 2, 1	14
5) Taking care of children	5, 4, 3, 2, 1	15
6) Agricultural work	----	
a) Land preparation	5, 4, 3, 2, 1	16
b) Planting/Seeding	5, 4, 3, 2, 1	17
c) Taking care	5, 4, 3, 2, 1	18
d) Harvesting	5, 4, 3, 2, 1	19
7) Non-agricultural work	5, 4, 3, 2, 1	20

Heavy Normal Easy

6.3 Which one has more influence in decision making ?

1) Education of children	M, F, B	21
2) Work / Job (of household head, wife, children)	M, F, B	22
3) Spending of Money (Living expense)	M, F, B	23
4) Others	M, F, B	24

M: Male, F:Female, B: Both male and female

Q-7 Problems and Intention of Community People

A. Agriculture

- 5.1 What are the major constraints for agriculture ? [] [] [] **1-3**
- | | |
|---|---|
| 1. Water shortage or no irrigaiton facilities | 7. Poor quality of farm inputs (seeds, fertilizer, etc.) |
| 2. Damage by pests, diseases, weed, animals | 8. Poor quality of products |
| 3. Inadequate application of agro-chemical | 9. Lack of technology information |
| 4. Low selling prices | 10. Lack of capital |
| 5. Inconvenient transportation | 11. Limited market outlet |
| 6. Lack of storage facilities | 12. Others (Specify: _____) 4 |

B. Environment

- 5.3 What kind of problems do you observe regarding environment? [] [] [] **5-7**
- | | |
|--|---|
| 1. Deforestation | 7. Decreasing of water discharge from spring |
| 2. Degradation of water quality in rivers | 8. Soil degradation |
| 3. Degradation of water quality in wells | 9. Soil erosion |
| 4. Degradation of water quality in springs | 10. Increased garbage and waste |
| 5. Decreasing of water level in rivers | 11. Reduction of fauna and flora |
| 6. Decreasing of water level in wells | 12. Others (Specify: _____) 8 |

C. Infrastructure

- 5.4 What kind of problems and needs do you observe regarding infrastructure ? [] [] [] **9-11**
- | | |
|-----------------------------------|---|
| 1. Insufficient potable water | 5. School facility is not sufficient. |
| 2. No electricity supply. | 6. Irrigation facility is not available. |
| 3. Road condition is poor. | 7. Insufficient marketing facility (storage, processing equipment, etc) |
| 4. No cooking stove is available. | 8. Others (Specify: _____) 12 |

D. Health

- 5.5 What kind of problems and needs do you observe regarding health ? [] [] [] **13-15**
- | | |
|---|---|
| 1. No health center or health post | 5. Inappropriate quality of portable water |
| 2. No permanent medical staff (or midwife) | 6. Uncleaness around the public water source |
| 3. Insufficient medicines or medical equipme | 7. Poor nutrition |
| 4. High morbidity of specific disease | 8. No toilet facility at home |
| (specify: _____) 16 | 9. Others (Specify: _____) 17 |

E. Farmers' Intention

- 6.1 What kind of support do you think necessary? [] [] [] **18-20**
- | | | | |
|----------------|---|-------------------|-------------------------------|
| 1. Road | 5. Portable water supply system | 9. Warehouse | 13. Soil conservation |
| 2. Bridge | 6. Irrigation facility | 10. Market place | 14. Water quality improvement |
| 3. Drainage | 7. Marketing of Agricultural product | 11. Toilet | 15. Community Center |
| 4. Health post | 8. Technical assistance for agriculture | 12. Reforestation | 16. Sewage works |

Technical Specification
for Evaluation Survey for the Verification Study on Sustainable Rural Development
for the Reduction of Poverty in the Central Highland Region
of the Republic of Guatemala

1. Objectives

The purpose of the evaluation survey is to collect data and information of the 3 communities in 3 provinces to evaluate the impact of the pilot projects.

2. Project Area

The project areas are the 3 selected communities that locate in 3 provinces as shown below.

Communities	Municipality	Province
Xeatzán Bajo	Patzun	Chimaltenango
Panyebar	San Juan La Laguna	Sololá
Palestina*	Palestina de Los Altos	Quetzaltenango

*: It consists of 5 communities, Los Perez, Los Diaz, Sector I, Los Cabrera and Los Morales

3. Scope of works

The survey is composed of 2 parts, Questionnaire Survey and Interview Survey. Detail scope of work for each part is explained below.

A. Questionnaire Survey

(1) Sample: 20 samples/community x 3 communities = 60 samples

(2) Methodology

- (a) Sample households shall be selected by purposeful sampling. Sample household selected in the benchmark survey shall also be selected for this survey. The list of sample household will be prepared by the Study Team. In case some of the households are not available, they will be replaced with newly selected households.
- (b) Sample shall be taken both from the beneficiaries and non-beneficiaries of the pilot projects.
- (c) In case some of the samples are replaced, it is necessary to pay attention to the distribution of the samples. The distribution of the samples shall be as follows. Sample beneficiaries should not necessarily be the beneficiaries exclusively for only one project. He or she could be the beneficiaries for several projects at the same time. However, all the pilot projects implemented in each community should be covered.

Community	Project	Sample Number
Xeatzan Bajo	Plan of revolving fund for hand weaving thread	} 15
	Mini-irrigation project	
	Non-beneficiaries	5
Panyebar	Coffee production improvement plan	} 15
	Coffee processing plan for workload reduction	
	Rehabilitation plan for drinking water system	
	Non-beneficiaries	5
Palestina	Potato storage plan*	} 15
	Model farm plan for potato production*	
	Mini-irrigation project	
	Plan for migrant people to the coastal area	
	Municipality community health activity plan	
	Non-beneficiaries	5

*: Any potato farmers in the five communities would be considered as the beneficiaries

- (d) The survey shall be conducted using the questionnaire form. Items to be interviewed are as follows and details are shown in Questionnaire Form.

- Q-1 General Information,
- Q-2 Income and Expenditure,
- Q-3 Housing condition,
- Q-4 Education,
- Q-5 Health and Alimentation, Medical condition,
- Q-6 Gender situation,
- Q-7 Problems and intention of the community, and
- Additional questions specific to each project.

(3) Data input

- (a) All the data should be inputted in the work sheet using Excel 97.
- (b) The work sheet for data input shall be divided into several parts, if it is big, so that the files will not be broken down.
- (c) Data shall be input according to the number attached to each answer box shown in the Questionnaire forms.
- (d) In case that an answer of a respondent does not match with any alternatives, the answer box shall be filled with either “-” or “/” instead of leaving blank. All the answer boxes should be filled up and none of them should be left as blank.
- (e) Inputted work sheets should be printed out and should be checked with the filled questionnaires to eliminate any input mistake.

(4) Data Processing

- (a) Following figures shall be calculated for all items (excluding non-calculable items).
 - The number of samples
 - Total value
 - Maximum value
 - Minimum value
 - Mean value
 - Standard deviation

- (b) Based on the data inputted, the average household budget (income and expenditure) for the last one year shall be prepared.

B. Interview Survey

- (1) Sample: 2~3 persons shall be interviewed. The persons to be interviewed shall be the key informants of the communities. Potential key informants would be Alcalde Auxiliar, President of committees, representative of women, elders in community, etc. However, it is necessary to include at least one female representative from each community.

(2) Methodology

The survey shall be made by semi-structured interview. The topics to be mentioned in the interview are as follows.

- a) Income condition
- b) Living condition
- c) Environmental condition
- d) Daily time schedule of community people
- e) People's participation and attitude towards community activities
- f) Gender issue (women's workload, position, participation, attitude, etc.)
- g) Other overall matters

For each item, observed change, positive impact, negative impact shall be mentioned based on the perspectives of the selected informants (See attached form).

(3) Data input and analysis

Information obtained through above interview shall be analyzed in qualitative manner. All the information obtained (even it is not related to the items mentioned above) shall be written up in the report.

4. Report

The final report shall be prepared in Spanish and two copies shall be submitted. Besides, following materials and documents shall be submitted together with the final report to the Study Team:

- Filled up questionnaire forms
- Inputted work sheet (one hard copy and 2 sets of diskettes)
- Diskettes of final report (2 sets)

5. Schedule

The expected period of the work is approximately 1.0 months. Tentative working schedule is shown below.

Activity	Oct.	November				Dec.
	5th	1st	2nd	3rd	4th	1st
Preparatory work and training*		■				
Survey 1** (Xeatzan Bajo)		■	■			
Survey 2** (Panyebar)			■	■		
Survey 3** (Palestina)				■	■	
Data input and arrangement			▨	▨	▨	
Reporting				■	■	

*: Training of enumerators.

** : Before starting the survey, the team should visit the site with a member of JICA study team for introducing the member and explaining the purpose of the survey to the community people.

6. Staffing

Following staff shall be included in the study.

1) Team Leader: 1 person

The leader will be in charge of supervising all the activities. It is necessary for him to have sufficient experience in socio-economic survey and to have background of economics or sociology.

2) Interviewer: 2 persons

The interviewers shall have experience of socio-economic survey, especially in semi-structured interview. They need to have enough experience and knowledge for understanding rural socio-economy and culture.

3) Enumerator: 4 persons

The enumerators shall have experience of questionnaire survey. In addition, it is necessary for them to have basic understanding about statistics such as calculation of mean, standard deviation and so on.

4) Supporting Staff: As required

Supporting staff may be included for the data inputting and arrangement.

**The Evaluation Survey for
the Verification Study on
Sustainable Rural Development for
The Reduction of Poverty in the Central Highland Region
of the Republic of Guatemala**

QUESTIONNAIRE FORM

Sample No.:
Date:
Name of enumerator:

Q-1 General Information

1.1 Name of Head of Household: **1**

1.2 Address:

Aldea/Caselio **2**

Municipio: **3**

Departamento: **4**

1.3 Family size, Education, Occupation (Except for families living outside)

	(1) Relationship to head*	(2) Gender (✓ in a box)	(3) Age	(4) Education (✓ the number)						(5) Occupation**		
				None 1	Elementary 2	Junior high 3	Senior high 4	University 5	Others 6			
(1)	Head	M, F	5	6	1	2	3	4	5	6	7	8
(2)	9	M, F	10	11	1	2	3	4	5	6	12	13
(3)	14	M, F	15	16	1	2	3	4	5	6	17	18
(4)	19	M, F	20	21	1	2	3	4	5	6	22	23
(5)	24	M, F	25	26	1	2	3	4	5	6	27	28
(6)	29	M, F	30	31	1	2	3	4	5	6	32	33
(7)	34	M, F	35	36	1	2	3	4	5	6	37	38
(8)	39	M, F	40	41	1	2	3	4	5	6	42	43
(9)	44	M, F	45	46	1	2	3	4	5	6	47	48
(10)	49	M, F	50	51	1	2	3	4	5	6	52	53
(11)	54	M, F	55	56	1	2	3	4	5	6	57	58
(12)	59	M, F	60	61	1	2	3	4	5	6	62	63

* Code:	1. Spouse	4. Parents	7. Siblings (incl. in law)
	2. Children	5. Parents in law	8. Not applicable
	3. Grandchildren	6. Grandparents	

** Code:	1. Farmer	4. Trader	7. School teacher
	2. Government staff	5. Restaurant/shop keeper	8. Student
	3. Skilled worker (ex. albanil)	6. Farmer w/ other job	9. None

1.4 Projects participated

Xeatzan Bajo	Mini-irrigation Project	64
	Plan of Revolving Fund for Hand Weaving Thread	65
	Non-beneficiaries	66
Panyebar	Coffee production improvement plan	67
	Rehabilitation Plan for Drinking Water System	68
	Coffee Processing Plan for Workload Reduction	69
	Non-beneficiaries	70
Palestina	Potato storage plan	71
	Mini-irrigation Project	72
	Municipality Community Health Activity Plan	73
	Plan for Migrant People to the Coastal Areas	74
	Non-beneficiaries	75

Q-2 Income & Expenditure

2.1 Annual Income by Source

Items	Monthly	Yearly
(1) Farm Income	1	11
(2) Non-farm Income	2	12
1) Salary from other occupations	3	13
2) Wages from working on other farm	4	14
3) Wages as casual worker	5	15
4) Earnings from cottage industry	6	16
5) Earnings from livestock products	7	17
6) Receipt of gifts and remittance	8	18
7) Rent for farm land	9	19
8) Other non-farm income	10	20

2.2 Annual Living Expences

Items	Monthly	Yearly
(1) Foods	21	29
(2) Clothing	22	30
(3) House maintenance and repair	23	31
(4) Education	24	32
(5) Medical care	25	33
(6) Expense for energy	26	34
(7) Loan Repayment	27	35
(8) Other	28	36

- 2.3 Are there any members who go out of the community for working? 1) Yes, 2) No **37**
- if yes,
- How many persons **38**
- How long 1) several months, 2) more than 6 months, 3) more than 1 year **39**
- How often 1) Every year, 2) Once in 2 years, 3) very rare **40**
- To where 1) within the municipality, 2) within the same Province, 3) to the Cities **41**

2.4 Land-ownership

(Cuerda)

Land Category	(a)* Net Holding Area	(b) Own Land	(c) Rent-out	(d) Rent-in
(1) Agricultural land	42	43	44	45
(2) Tree crop	46	47	48	49
(3) Homestead	50	51	52	53
(4) Other	54	55	56	57
(5) Total Area	58	59	60	61

* (a) = (b) - (c) + (d)

Q-3 Housing and Living Condition

- 3.1 How many house buildings do you have in your homestead area? **1**
1. Only one 3. Three houses
2. Two houses 4. More than three
- 3.2 What are the main materials of the house wall? **2**
1. Concrete (block) 3. Wood
2. Adobe 4. Tinplate
- 3.3 How many radios do you have in your home? **3**
- 3.4 How many T.V. do you have in your home? **4**
- 3.5 Do you have any following type of transportation for your family? **5**
1. Car (Pick-up) 3. Bicycle
2. Motorcycle 4. None
- 3.6 What is the source of drinking water? **6**
1. Spring 3. Tube well
2. River 4. Public water supply (Tap water)
- 3.7 What type of toilet facilities do you use? **7**
1. Pit 3. Flush toilet
2. Non-flush toilet 4. None
- 3.8 What type of energy do you use for lighting? **8**
1. Kerosene/oil 3. Generator 5. None
2. Electric (public) 4. Others
- 3.9 What type of energy do you use for cooking? **9**
1. Firewood w/o stove 3. Kerosene/oil 5. LP gas
2. Firewood w/ stove 4. Charcoal 6. Other

Q-4 Education

- 4.1 Can you read Spanish ? 1. Yes, 2. No **1**
- 4.2 Can you write Spanish ? 1. Yes, 2. No **2**
- 4.3 Up to which grade do you want your children to complete? **3**
1. No need to go to school 3. 3~4th grade of elementary 5. Junior high school
2. 1~2nd grade of elementary 4. 6th grade of elementary 6. Above junior high school
- 4.4 How frequent do your children attend school ? **4**
1. Everyday 3. Once or twice in a week
2. Every 2 days 4. Very rare to go
- 4.5 Can your children read Spanish? **5**
1. Yes, all of them, 2. Yes, some of them, 3. None of them
- 4.6 Can your children write Spanish? **6**
1. Yes, all of them, 2. Yes, some of them, 3. None of them

Q-5 Health, Alimentation, and Medical Condition

- 5.1 What kind of sickness do you often observe and how frequent is it?
- 1) Diarrhea **1**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 2) General Stomach Problem **2**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 3) Fever **3**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 4) Respiratory Disease **4**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 5) Dengue / Malaria **5**
1. Very often 2. Often 3. Rare 4. Very rare 5. None
- 6) Other (Specify: _____) **6**
1. Very often 2. Often 3. Rare 4. Very rare 5. None **7**
- 5.2 What kind of medical care when you observe above mentioned sickness or injury ? **8**
1. Go to Health Center / Pc 3. Go to Pharmacy 5. Use household medicine
2. Go to private clinic 4. Go to Traditional faith healer 6. Do nothing
- 5.3 How often do you go to health center, post, or private clinic times/year **9**
for medical treatment per year?
- 5.4 How often do you go to pharmacy ? times/year **10**

Q-6 Gender Situation

6.1 What kind of work are you in charge of in your family?

1) Preparation of meal	M, F, B	1
2) Washing dishes	M, F, B	2
3) Washing clothes	M, F, B	3
4) Cleaning of house	M, F, B	4
5) Taking care of children	M, F, B	5
6) Agricultural work	---	
a) Land preparation	M, F, B	6
b) Planting/Seeding	M, F, B	7
c) Taking care	M, F, B	8
d) Harvesting (including transportation of harvested crop)	M, F, B	9
7) Non-agricultural work	M, F, B	10

M: Male, F:Female, B: Both male and female

6.2 Please describe the heaviness of each work.

1) Preparation of meal	5, 4, 3, 2, 1	11
2) Washing dishes	5, 4, 3, 2, 1	12
3) Washing clothes	5, 4, 3, 2, 1	13
4) Cleaning of house	5, 4, 3, 2, 1	14
5) Taking care of children	5, 4, 3, 2, 1	15
6) Agricultural work	----	
a) Land preparation	5, 4, 3, 2, 1	16
b) Planting/Seeding	5, 4, 3, 2, 1	17
c) Taking care	5, 4, 3, 2, 1	18
d) Harvesting	5, 4, 3, 2, 1	19
7) Non-agricultural work	5, 4, 3, 2, 1	20

Heavy Normal Easy

6.3 Which one has more influence in decision making ?

1) Education of children	M, F, B	21
2) Work / Job (of household head, wife, children)	M, F, B	22
3) Spending of Money (Living expense)	M, F, B	23
4) Others	M, F, B	24

M: Male, F:Female, B: Both male and female

Q-7 Problems and Intention of Community People

A. Agriculture

- 5.1 What are the major constraints for agriculture ? [] [] [] **1-3**
- | | |
|---|--|
| 1. Water shortage or no irrigaiton facilities | 7. Poor quality of farm inputs (seeds, fertilizer, etc.) |
| 2. Damage by pests, diseases, weed, animals | 8. Poor quality of products |
| 3. Inadequate application of agro-chemical | 9. Lack of technology information |
| 4. Low selling prices | 10. Lack of capital |
| 5. Inconvenient transportation | 11. Limited market outlet |
| 6. Lack of storage facilities | 12. Others (Specify: _____) 4 |

B. Environment

- 5.3 What kind of problems do you observe regarding environment? [] [] [] **5-7**
- | | |
|--|--|
| 1. Deforestation | 7. Decreasing of water discharge from spring |
| 2. Degradation of water quality in rivers | 8. Soil degradation |
| 3. Degradation of water quality in wells | 9. Soil erosion |
| 4. Degradation of water quality in springs | 10. Increased garbage and waste |
| 5. Decreasing of water level in rivers | 11. Reduction of fauna and flora |
| 6. Decreasing of water level in wells | 12. Others (Specify: _____) 8 |

C. Infrastructure

- 5.4 What kind of problems and needs do you observe regarding infrastructure ? [] [] [] **9-11**
- | | |
|-----------------------------------|---|
| 1. Insufficient potable water | 5. School facility is not sufficient. |
| 2. No electricity supply. | 6. Irrigation facility is not available. |
| 3. Road condition is poor. | 7. Insufficient marketing facility (storage, processing equipment, etc) |
| 4. No cooking stove is available. | 8. Others (Specify: _____) 12 |

D. Health

- 5.5 What kind of problems and needs do you observe regarding health ? [] [] [] **13-15**
- | | |
|--|---|
| 1. No health center or health post | 5. Inappropriate quality of portable water |
| 2. No permanent medical staff (or midwife) | 6. Uncleanliness around the public water source |
| 3. Insufficient medicines or medical equipment | 7. Poor nutrition |
| 4. High morbidity of specific disease | 8. No toilet facility at home |
| (specify: _____) 16 | 9. Others (Specify: _____) 17 |

E. Farmers' Intention

- 6.1 What kind of support do you think necessary? [] [] [] **18-20**
- | | | | |
|----------------|---|-------------------|-------------------------------|
| 1. Road | 5. Portable water supply system | 9. Warehouse | 13. Soil conservation |
| 2. Bridge | 6. Irrigation facility | 10. Market place | 14. Water quality improvement |
| 3. Drainage | 7. Marketing of Agricultural product | 11. Toilet | 15. Community Center |
| 4. Health post | 8. Technical assistance for agriculture | 12. Reforestation | 16. Sewage works |

Q-8 Plan of Revolving Fund for Hand Weaving Thread

- 8.1 Do you use association shop for purchasing material thread? 1
1. Yes 2. No
- 8.2 If no, what is the reason for not using? 2
1. Price of thread is not so cheap.
 2. The shop is not convenient in terms of working hour.
 3. Location of the shop is not convenient.
 4. It is impossible to purchase on credit basis.
 5. Attitude of shopkeeper is not comfortable.
 6. Others (_____) 3
- 8.3 If yes, what is the advantage for using? 4
1. Price of thread is cheaper than other shops.
 2. The shop is convenient in terms of working hour.
 3. Location of the shop is convenient.
 4. Attitude of shopkeeper is comfortable.
 5. It is important for development of the community.
 6. Others (_____) 5
- 8.4 What kind of change do you observe after opening the shop? 6
1. Cost of thread has reduced.
 2. Various type of thread became available.
 3. Purchase of thread became easier in terms of location.
 4. None
 5. Others (_____) 7
- 8.5 How much did it cost for preparing a Huipil before opening of the shop? Q per Huipil 8
- 8.6 How much does it cost for preparing a Huipil after opening of the shop? Q per Huipil 9
- 8.7 Did you attend the literacy training courses? 10
1. Yes 2. No
- 8.8 If no, what was the reason for not attending? 11
1. Too busy.
 2. Time shedule of the courses was not convenient.
 3. Location of the place for training was not convenient.
 4. The contents of training was not useful.
 5. Attitude of organizer was not comfortable.
 6. Already be able to write and read.
 6. Others (_____) 12
- 8.9 If yes, what was the impression of the course? 13
1. The contents was useful for writing and reading.
 2. The contents was useful for the knowledge such as business skill or motivation rather than literacy.
 3. The contents was useful not only for writing and reading but also for other knowledge.
 4. It was a good opportunity to get together and talk with other women in the community.
 5. Others (_____) 14

8.10 What kind of advantage do you think you will have after this course?

15

1. There will be no problem in reading and writing.
2. There will be more possibility for job opportunity.
3. Be able to access more information on social or economic activity.
4. Be able to participate more in social activity (ex. Committee of the community, etc.)
5. The position of women in family or society will be better.
6. Others (_____)

16

8.11 What kind of impact do you observe after this project? Please describe.

17

Q-9 Mini-irrigation Project

Irrigation Facility

9.1 Did you use irrigation facility for this dry season? **1**

1. Yes 2. No

9.2 If no, what is the reason for not using? **2**

1. Available water is not sufficient.
 2. Rain was still sufficient for cultivation and irrigation water was not necessary.
 3. Facility is not reliable.
 4. Confliction among association members.
 5. Too busy for working in other place or for other cultivation.
 6. Operation is too difficult.
 7. Water fee is too expensive.
 8. Others (_____) **3**

9.3 What do you think about the water amount distributed by the facility? **4**

1. Sufficient
 2. Reasonable
 3. Not sufficient

9.4 What do you think about the water fee? **5**

1. Too expensive
 2. Reasonable
 3. Cheap

9.5 What do you think about easiness of the facility operation? **6**

1. Easy for operation and maintenance
 2. Not easy but still managable
 3. Difficult and need assistance of technician

Newly introduced crops

9.6 What do you think about the newly introduced crop? **7**

1) French Bean

1. Good
 2. Acceptable
 3. Not good (Reason: _____) **8**

2) Green Zucchini **9**

1. Good
 2. Acceptable
 3. Not good (Reason: _____) **10**

3) Patty Pan **11**

1. Good
 2. Acceptable
 3. Not good (Reason: _____) **12**

4) Sunburst **13**

1. Good
 2. Acceptable
 3. Not good (Reason: _____) **14**

Income Change

9.7 Cost and return from the cultivation

Crop	Area (crd.)	Production (qq)	Total Return (Q)	Total Cost (Q)
French Bean	15	16	17	18
Green Zucchini	19	20	21	22
Patty Pan	23	24	25	26
Sunburst	27	28	29	30

9.8 What kind of impact do you observe after this project? Please describe. 31

Q-10 Water Quality Improvement Plan

- 10.1 Do you feel any change in the taste of water?
 1. Yes 2. No
- 10.2 If yes, is it acceptable change?
 1. Yes 2. No
- 10.3 Do you know the reason for putting stelerizer in the drinking water?
 1. Yes 2. No
- 10.4 Are you willing to pay for the maintenance cost of sterilizer if it is necessary?
 1. Yes 2. No
- 10.5 What kind of change do you see in the health condition of your famuily after installation?
 1. No significant change
 2. Diarreeah or stomach problem had reduced.
 3. Health condition became worth.
- 10.6 Do you think the sterilizer is necessary?
 1. Yes 2. No
- 10.7 If no, why?
 1. It is not necessary.
 2. It might be necessary but the taste of water will be bad.
 3. Maintenance cost is expensive.
 4. Other (Reason: _____)

Q-8 Coffee Production Improvement Plan**Distribution of Seedlings*****Coffee***

8.1 Did you receive seedlings of coffee?

1

1. Yes 2. No

8.2 If yes, how many seedlings did you received and planted, and what is the present condition?

Number of seedlings you received	Number of seedlings you planted	Number of seedlings that are still alive
2	3	4

8.3 In case you did not planted at all, what is the main reason for that?

5

1. I don' know how to plant.
2. It's better to sell rather than to plant. (So I sold them)
3. No intention to plant (but just received)
4. Others (_____)

6***Avocado***

8.4 Did you receive seedlings of avocado?

7

1. Yes 2. No

8.5 If yes, how many seedlings did you received and planted, and what is the present condition?

Number of seedlings you received	Number of seedlings you planted	Number of seedlings that are still alive
9	10	11

8.6 In case you did not planted at all, what is the main reason for that?

12

1. I don' know how to plant.
2. It's better to sell rather than to plant. (So I sold them)
3. No intention to plant (but just received)
4. Others (_____)

13***Peach***

8.7 Did you receive seedlings of peach?

14

1. Yes 2. No

8.8 If yes, how many seedlings did you received and planted, and what is the present condition?

Number of seedlings you received	Number of seedlings you planted	Number of seedlings that are still alive
15	16	17

8.9 In case you did not planted at all, what is the main reason for that?

18

1. I don' know how to plant.
2. It's better to sell rather than to plant. (So I sold them)
3. No intention to plant (but just received)
4. Others (_____)

19**Operation of Vinyl House and Training**

Coffee**a) Vinyl house operation**

8.10 Did you participate in taking care of coffee seedling? **20**

1. Yes 2. No

8.11 If no, why? **21**

1. There were no chance for participation.
 2. It's not profitable.
 3. No time to participate.
 4. Not interested in coffee production.
 5. Others (_____) **22**

8.12 For those who participated, do you think that the operation of vinyl house is useful ? **23**

1. Yes 2. No

8.13 If no, why? **24**

1. It is not profitable.
 2. No intention to continue coffee cultivation.
 3. Coffee prodction would be not profitable in the future.
 4. It is better to work outside.
 5. Others (_____) **25**

b) Training

8.14 Did you participate in the training seminar conducted by REINSA? **26**

1. Yes 2. No

8.15 If no, why? **27**

1. No intention to continue coffee cultivation.
 2. There were no information about the seminar in advance (so I missed the chance).
 3. Training is not necessary.
 4. No time to attend the training.
 5. Others (_____) **28**

8.16 Those who attended, how were the training? **29**

1. It was very useful.
 2. It was useful to some extent.
 3. Not useful.

8.17 If not useful, why? **30**

1. Too difficult.
 2. It didn't match with the actual situation.
 3. The way of training was not good.
 4. The trainer was not good.
 5. Others (_____) **31**

Avocado and Peach

a) Vinyl house operation

8.18 Did you participate in taking care of seedlings of avocado and peach? **32**

1. Yes 2. No

8.19 If no, why? **33**

1. There were no chance for participation.
 2. It's not profitable.
 3. No time to participate.
 4. Not interested in cultivation of peach and avocado.
 5. Others (_____) **34**

8.20 For those who participated, do you think that the operation of vinyl house is useful ? **35**

1. Yes 2. No

8.21 If no, why? **36**

1. It is not profitable.
 2. No intention to cultivate avocado and peach.
 3. Prodction of avocado and peach would be not profitable in the future.
 4. It is better to work outside.
 5. Others (_____) **37**

b) Training

8.22 Did you participate in the training seminar conducted by REINSA? **38**

1. Yes 2. No

8.23 If no, why? **39**

1. No intention to cultivate avocado and peach.
 2. There were no information about the seminar in advance (so I missed the chance).
 3. Training is not necessary.
 4. No time to attend the training.
 5. Others (_____) **40**

8.24 Those who attended, how were the training? **41**

1. It was very useful.
 2. It was useful to some extent.
 3. Not useful.

8.25 If not useful, why? **42**

1. Too difficult.
 2. It didn't match with the actual situation.
 3. The way of training was not good.
 4. The trainer was not good.
 5. Others (_____) **43**

Overall

8.26 What kind of impact do you observe after this project? Please describe. **44**

Q-9 Water Quality Improvement Plan

- 9.1 Do you feel any change in the taste of water?
 1. Yes 2. No
- 9.2 If yes, is it acceptable change?
 1. Yes 2. No
- 9.3 Do you know the reason for putting sterilizer in the drinking water?
 1. Yes 2. No
- 9.4 Are you willing to pay for the maintenance cost of sterilizer if it is necessary?
 1. Yes 2. No
- 9.5 What kind of change do you see in the health condition of your family after installation?
 1. No significant change
 2. Diarrhea or stomach problem had reduced.
 3. Health condition became worth.
- 9.6 Do you think the sterilizer is necessary?
 1. Yes 2. No
- 9.7 If no, why?
 1. It is not necessary.
 2. It might be necessary but the taste of water will be bad.
 3. Maintenance cost is expensive.
 4. Other (Reason: _____)

Q-10 Water Supply Improvement Plan

10.1 Have you participated in labor work?

- 1. Yes
- 2. No

10.2 If no, why?

- 1. No intention to work (because somebody else will do it)
- 2. No intention to work (because the project is not necessary)
- 3. There were no information about the working (so I missed the chance).
- 4. No time to work for the project (too busy with own work)
- 5. It was better to work outside.
- 6. It was impossible to participate because of improper management of committee.
- 7. Others (_____)

10.3 Do you think that the project was necessary for the community?

- 1. Yes
- 2. No

10.4 How is the present condition of the water supply compare to the situation before?

- 1. Water supply became more sustainable.
- 2. More water became available.
- 3. Less maintenance work is necessary compare to before.
- 4. No change is observed.
- 5. Situation became worth (less water became available).
- 6. Others (_____)

10.5 What do you think about the change of water fee collection?

- 1. Better
- 2. No significant change
- 3. Worth

10.6 What kind of impact do you observe after this project? Please describe.

Q-8 Potato Storage Plan and Model Farm for Potato Production Improvement**Potato Storage Plan**

8.1 Did you see the sotrage made under the Project?
 1. Yes 2. No

8.2 If no, why?
 1. No information about the storage.
 2. Not interested in it.
 3. Do not cultivate potato.
 4. Location was too far.
 5. Others (_____)

8.3 If yes, do you think that the storage is useful for you?
 1. Yes 2. No

8.4 If no, why?
 1. Do not see any benefit for using that.
 2. It costs too much.
 3. Cannot wait to sell because of immediate needs for cash
 4. Others (_____)

Model Farm for Potato Production Improvement

8.5 Did you see the model farm made under the Project?
 1. Yes 2. No

8.6 If no, why?
 1. No information about the model farm.
 2. Not interested in it.
 3. Do not cultivate potato.
 4. Others (_____)

8.7 If yes, do you think that the infromation from model farm is useful for you?
 1. Yes 2. No

8.8 If no, why?
 1. Do not see any benefit for applying the methodologies used in the model farm.
 2. It costs too much.
 3. Traditional way is more reliable.
 4. Do not know where to get necessary farm inputs for applying the technique
 5. Others (_____)

Q-9 Municipality Community Health Service Plan

9.1 Did you use MPU?

- 1. Yes 2. No

9.2 If no, what is the reason for not using?

- 1. No information about the MPU
- 2. Not necessary to buy medicine so far
- 3. Price is not reasonable enough
- 4. The promoters are not reliable
- 5. Others (_____)

9.3 Do you think that MPU is benefitable for the communities?

- 1. Yes 2. No

9.4 If yes, what is the main benefit of the MPU?

- 1. Cheaper price of medicines
- 2. Easy access
- 3. Flexible working hours
- 4. Others (_____)

9.5 If no, what is the reason for not benefitable?

- 1. Price is still not reasonable.
- 2. Promoters are not reliable.
- 3. Available medicine is limited.
- 4. It seems that the MPU is always closed.
- 5. Others (_____)

9.6 What kind of impact do you observe after this project? Please describe.

Q-10 Water Quality Improvement Plan

- 10.1 Do you feel any change in the taste of water? **1**
 1. Yes 2. No
- 10.2 If yes, is it acceptable change? **2**
 1. Yes 2. No
- 10.3 Do you know the reason for putting sterilizer in the drinking water? **3**
 1. Yes 2. No
- 10.4 Are you willing to pay for the maintenance cost of sterilizer if it is necessary? **4**
 1. Yes 2. No
- 10.5 What kind of change do you see in the health condition of your family after installation? **5**
 1. No significant change
 2. Diarrhea or stomach problem had reduced.
 3. Health condition became worth.
- 10.6 Do you think the sterilizer is necessary? **6**
 1. Yes 2. No
- 10.7 If no, why? **7**
 1. It is not necessary.
 2. It might be necessary but the taste of water will be bad.
 3. Maintenance cost is expensive.
 4. Other (Reason: _____) **8**

Form for Semi-structured Interview

1. Date: _____
2. Name: _____
3. Position: _____
4. Community: _____

Topic	Observed Change	Positive Impact	Negative Impact
1. Income condition			
2. Living condition			
3. Environmental Condition			
4. Daily time schedule of community people			
5. People's attitude towards community activities			
6. Gender issues - Women's workload - Women's Position - Women's attitude etc.			
7. Other overall matters			

Results of Key Informant Survey

Community: Xeatzan Bajo

Topic	Informant 1 (female)	Informant 2 (male)	Informant 3 (male)
1. Income condition	<ul style="list-style-type: none"> - Better opportunity to increase income. - Transportation cost for purchasing thread is reduced. - Cultivation in dry season became possible. - The organization is weak and not trustful. 	<ul style="list-style-type: none"> - The community has opportunity to negotiate as a group. - Better income for dry season is expected. - Production cost of huipil is decreased. - Organization caused loss due to insufficient knowledge. 	<ul style="list-style-type: none"> - Income condition is improved. - New activities to get income are implemented. - Inadequate organization and knowledge lead to loss.
2. Living condition	<ul style="list-style-type: none"> - No change is observed so far. - Stomach problems would be improved by use of sterilizer. - We worry about the payment of fee and taste of water. 	<ul style="list-style-type: none"> - Health condition is expected to improve. - Diarrhea would be decrease. - We worry about the change of the taste of water. 	<ul style="list-style-type: none"> - It is expected that water quality will be improved. - Diseases will be expected to decrease - None
3. Environmental Condition	-	<ul style="list-style-type: none"> - Environmental condition can be improved. 	<ul style="list-style-type: none"> - Same as before. No change is observed.
4. Daily time schedule of community people	<ul style="list-style-type: none"> - The community spend more time to community activities - Women can save time to purchase thread. - Not all the community people attended to meetings even it would be their benefit 	<ul style="list-style-type: none"> - People participate actively in the projects. - People are willing to give their time for community benefit - Too many meetings were made for the projects. 	<ul style="list-style-type: none"> - The peoples participation is good - Because they participate now we have the projects - The benefit of the participation is for small group or is too low
5. People's attitude towards community activities	<ul style="list-style-type: none"> - The community came to have more committees organized - People are aware of problems in the communities. 	<ul style="list-style-type: none"> - Now there's more interest of community issues - More people is participating in community activities - Lack of capacity for new leaders or lack of leaders. 	<ul style="list-style-type: none"> - The projects stimulate the community to participate. - More people came to participate. - There is still resistance in the community.
6. Gender issues	<ul style="list-style-type: none"> - Women have more chance to participate. - Women have presence in the organized committees in the auxiliatura. Women can increase the income for the family. Women committee can decide for their own. - The women willingness of working is decreasing because of committee problem. 	<ul style="list-style-type: none"> - The women's group has an opportunity to develop. - The traveling to patzun is decreased. - Women have their own project and organization - Insufficient knowledge for management and lack of trust among the beneficiaries. 	<ul style="list-style-type: none"> - Although the community criticizes the committee, people are interested in participation. - Women have lower production cost of huipil. Women participate in auxiliatura meetings - Organization management is poor.
7. Other overall matters	<ul style="list-style-type: none"> - Influence of previous projects. - The previous projects affect in bad way the work in the actual projects. 	-	-

Community: Panyebar

Topic	Informant 1 (male)	Informant 2 (male)	Informant 3 (female)
1. Income condition	<ul style="list-style-type: none"> - No significant change is observed since he couldn't obtain commercial products. - Better quality of plants and products may contribute to income.. - Diversification of crops would lead to other income source. - It will take time until we can enjoy the benefit of the coffee projects. 	<ul style="list-style-type: none"> - It is expected to have better water without cost. - We worried about the cost to be imposed by the service. 	<ul style="list-style-type: none"> - Quality of some products (ex. ice creams, sodas, atoles, etc.) is improved. But price is higher. - Payment for having the sterilizer and water service.
2. Living condition	<ul style="list-style-type: none"> - No change is observed, since the project has not generated immediate benefits. - Better income is expected when improvement of the quality of the coffee is attained. 	<ul style="list-style-type: none"> - Availability and quality of water were improved. - Better hygiene and health conditions. - Application of the chloride might be inadequate. 	<ul style="list-style-type: none"> - Availability and quality of water were improved. - Improvement in the quality of people's life, especially for the children. - The chloride might be harmful
3. Environmental Condition	<ul style="list-style-type: none"> - Better conditions of seedling production are established by installation of greenhouses. - Less environmental contamination when applying agro-chemicals inside the greenhouse. - High cost of maintenance 	<ul style="list-style-type: none"> - Less contamination of the water. - General conditions of community are improved. - Possible damages of the system 	<ul style="list-style-type: none"> - There is less wasted water. - There won't be contamination of the environment. - There would be negative impact if projects were inadequately utilized.
4. Daily time schedule of community people	<ul style="list-style-type: none"> - Most of people participate actively in the Project. - People are interested in participating in the project. 	<ul style="list-style-type: none"> - Only at the beginning, a lot of participation was seen. - It seems that people came to have more interest in working for benefit. - Little availability of time for other activities 	<ul style="list-style-type: none"> - People participated more. - Implementation of projects affected the schedule of daily activities.
5. People's attitude towards community activities	<ul style="list-style-type: none"> - More cooperation among community people is observed. - Easiness for the execution of Projects. - People have little time availability due to productive activities. 	<ul style="list-style-type: none"> - More cooperation among people was observed. - Not all of the people participated with the same interest. 	<ul style="list-style-type: none"> - More cooperation among community people is observed. - The activities are beneficial for the whole community. - Not everybody participated in the projects.
6. Gender issues	<ul style="list-style-type: none"> - There is availability of working. - More participation is observed. - There are more rooms for the women to participate. - Women can give more opinion. - Some of women are not accustomed to participate. 	<ul style="list-style-type: none"> - There was more participation. - People have intention to participate - Woman has more participation. - They express what they think. - They have willingness to work. - Little availability of time due to their home responsibilities. - Insufficient knowledge. 	<ul style="list-style-type: none"> - There is no change. It is same as before - With these projects, they open up more rooms for women to participate. - There wasn't an specific project for women
7. Other overall matters	-	-	-

Community: Palestina

Topic	Informant 1 (male)	Informant 2 (male)	Informant 3 (female)
1. Income condition	<ul style="list-style-type: none"> - There is better quality of water. - There is more readiness of medicines in the communities with lower price. - We worried about the payment for the service. - Inadequate handling of medicine prices 	<ul style="list-style-type: none"> - No significant change is observed for potato project. - There are medicines in the community now and at lower price. - Potato can be kept to sell at higher price. If potatoes are not stored well it can get lost. - There's not enough medicines 	<ul style="list-style-type: none"> - More medicines became available at lower price. - There are some medicines not available in MPU so there is still necessity of purchase in private pharmacies.
2. Living condition	<ul style="list-style-type: none"> - Better conditions of hygiene and health. - Better control of illnesses. - Insufficient knowledge regarding use of some medicines 	<ul style="list-style-type: none"> - Better quality of hygiene and health. - Better control of illnesses. - Inadequate functioning of the medicines 	<ul style="list-style-type: none"> - Immediate availability in the medicine community. - Better control of illnesses. - Insufficient knowledge of use and effect of some medicines
3. Environmental Condition	<ul style="list-style-type: none"> - Quality of water is improved. - There is leak of water. - Inadequate use of the water. 	<ul style="list-style-type: none"> - Less contamination is observed since less chemicals are used for potato production. - Inadequate use of chemical can contaminate the environment 	<ul style="list-style-type: none"> - Appropriate place for sale of medicines. - The space for storing medicines is not sufficient.
4. Daily time schedule of community people	<ul style="list-style-type: none"> - They save time because they have medicines in their community. - When the pharmacies are closed, people have to go to the urban area 	<ul style="list-style-type: none"> - They use less time to buy medicines. - They participated in activities without any change of normal schedule. - Not all are willing to practice the recommended method. - The pharmacies don't open full time 	<ul style="list-style-type: none"> - Less time became necessary to buy medicines. - The MPUs are not open sometimes.
5. People's attitude towards community activities	<ul style="list-style-type: none"> - No significant change is observed. - More people participated as the projects proceeded - There are still a lot of resistances to participation in community activities. 	<ul style="list-style-type: none"> - There was more participation. - The projects promoted the community participation. - There are still a lot of resistances to participation in community activities. 	<ul style="list-style-type: none"> - The project became an example to work in cooperation. - Little availability of time for people to work in community activities
6. Gender issues	<ul style="list-style-type: none"> - There are more rooms for the woman to participate. - Some have the opportunity to work for their community now. - They're not sufficiently prepared to participate in this type of projects. 	<ul style="list-style-type: none"> - Some women participated more. - There is more possibility for women to participate. - There was no specific project for the women that generates significant direct benefit 	<ul style="list-style-type: none"> - Women have more chance to participate. - Women have very little time to participate in the additional activities.
7. Other overall matters	<ul style="list-style-type: none"> - More support should be given in others aspect, for example like commercialization 	-	<ul style="list-style-type: none"> - It is important to have medicines in the community at lower price. - More medicine should be handled and preparation for it is necessary.

ANNEX 3
LESSONS LEARNED

ANNEX 3

LESSONS LEARNED

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ANNEX 3 LESSONS LEARNED

1. Lessons Learned by Stage

Through the study (the master plan stage to the verification study), various lessons are obtained which would be useful for the future planning and implementation of projects in the central highland region. The lessons learned are summarized as in the following section and details of the cases for each lesson learned are explained in Attachment.

1.1 Planning Stage

Item / Projects referred	Lessons Learned	Reference*
1) Development concept		
<i>Due to overall observation, no specific project is referred.</i>	- It was observed that the micro-basin does not necessarily match with economically active area in the central highland region. Besides, rural communities do not have sufficient communication each other among them. Therefore, the concept of micro-basin shall be adjusted flexibly if there are more than one communities in the basin and they are independent each other.	A-1
<i>Due to overall observation, no specific project is referred.</i>	- Approach to the poverty alleviation from 3 aspects (income generation, improvement of living facilities, and conservation of natural resource) is useful and necessary in terms of sustainability of project and mitigation of bias in providing benefit.	A-8
2) Selection of project area		
<i>Due to overall observation, no specific project is referred.</i>	- A project area that consists of only one community will be easier and more manageable in planning projects and their implementation.	A-1
<i>Due to overall observation, no specific project is referred.</i>	- When more than one community will be selected as a project area, an appropriate leader shall be found so that better communication shall be made.	A-1
<i>Due to overall observation, no specific project is referred.</i>	- It is observed that initial conditions of each community (organization, experience of projects, political factor, etc.) affect progress and results of the projects (refer to Section 4.2.4). Therefore, sufficient consideration has to be made on these initial conditions during the process of selection of project area.	Section 2
3) Participatory survey		
<i>No specific project is referred.</i>	- The methodology used for the survey is too comprehensive and costly for the counterpart organization to implement continuously in future. Besides, it imposed many burdens on community people due to the series of meetings. Therefore, the methodology shall be more simplified so that the counterpart organization can easily apply and also the burden of the community people will be reduced.	A-2

<i>No specific project is referred.</i>	- People focus more on facility-providing projects and their attention tends to be paid more on the problems that they are facing at the time of meeting. This would lead to the selection of projects that does not reflect long-term needs of communities. Hence, sufficient discussion would be necessary to make people aware of long-term needs.	A-3
<i>Project #06</i>	- It was observed that highly-ranked projects in the meeting may not necessarily reflect the people's real needs. Hence, people's real intention has to be tested by their action. For example, people have to collect signatures that promise for voluntary labor force or to collect small amount of money to participate in the project in order to prove their real intention.	A-4
4) Survey by experts		
<i>Project #11</i>	- In visiting each house for interview or to distribute information about projects, some of the people, especially in case of women, showed a kind of fear in talking with outsiders due to the influence of the long-lasting internal war. To visit community people individually, it is necessary to accompany one or two village people always. Besides, it would be preferable to include local female staff in the survey team.	A-2
<i>Project #11</i>	- In the future, opposition to the projects may occur not only from inside of the project area but also from outside of the area. Therefore, survey on social aspect shall be conducted also for surrounding area to avoid any potential opposition or conflict.	B-3
5) Utilization of NGOs		
<i>Due to overall observation, no specific project is referred.</i>	- For the survey or implementation of projects, role of NGO or local consultant will be quite important. After clarifying the role of NGO or local consultants under the project framework, appropriate selection shall be made since ability of the NGO/local consultant varies a lot. Besides, local-based NGO usually has experience of working together with community people and, hence, have knowledge on social background. These experiences and knowledge would be useful for social survey of the community (refer to Section 4.2.5).	Section 3
6) Details of project planning		
<i>Project #01, 13</i>	- In case like MPU or the thread shop, their sales were not large as expected and it lead to the less incentive and little profit accumulation. In planning similar type of projects, scale of the project shall be smaller than the demand usually expected. The scale of the shop can be enlarged as the profit accumulates in the later stage.	A-5

<i>Project #02, 11</i>	- If a water source is originally used for water supply, use of the source for other purpose such as irrigation may cause opposing movement or worrying by the beneficiaries of water supply system. In this case, the project must be designed so as not to affect the water supply and also this point shall be clearly explained to the stakeholders. Then an agreement on use of the water source shall be clearly made with them by a written document in order to avoid future conflict.	A-6
<i>Project #02</i>	- A project that provides benefit to a limited number of people may create internal conflict in the community. When the beneficiary is limited under a project, a part of the profit of the project shall be re-utilized to the whole community in some way. In addition, the re-utilization of profit shall be clearly explained to the community so that they can understand that the project is not only for a limited number of people but also for the whole community.	A-7
<i>Project #12, 13</i>	- Combination of two projects shall be considered in project planning since they might have multiplier or complementary effect. For example, combination of a project that raises people's awareness (ex. Plan for migrant people to the coastal area) and a project that improves availability of material relating to its awareness (ex. MPU plan) would have complementary effect each other and contribute efficiently to the people's welfare.	A-9
<i>Project #01,13</i>	- The rural area of Guatemala is still a male-dominated society. Participation of women in projects is low and projects targeted for women are also quite few, which means that women have little chance to receive benefit and to contribute to improvement of their income and their status in the communities. Therefore, it is necessary to include projects that pay attention to gender issue so that status and capacity of women and their opportunity will be improved. Considering this social background, i.e. male dominated situation, it would be necessary to obtain understanding of men regarding implementation of women-targeted projects.	A-10

*: The numbers show the *case number* to be referred.

1.2 Implementation Stage

Item / Projects referred	Lessons Learned	Reference
1) Participation of people		
<i>Project #02</i>	- People tend to hesitate to participate in the project at the beginning due to the doubt or to be <i>free rider</i> . People who did not participate at the beginning may participate after the implementation or when actual effect is observed. And if they cannot be the beneficiaries, conflict with original beneficiaries may occur. Therefore, the project shall be designed in a way that it can expand its capacity and be able to absorb additional participants in the later stage.	B-1

<i>Project #04,06</i>	<ul style="list-style-type: none"> - Implementation of more than one project in the same area within a limited time makes difficult for people to offer voluntary labor force. Besides, in the area where people earn cash income through daily labor work, it would be difficult to offer voluntary labor force. Hence, in case voluntary labor force is precondition for implementation of a project, detail analysis on labor availability is necessary and sufficient time schedule shall be considered for the construction work. In case, payment of economic incentive is necessary due to the condition of community (custom, economic activities of people, etc.), careful consideration should be made regarding the amount of incentive since provision of incentive may change people's mind and they will not work without payment in the future. Amount of payment should be at most the opportunity cost of community people. Otherwise, the payment will hinder indigenous development of the community and change it into an aid-relying community. 	B-6
2) Conflict among people		
<i>Project #11</i>	<ul style="list-style-type: none"> - Existence of political conflict will be a big obstacle of project implementation. Besides, when an opposing group exists outside of project area, detection is difficult. Therefore, it is necessary to conduct social survey also in the surrounding communities of project area in order to detect any possibility of conflict. In addition, investigation on existence of political conflict in local administration would be also necessary. In case any conflicts arise, it is necessary to arbitrate with involving third party from outside the community, such as MAGA, NGO, Department authority, and so on. 	B-3
<i>Project #04,05</i>	<ul style="list-style-type: none"> - Unclear agreement may cause one-sided claim and, hence, it may cause internal conflict among the community people. It is necessary to prepare written document for any kind of agreement, especially for cases of using land or water source. And details of agreement have to be clearly stipulated in the document. In case any conflicts arise, it is necessary to arbitrate with involving third party from outside the community, such as MAGA, NGO, Municipality/Department authority, and so on. 	B-2
3) Supporting system		
<i>Due to overall observation, no specific project is referred.</i>	<ul style="list-style-type: none"> - Counterpart organizations have constraints in providing continuous supervision due to frequent personnel change. Lack of continuous supervision at the initial stage of the project may seriously affect the sustainability of the project. There is a necessity to establish a system to provide continuous and close supervision on the projects under the present institutional framework. 	D-1

4) Communication		
<i>Due to overall observation, no specific project is referred.</i>	- Poor communication among communities/municipalities affects the demonstration effect of the pilot projects. This will be a constraint for any kind of projects that aim at demonstration effect, since very few people will know about the existence of the projects. To tackle this problem, active information distribution has to be made by the governmental side.	D-2
5) Task of committee		
<i>Project #01,02</i>	- Majority of people in the community did not receive sufficient education and, therefore, management work tends to concentrate on those who have capacity that are few in rural areas. Concentration of work may lead to a misunderstanding that the project is for a group of people instead of for the community and it might lead to an internal conflict. Therefore, management work shall be as simple as possible so that more people can take part in and, at the same time, continuous education shall be necessary to enhance people's capacity in management work.	B-2
6) Understanding on project facility		
<i>Project #01,13</i>	- When community people, especially principal member of a project, receive any facilities, they tend to think that those facilities belong to them rather than to the whole community. If the people think that equipment or facilities belong to them, they do not carefully use or misappropriate the facilities for their own use. To avoid this problem, it is necessary to educate people continuously, especially for principal members of the project, that any facilities of projects are for the whole community. However, this process would take long time.	B-4

1.3 Monitoring/Operation Stage

Item / Projects referred	Lessons Learned	Reference
1) Monitoring		
<i>Project #03,07,14</i>	- Monitoring is important for people to understand the impact of a project and for sustainability of the projects. In this sense, it is preferable for the beneficiaries to conduct monitoring by themselves. On the other hand, community people are not capable to conduct complicated monitoring. Therefore, monitoring indicator shall be as simple as possible. For example, monitoring indicator for water quality improvement shall be occurrence of diarrhea rather than the number of coliform in potable water.	C-1

<p><i>Project #01,02,04,13</i></p>	<p>- People in rural area are generally skeptical about the management of committee. In order to clarify the performance of committee member to the community, feedback of monitoring results to the community would be necessary. This will be attained by establishing reporting system of the results through informing through general assembly or displaying report in a public place.</p>	<p>C-2</p>
<p>2) Transparency in management</p>		
<p><i>Project #01,02,04,13</i></p>	<p>- Unclear management easily causes the rumor of misappropriation and possibly grows to a conflict. To avoid this, continuous effort has to be made to explain about the project to all the people in the community before it grows to a conflict. Transparency in management of the project would be a solution and it has to be secured by establishing auditing system by a third party.</p>	<p>C-2</p>
<p>3) Burden of committee and payment of incentives</p>		
<p><i>Project #01,02,13</i></p>	<p>- The committee members have to deal with various works without any payment. In case of women, working as committee will be a heavy burden since they have to sacrifice their time in addition to domestic work. Therefore, the work of committee has to be reduced as much as possible in case it is voluntary work. Besides, employing a person for management work would be a solution as far as the project affords it. In case, payment of economic incentive is necessary due to the condition of community (custom, economic activities of people, etc.),, careful consideration would be necessary regarding the amount of incentive since provision of incentive may change people's mind and they will not work without payment in the future. This tendency will hinder indigenous development and change it into an aid-relying community.</p>	<p>C-3</p>
<p><i>Project #01,02,13</i></p>	<p>- In rural community, people generally think that they are entitled to be paid if he/she worked for the community. If no payment is made, misappropriation could easily occur by paying to themselves from the project assets. Besides, unpaid work will reduce their intention for their work. For this tendency, it would be preferable to provide certain amount of incentives. Employment of staff for a project by the association or committee would be a solution since it would provide incentive for a person to work and at the same time workload could be reduced.</p>	<p>B-6</p>

4) Regulation of people's organization		
<i>Project #02,04,05</i>	- In the operation stage, various problems which were not predicted in the planning stage might occur. For example, there is a possibility of misuse of the project facility in unexpected way, or use of excess water for irrigation in severe dry season. In case these points are not included in the original rules of association, it is necessary to establish a regulation regarding these points in detail during the implementation stage. The regulation has to be legally effective so that strict supervision shall be made.	C-4
5) Supervision & supporting system		
<i>Due to overall observation, no specific project is referred.</i>	- Counterpart organizations have constraints due to frequent personnel change. Lack of continuous supervision at the initial stage of the project may seriously affect its sustainability. There is a necessity to establish a system to provide continuous and close supervision on the projects under the present institutional framework.	D-1
<i>Due to overall observation, no specific project is referred.</i>	- It is observed that communication among governmental and/or administrative side is also insufficient. Due to this, useful programs for rural development such as PROAM, seedling provision program under INAB, etc. are not fully utilized. Therefore, a system to improve information exchange among governmental organizations would be necessary, such as establishment of information distribution unit, and so on.	D-2

2. Initial Conditions of Communities and Effects on Project Implementation

It is observed that smoothness of implementation and results of projects were different for each community. It is considered that these differences stem from the difference of initial conditions of each community. The effects of initial conditions on project implementation, which are observed through the implementation of the projects, can be summarized as below (see Table 4.2.4(1)).

(1) Structure of the project area (number of communities) and communication

Effect: Large

Insufficient communication among communities and/or inside communities makes difficult in obtaining consensus during project formation. Besides, information regarding meaning of projects, its effect and its operation will not reach all the communities. It may cause misunderstandings among community people and may cause internal conflict in the future.

(2) Organization in the communities

Effect: Very Large

If there is no organization basis in a community, it is quite difficult to make decision as a community and to obtain consensus regarding projects. Lack of organization also affects the process of establishing a new organization for a project. Selection of participants and representatives will be difficult and require a lot of assistance from outside. Besides, if there are several groups inside community due to the difference of religion, custom or belief, coordination among those groups cannot be made and possibly causes internal conflict.

(3) Experience of projects

Effect: Large

Some people have experience that they cooperate for survey or invest some money for projects and the projects were not realized. In case people have this kind of experience before, people become very skeptical about project implementation and their participation become very low. In some communities, principal members of a project misappropriated the project assets before. In this case also, people become doubtful about the principal member and become very sensitive about the unclearness of project management. Once this kind of case occurs, extensive support will be necessary until the projects will take off. In addition, from the viewpoints of voluntary labor, it will be quite difficult if the people experienced paid work in any projects in the past.

(4) Political factor

Effect: Very Large

When political conflicts exist in and around a community, a political leader may agitate community people and impede project implementation. In this case, the problem cannot be technically solved, because neither political leader nor agitated people would accept any logical explanation. For this reason, projects may be suspended or be implemented by force. Therefore, existence of political conflict will be a big factor that impedes project implementation.

(5) Economic activity of community people

Effect: Small

By adjusting project contents, timing of implementation, etc., it would be possible to avoid any problems to arise. However, in case people in the community earns necessary cash income through daily labor work, condition of voluntary labor work shall be well-considered in terms of people's attitude and their availability.

(6) Natural condition (Climatic, topographic condition, etc.)

Effect: Small

Since these factors are considered during the process of project formation, most of the problems can be technically solved and, hence, effect on project is small. However, it is necessary to pay sufficient consideration when agriculture-related projects will be implemented in a area with severe climatic conditions. Besides, conservative and/or irrational attitude of people in remote rural area may affect the progress of projects.

(7) Others (religion, custom, belief, etc.)

Effect: Different for each case

Difference in religion, custom, or belief may form several groups in a community. In case the community has a function of decision-making and coordination in it, these differences would not affect so much on project implementation. On the other hand, in a area where the above mentioned function does not exist, special attention should be paid, since the difference of religion, custom, or belief, etc. may cause internal conflict. In addition, there might be fanatic religious group or group that has same belief in some cases. In this case, special consideration will be necessary.

3. Evaluation on Non Governmental Organization (NGO) in the Pilot Projects

In the pilot projects, the study team involved the NGOs in project formulation from the planning stage broadly.

(1) Capability

The study team selected NGOs from the short list of the candidates with advises of the counterpart, MAGA. Thus the NGOs that were selected finally and involved in the pilot projects had good capabilities for implementing the project. Some of them had experiences of participatory community development and management of a public meeting, knowledge of Project Cycle Management, knowledge and experiences of methodology for interview survey in the rural area. All their works in rural area were good managed and very skilled. Especially NGOs that work in local department had several native Mayan language speakers in order to communicate and obtain more information from indigenous people.

On the other hand, in general, the reports prepared by the NGOs were not good enough to satisfy our requirement in content. There was a tendency that NGOs that have office in the capital and relatively big in scale wrote reports better than the small NGOs. There were several NGOs who did not have good capability for

summarizing and analyzing the results of their survey.

(2) Contribution to the Implementation of the Projects

In implementation of rural development project, NGO is required to be a bridge between two parties, the government and beneficiaries. NGOs are always expected to establish good relation to villagers, and in our pilot projects they had done well. They took very important role in the project implementation and contributed well for managing public meeting, collecting information and other several activities in rural area. For a small exception, it should be note that there was an NGO that could not establish good relation to rural people and failed to perform their activities in village.

(3) Lesson and learned

- As mentioned above, NGO tends to be lack of some basic capabilities for statistical compilation and analysis. When next questionnaire survey will be done in future, it is recommended that NGO should take part only in interview to villager and compilation and analysis should be made by the study team directly in order to have more reliable result.
- On the other hand, local-based NGOs usually have various experiences of working together with people in target areas and have knowledge about its social background. This information is quite useful for social survey necessary for detecting social problems in the area. For this purpose also, NGO has to be utilized.
- Regarding payment to NGO, an NGO that is big in scale and/or has office in the capital, with high capability of the works requires high salary. In case of interview survey in rural area, thus it is not necessary to hire such expensive NGO from the capital because local NGO knows well about their area and can communicate to rural people more than the capital NGO.
- There are various type of NGOs, an NGO which is good at interview survey, an NGO good at public meeting and so on. However it is very difficult to identify such characteristics with company papers or instant interviews. The advises of the counterpart or international cooperation agency should be referred to make selection of NGO.
- In selection of NGO, an opinion of villager should be included. Without villagers' acceptance, or with villagers' suspicion, NGO would not perform their activities in rural area.

Table 2 (1) Initial Condition and Project Implementation (1/2)

Aspect	Xeatzan Bajo	Panyebar	Palestina	Effect on Project
1. Structure of the project area (no. of community) & communication	There is only one caserío, Xeatzan Bajo, in the project area. Due to this, communication in the area is relatively good.	Although Panyebar is one caserío, it consists of 3 parajes. Although people communicate each other among these parajes, the level of communication is not sufficient.	The area consists of 5 communities and communication among these communities is quite poor.	Effect: Large Insufficient communication among communities and/or inside communities makes difficult in obtaining consensus during project formation. Besides, information regarding meaning of projects, its effect and its operation will not reach all the communities. It may cause misunderstandings among community people and may cause internal conflict in the future.
2. Organization in the communities	People select community authority by themselves. This authority is in charge of decision-making and coordination of the community, and various committees are also established. The community is well-organized.	There are 3 alcalde auxiliar in the community. However, they do not have any power in decision making of the community. Hence, the community lacks established decision making system and organization basis is quite weak.	Traditional system of community does not function already and there is no coordination function inside the communities. The mayor of the municipality directly makes decision and coordination among the people. Therefore, there is no organization basis in the communities.	Effect: Very Large If there is no organization basis in a community, it is quite difficult to make decision as a community and to obtain consensus regarding projects. Lack of organization also affects the process of establishing a new organization for a project. Selection of participants and representatives will be difficult and require a lot of assistance from outside. Besides, if there are several groups inside community due to the difference of religion, custom or belief, coordination among those groups cannot be made and possibly causes internal conflict.
3. Experience of projects	A community development project was implemented by a NGO before. The NGO misappropriate project assets and profit from the project. Therefore, people become quite sensitive about unclear management of development project.	A Water supply project was implemented by a NGO and FONAPAZ, and the system was installed. In addition to this, a project on coffee processing was implemented by a NGO. However, the project was stopped due to no repayment of credit. Since labor for public works is usually paid by the government in this area, it is difficult for people to offer voluntary labor.	A water supply project was implemented by a NGO. To participate in this project, it was necessary for people to offer labor force, etc. A political leader agitate people by saying water supply system would installed with free of charge. However, no supply system was installed by him and, due to this, people starts doubting about any projects for its implementation.	Effect: Large Some people have experience that they cooperate for survey or invest some money for projects and the projects were not realized. In case people have this kind of experience before, people become very skeptical about project implementation and their participation become very low. In some communities, principal members of a project misappropriated the project assets before. In this case also, people become doubtful about the principal member and become very sensitive about the unclearness of project management. Once this kind of case occurs, extensive support will be necessary until the projects will take off. In addition, from the viewpoints of voluntary labor, it will be quite difficult if the people experienced paid work in any projects in the past.

Table 2 (1) Initial Condition and Project Implementation (2/2)

Aspect	Xeatzan Bajo	Panyebar	Palestina	Effect on Project
4. Political factor	Not observed.	Not observed.	There is a political leader near the project area who is against the present mayor of the municipality. He has been against the present mayor for long time and made disturbance whenever projects were implemented. Due to this, the mini-irrigation project was suspended.	Effect: Very Large When political conflicts exist in and around a community, a political leader may agitate community people and impede project implementation. In this case, the problem cannot be technically solved, because neither political leader nor agitated people would accept any logical explanation. For this reason, projects may be suspended or be implemented by force. Therefore, existence of political conflict will be a big factor that impedes project implementation.
5. Economic activity of community people	Contract farming of vegetables.	Small scale plantation of coffee and daily labor work at coffee plantation around the Lake Atitlan.	Producing maize and potatoes and seasonal migration to the coastal area for additional income. Migration to U.S.A. is also observed.	Effect: Small By adjusting project contents, timing of implementation, etc., it would be possible to avoid any problems to arise. However, in case people in the community earn necessary cash through daily labor work, condition of voluntary labor work shall be well-considered in terms of people's attitude and their availability.
6. Natural condition (climatic, topographic condition, etc.)	Altitude: 2,000~2,300m Moderate undulation, 1~10% of slope Average rainfall: 1,000mm Temperature: -3~36°C Approx. 2 hours from Guatemala city and access is relatively good.	Altitude: 1,600~2,600m Strong undulation, 15~60% of slop Ave rainfall: 1500~2000mm Temperature: 18~24°C About 1 hour from American highway. Access is relatively poor.	Altitude: 2,600~2,900m Strong undulation, 10~20% of slope Ave. rainfall: 800~1000mm Temperature: -9~26°C It locates along the American highway. About 45 min from Xela. Access is good.	Effect: Small Since these factors are considered during the process of project formation, most of the problems can be technically solved and, hence, effect on project is small. However, it is necessary to pay sufficient consideration when agriculture-related projects will be implemented in a area with severe climatic conditions. Besides, conservative and/or irrational attitude of people in remote rural area may affect the progress of projects.
7. Others (religion, custom, belief, etc.)	Not observed.	A group of new religion exists in the community and is against any development activities. However, no disturbance was made.	A group of new religion was observed in the area. However, no disturbance was made from them. More female household heads were observed compare to other areas. It is considered that many of male members migrate to outside of communities.	Effect: Different for each case Difference in religion, custom, or belief may form several groups in a community. In case the community has a function of decision-making and coordination in it, these differences would not affect so much on project implementation. On the other hand, in a area where the above mentioned function does not exist, special attention should be paid, since the difference of religion, custom, or belief, etc. may cause internal conflict. In addition, there might be fanatic religious group or group that has same belief in some cases. In this case, special consideration will be necessary.

Note: Since the communities are selected from the same level of poverty (income condition and living environment), it is assumed that there is no big difference regarding income level, living environment, etc., and therefore, they are excluded from the aspects of analysis.

ATTACHMENT

No.	A-1
Stage	Planning
Issue	Selection of the Communities (Project Area)
Case	<p>Among the selected micro-basins, difference in development potential was observed for each basins. For example, Xeatzan Bajo has more potential compare to the other areas. One of the reason for this is that Xeatzan Bajo consists of one community (caserío) while other areas consist of more than one community (Panyebar has 3 different small villages (paraje), Palestina has 5 caseríos, Pachum has 3 sectors). In rural area of Guatemala, there is almost no communication among communities. Therefore, including several communities in a project area is quite difficult in obtaining consensus, distributing information and managing projects. Besides, it is quite difficult to find a key person who can have leadership for the area consists of more than one community.</p>
Analysis	<ol style="list-style-type: none"> 1) There is almost no communication among communities. 2) Poor communication among communities will be an obstacle for project formation and implementation. 3) It is quite difficult to find an appropriate leader for the area that consists of more than one community.
Lessons	<ol style="list-style-type: none"> 1) A project area that consists of only one community will be easier for project formation and implementation. 2) When more than one community will be selected as a project area, an appropriate leader shall be found so that better communication shall be made.

No.	A-2
Stage	Planning
Issue	Participatory Survey
Case	<p>During the master plan study, a participatory survey was made to extract the needs of community people. In the process of the survey, meetings were held for 5 times. However, following problems were observed.</p> <ol style="list-style-type: none"> 1) The survey cost about Q60,000 ~ Q85,000, which is too costly for the counterpart organization to implement continuously in future. 2) To attend a series of meeting is a burden for the people. They sometimes have to give up working to attend the meeting. 3) Although many opportunities were provided for the people to participate, not all the community people (only a part of the people) attended the meeting. 4) In visiting each house for interview or to distribute information on projects, some of the people, especially women, showed a kind of fear in talking with outsider.
Analysis	<ol style="list-style-type: none"> 1) The methodology used for the survey is too comprehensive and, therefore, it became costly and imposed many burdens on community people. 2) It is quite difficult to involve all the people of the community for the meetings. 3) Due to the influence of the long-lasting internal war, some of the community people, especially in remote area, are quite cautious against the outsiders.
Lessons	<ol style="list-style-type: none"> 1) The methodology shall be more simplified so that the counterpart organization can easily apply in future and also the burden of the community people will be reduced. 2) To involve community people as much as possible, it is necessary to spend sufficient time to distribute information about the meeting and to persuade them to participate. 3) To visit community people individually, it is necessary to accompany one or two village people always and it is better to include female staff.

No.	A-3
Stage	Planning
Issue	Extraction of Needs and Project Formation
Case	<p>Community needs were extracted thorough the participatory survey. It was observed, however, that most of the people focus more on the project that will provide facilities and do not think carefully about its operation and maintenance, cost for O&M and skill for management. Besides, people tend to put more importance on the problems that they are facing at the time of meeting. For example, if the meeting is held during the rainy season, their attention tends to be paid on road condition rather than water supply system. On the other hand, in many cases of participatory survey, the survey team takes the community needs as the most adequate needs of the community. This tendency may lead to near-sighted decision in forming development approaches.</p>
Analysis	<ol style="list-style-type: none"> 1) People focus more on facility-providing projects. 2) Attention tends to be paid on the problems that they are facing at the time of meeting. 3) Survey teams may take the community needs as the most adequate needs of the community when a participatory approach is applied.
Lessons	<ol style="list-style-type: none"> 1) Sufficient discussion is necessary to make people aware of long-term needs of the community. 2) Explanation of the difficulty in operation and maintenance shall be made during the process of forming development approaches. 3) Survey teams should take more time on forming development approaches by considering communities' long-term needs and management capacity of people as the third party.

No.	A-4
Stage	Planning
Issue	Selecting Projects (Necessity of Action from People's Side)
Case	In selecting pilot projects, people's intention was included as a criterion for selection. However, it was observed that people do not take action when it came to the implementation while the project was ranked as high priority at the time of meeting. For example, rehabilitation of water supply system in Panyebar, very few people offered their voluntary labor force during the implementation while the project was ranked as first priority. Although there are many other factors for them not to participate in voluntary work, it is considered that the ranking itself did not necessarily reflect the real people's priority.
Analysis	1) High ranked project does not necessarily reflect the people's real intention.
Lessons	1) In selecting projects, people's real intention has to be tested by their action. For example, people have to collect signatures that showing their intention for voluntary labor force or to collect small amount of money to participate in the project in order to prove their real necessity.

No.	A-5
Stage	Planning
Issue	Deciding Project Scale
Case	<p>In the plan of revolving fund for hand weaving thread in Xeatzan Bajo, about Q86,000 of thread was provided as the initial investment. The amount of initial investment was calculated based on the demand in the community. However, the sale was not sufficient as it was expected. Due to this, operation of the shop becomes almost at even, i.e. no accumulation of profit, and large amount of stock makes difficult in controlling them.</p> <p>On the other hand, in the Municipality Community Health Service Plan in Palestina, 2 Minimal Pharmacy Units (MPU) were installed. The number of pharmacy to be installed were decided based on the equality of benefit and potential demand of the communities. However, the sale of medicine was not sufficient as it was expected and, therefore, very few incentives were paid to the health promoters. With this condition, too many burdens will be imposed on the promoters and it may affect the sustainability of the project.</p>
Analysis	<ol style="list-style-type: none"> 1) In both cases, the scale of the project was designed based on the communities' demand and equality of benefit. 2) The sale was not large as expected. This leads to the less incentive and little profit accumulation.
Lessons	<ol style="list-style-type: none"> 1) In case like MPU or the thread shop, the scale of the project shall be designed to be smaller than the demand that usually expected. The scale of the shop can be enlarged by the profit accumulation in the later stage. 2) Smaller scale of project will be easier in management and, hence, suitable for the people to manage in the initial stage.

No.	A-6
Stage	Planning
Issue	Utilization of Water Source
Case	<p>In Palestina, the water source for the irrigation is originally used for the potable water supply. Although it was the political reason, an opposing group protested against the use of water for irrigation purpose.</p> <p>In case of mini-irrigation project in Xeatzan Bajo also, the water source is originally used for the potable water supply partly for the community and partly for the municipality of Patzún. The municipality worried about the water availability if the water is used for the irrigation. However, the Study Team explained that there would be no negative impact on water supply and made an agreement with the municipality with a written document.</p>
Analysis	<ol style="list-style-type: none"> 1) Use of water source that originally used for water supply may cause opposing movement or worrying by the beneficiaries of water supply system. 2) Explanation and agreement with written document at the initial stage could avoid conflict in implementation stage.
Lessons	<ol style="list-style-type: none"> 1) In case that water source will be used for irrigation purpose, there is a high possibility of protesting from the present beneficiaries or future beneficiaries of water supply system. 2) The project should be designed so as not to affect the water supply and also this point shall be clearly explained to the stakeholders. Besides, a written agreement will avoid future conflict with them.

No.	A-7
Stage	Planning
Issue	Utilization of Profit for the Community
Case	<p>For the project that the beneficiaries are limited such as the case of mini-irrigation project, envy of non-beneficiaries will easily arise and it will change into rumor or criticism against principal member of the project. This situation may expand to a conflict in the community. Besides, a project that provides benefit to a limited number of people will merely expand the income gap in a community, which should not be an objective of the project. On the other hand, due to the various constraints such as water availability, topographic condition, attitude of community people, etc., not all the member can be included in the beneficiaries of the project. Therefore, there is a necessity to re-utilize profit from the project for the whole community so that non-beneficiaries will also enjoy the benefit to some extent. In the case of Xeatzan Bajo, 11% of the water charge will be re-utilized for welfare and development activities of the community.</p>
Analysis	<ol style="list-style-type: none"> 1) A project that provides benefit to a limited number of people may create internal conflict in the community. 2) This type of the project will expand the income gap in the community. 3) Re-utilization of the profit from the project for the whole community will avoid conflict and also contribute to the development of the community.
Lessons	<ol style="list-style-type: none"> 1) When the beneficiary-limited project is necessary to implement, a part of the profit from the project shall be re-utilized to the whole community in some way. 2) Re-utilization of the profit shall be clearly explained to the community people so that they can understand that the project is not only for a limited number of people but also for the whole community.

No.	A-8
Stage	Planning
Issue	Implementation of More than One Project
Case	<p>When a project is planned to be implemented in a area, those who are in the area but cannot be the beneficiaries usually complains and, in serious case, the projects cannot be sustainable. It was observed that this kind of complain could be avoided by implement more than one project in the same area. For example, those who could not be a beneficiary of plan for migrants to the coastal area will have complaints. However, if they will know that they will be covered by municipality community health service plan, their complaints will be absorbed and can avoid possible conflict among them.</p>
Analysis	<ol style="list-style-type: none"> 1) Implementation of one project may raise complaints those who could not be the beneficiaries. 2) If there are more than one project planned and the projects cover different type of beneficiaries, complaints among people could be reduced.
Lessons	<ol style="list-style-type: none"> 1) It would be preferable to implement (plan) more one project in a area. 2) Different type of projects that cover different beneficiaries will avoid bias of the project benefit and potential conflict among them.

No.	A-9
Stage	Planning
Issue	Multiplier effect of projects
Case	<p>It was observed that people who migrate to the coastal area also buy medicines for their migration. This fact can be analyzed by two factors. One is people's awareness towards hygiene condition in the coastal area that was brought up through the training programs under the plan for migrant people to the coastal area. Another factor is more availability of medicines due to drastically low price that is realized through the Municipality community health activity plan. Therefore, it can be said that these two projects had multiplier effect or complementary effect each other and, therefore, contributed to improvement of health condition of the community people.</p>
Analysis	<p>1) Combination of two project, a project raising people's awareness (Plan for migrant people to the coastal area, in this case), and a project that improves availability of material relating to its awareness (MPU plan in this case), would have complementary effect each other and contribute more to the people's welfare.</p>
Lessons	<p>1) Project with only training program may not have sufficient effect.</p> <p>2) If a training program will be combined with a project that will improve supply condition of necessary material relating to the awareness, both projects will have positive effect each other.</p>

No.	A-10
Stage	Planning
Issue	Consideration on gender issue (projects targeted for women)
Case	<p>The rural area of Guatemala is still a male-dominated society. Participation of women in projects is low and projects targeted for women are also quite few, which means that women have little chance to receive benefit and to contribute to improvement of their income and their status in the communities. With this background, even if there is a project in a community, women cannot actively participate in the project, since major opinion is usually decided by male participants.</p> <p>On the other hand, in case of Xeatzan Bajo and Palestina, women could participate more actively in the projects since there is a women-targeted project in Xeatzan Bajo and there is a specific opportunity for women to participate as a health promoter in case of Palestina. Participation of women in projects motivates women and contributes to improvement of their status in the rural society.</p>
Analysis	<ol style="list-style-type: none"> 1) It is difficult for women to actively participate in projects under the male-dominated society. 2) If there is a project targeted for women or a specific opportunity for women to participate is set in the project, more active participation can be expected. 3) Participation of women in projects contributes to the improvement of status and enhancement of their capacity.
Lessons	<ol style="list-style-type: none"> 1) In planning of projects, it is preferable to include women-targeted project. 2) In case women-targeted project is difficult to include, it is necessary to set specific opportunity for women to participate in a project such as assigning female health promoter like the case of Palestina.

No.	B-1
Stage	Implementation
Issue	Hesitation in Participation / Free Rider
Case	<p>In case of the plan for extension use of improved stove, participation of 130 beneficiaries was originally expected. However, at the beginning, only 86 beneficiaries actually participated and the rest of beneficiaries postponed their decision. When the improved stoves were installed for the 86 beneficiaries and its effect was observed, the rest of 44 beneficiaries decided to participate.</p> <p>Also in the case of mini-irrigation project, community people hesitate to participate in the project at the initial stage especially when an initial investment is necessary. Those who do not participate usually try to participate after seeing the implementation or the result of project. On the other hand, the original beneficiaries sometimes try to refuse them to participate or set a high obstacle to participate. This tendency may cause conflict among people.</p>
Analysis	<ol style="list-style-type: none"> 1) People tend to hesitate to participate in the project at the beginning due to the doubt about the project or to be a free rider. 2) People who did not participate in the project at the beginning may participate when actual effect is observed. 3) If the project is designed to absorb additional participants, conflict among people may be avoided.
Lessons	<ol style="list-style-type: none"> 1) It is also important to start the project with small number of participants at the beginning since many of people usually hesitate to participate. 2) The projects should be designed to absorb additional participants to avoid conflict in future. 3) Requirement for the participation in the later stage should be reasonable and affordable for the ordinary people in the community. Otherwise, conflict may occur.

No.	B-2
Stage	Implementation
Issue	Problems Caused by Unclear Agreement
Case	<p>Under the coffee production improvement project, a problem arose from management of nursery land. The landowner originally agreed on offering land for the coffee nursery with free of charge. The nursery was managed by a family member of landowner (landowner's son). All the seedlings grown in the nursery were supposed to be transferred to the association's green house as the association's property. When the seedlings were transferred to the association's green house, however, the landowner suddenly insisted to receive a portion of seedlings for his son (who managed nursery). The association rejected his claim and became in a state of confrontation with the landowner. With the arbitration by MAGA Sololá and the sub-contractor, both sides finally agreed on providing some portion of seedlings to the landowner's son.</p> <p>In other case also, similar argument occurred due to unclear agreement especially for the case such as land offering and distribution of water.</p>
Analysis	<ol style="list-style-type: none"> 1) Unclear agreement may cause one-sided claim and, hence, it may cause internal conflict among the community people. 2) With the arbitration by a third party (MAGA and sub-contractor in this case), conflict between landowner and association was avoided.
Lessons	<ol style="list-style-type: none"> 1) It is necessary to prepare written document for any kind of agreement at the beginning. And details of agreement have to be clearly stipulated in the document. 2) In the agreement, a third party has to be involved as a witness. The third party could be Alcalde of Municipality, MAGA, NGO, etc.

No.	B-3
Stage	Implementation
Issue	Political Opposition
Case	<p>In case of mini-irrigation project in Palestina, the project was cancelled due to security reason. A group of people opposed the project by claiming that the water source should not be used for irrigation purpose. However, the group was lead by a political leader who had been opposing to the present municipal mayor and never accepted any kind of explanation. The objective of the leader was merely to impede the mayor's project and he had no intention to reach any agreement. The people were from the outside of the project area and never showed up during the project formation stage (for the details, refer to Annex 1-L).</p>
Analysis	<ol style="list-style-type: none"> 1) Existence of political conflict will be a big obstacle of project implementation. 2) When the opposing group exists outside of the project area, detection of its existence is difficult.
Lessons	<ol style="list-style-type: none"> 1) Investigation on existence of political conflict in local administration is also important for smooth implementation of the projects. 2) It is important to cover not only the project area but also the surrounding area for social survey in order to detect any possibility of conflict.

No.	B-4
Stage	Implementation
Issue	Understanding on Project for the Community
Case	<p>It is observed that people tend to think that they can use the project properties as they like rather than thinking that the project is for the community. Besides, it seems that people usually think their own benefit first and try to enjoy the benefit among the limited number of people. This misunderstanding leads to inadequate management of the project. For example, under the plan of revolving fund for hand weaving thread, it is presumed that stock and cash were misused for their own benefit. Also similar cases were observed in other projects.</p>
Analysis	<ol style="list-style-type: none"> 1) When community people, especially principal member of a project, receives any facility or equipment, they tend to think that those equipment or facilities belong to them rather than to the whole community. 2) If the people think that equipment or facilities belong to them, they do not carefully use or, in worst case, misappropriate the facilities for their own use.
Lessons	<ol style="list-style-type: none"> 1) It is necessary to educate people, especially principal members of the project, that any equipment or facility of the project is for the whole community and not for themselves only. However, this process may take long time. 2) During the start-up period, continuous instruction and monitoring by the third party would be essential to change peoples understanding.

No.	B-5
Stage	Implementation
Issue	Capacity of the Beneficiaries
Case	<p>Generally, community people did not receive sufficient education due to the internal war and other various reasons. Because of this fact, the management of the project tends to concentrate on few persons who have capacity to do it. This may lead to misunderstanding that the project is not for the community but for the limited group of people. On the other hand, heavy burden will be imposed on those who have capacity. The heavy burden on them combined with distrust from the community people makes them reluctant to continue to work for the project and, accordingly, it affects the sustainability of the project. This case was observed in the mini-irrigation project in Xeatzan Bajo.</p>
Analysis	<ol style="list-style-type: none"> 1) Majority of people in the community did not receive sufficient education. 2) Management work tends to concentrate on those who have capacity that are few in rural areas. 3) Concentration of management work may lead to the misunderstanding that the project is for a group of people instead of for the community.
Lessons	<ol style="list-style-type: none"> 1) Management work shall be as simple as possible so that more people can take part in and, on the other hand, continuous education will be necessary to enhance the capacity of people in management work. 2) Disclosure of information on management work would be necessary to avoid misunderstanding.

No.	B-6
Stage	Implementation
Issue	Difficulty in Voluntary Labor Force
Case	<p>In the rehabilitation plan for the water supply system in Panyebar, voluntary labor force was the condition for the project implementation. However, very few people participated for voluntary work and, accordingly, the progress of the work delayed much more than expected. In this area, people earn cash through daily labor work and, due to this, it was difficult to offer the labor force for long time. To cope with this situation, the municipality promised to pay opportunity cost for participating in the work, and sufficient labor force was obtained.</p> <p>In other projects such as plan for revolving fund for hand weaving thread and plan for extension use of the improved stove, committee member paid some amount of compensation to them. This is basically because of their misunderstanding about the project ownership, but also because of their understanding that they should be rewarded for their work in some way. This understanding also makes difficult to obtain voluntary work for the community.</p>
Analysis	<ol style="list-style-type: none"> 1) Implementation of more than one project in the same area within a limited time makes difficult for the people to offer voluntary labor force. 2) In the area where people earn cash income through daily labor work, offering voluntary labor force is difficult. 3) People have understanding that they are entitled to be paid whenever they worked for the community.
Lessons	<ol style="list-style-type: none"> 1) In case voluntary labor force is precondition for the implementation of the project, sufficient time schedule and detail analysis for labor availability will be necessary. 2) Clear explanation has to be made to the committee members regarding the meaning of the project and importance of the voluntary work. In case any payment is necessary, clear agreement should be made with a written document.

No.	C-1
Stage	Operation/Monitoring Stage
Issue	Necessity for Simple Monitoring System
Case	<p>During the study period, the study team could assist in monitoring of the projects. After the study period, however, it will be necessary for the community to continue monitoring by themselves, since monitoring is important for people to understand the impact of a project. Besides, reporting the result of monitoring could clarify the performance of the committee member and avoid any rumors to occur. On the other hand, community people are not capable to conduct complicated monitoring and supporting system of the governmental side is not strong enough under the present institutional framework. Therefore, monitoring indicator shall be as simple as possible. For example, monitoring indicator for water quality improvement shall be occurrence of diarrhea rather than the number of coliform in potable water.</p>
Analysis	<ol style="list-style-type: none"> 1) Monitoring would be necessary even after the project since it is useful in understanding impacts of the project and to clarify the performance of the committee. 2) Supporting system of governmental side is not stable enough to assist in monitoring. 3) Community people are not capable enough to conduct complicated monitoring.
Lessons	<ol style="list-style-type: none"> 1) It is necessary to establish simpler monitoring system with simpler indicators in order for the people to continue their monitoring activity.

No.	C-2
Stage	Operation/Monitoring Stage
Issue	Distrust against the Committee Member
Case	<p>In the operation stage, various types of rumor and criticism occurred against the committee member. In case of Xeatzan Bajo, for instance, it is said that the committee member took the ownership of the projects and misappropriated the assets of the project or exploited the profit from the association members. The reasons for these rumors and criticisms are considered as follows.</p> <ol style="list-style-type: none"> 1) Information about the project (objectives, capacity, potential impact, etc.) is not well distributed among the community people. 2) Financial condition is not clearly reported to the association members or to the community. 3) Those who could not be beneficiaries try to impede the project due to their misunderstanding that they cannot be the beneficiaries in the future.
Analysis	<ol style="list-style-type: none"> 1) Information on project does not reach all the people in the community due to their poor communication. 2) People are quite sensitive about the situation that only a limited number of people have benefit. And if they think that project will benefit only a group of people, they try to impede or to take over the project. 3) Unclear management easily causes the rumor of misappropriation and possibly grows to a conflict.
Lessons	<ol style="list-style-type: none"> 1) Continuous effort has to be made to explain about the project to all the people in the community. 2) Whenever a rumor or misunderstanding occurs, clear explanation has to be made to those who have misunderstanding before it grows to a conflict. 3) Transparency in management of the project has to be secured by establishing auditing system by a third party, reporting system on financial condition, and so on.

No.	C-3
Stage	Operation/Monitoring Stage
Issue	Workload of Committee
Case	<p>The committee member shoulder heavy burden in operating the projects. In case of mini-irrigation project in Xeatzan Bajo, the committee has to arrange many things: from distribution of farm inputs to transportation of products in addition to the management of irrigation system. The committee has to manage these works without any payment.</p> <p>Also in the case of Huipil project, the committee member had to sacrifice their time for operation of the shop and purchase of threads. Due to this, the original committee member became reluctant to continue to work as committee member. Some of the new committee member also worried about their time necessary to spend for the activity. However, in case of this project, the problem was solved by hiring a shopkeeper to reduce the burden of the committee.</p>
Analysis	<ol style="list-style-type: none"> 1) The committee member has to deal with various works without any payment. 2) In case of women, working as committee member will be heavy burden since they have to sacrifice their time in addition to the domestic work. 3) The burden can be reduced by employing a person for management work.
Lessons	<ol style="list-style-type: none"> 1) The work of committee has to be reduced as much as possible if it is voluntary work. 2) Employing a person for management work will be a solution as far as the project affords it.

No.	C-4
Stage	Operation/Monitoring Stage
Issue	Inadequate Utilization of the Facility
Case	<p>In Xeatzan Bajo, there is a possibility of overuse of irrigation water by the beneficiaries in future, especially during dry season that the water will be crucial factor for their income. Overuse of water might affect the availability of water for the others even if he pays water charge according to the volume used.</p> <p>Similarly, greenhouses in Panyebar also have a possibility that a group of people will use it for their own benefit rather than for the whole association member. They might use it for growing vegetables or other crops for them if there is no regulation.</p>
Analysis	1) There is a possibility of misuse of the project facility such as use of excess water for irrigation, use of greenhouse for private purpose.
Lessons	1) Regulation regarding use of facility should be established in detail to prohibit its misuse. The regulation has to be legally effective so that strict supervision shall be made.

No.	D-1
Stage	Overall
Issue	Institutional Constraints
Case	<p>Counterpart organizations of Guatemalan Government have constraints to conduct close and continuous supervision on the projects because of its frequent personnel change. On the other hand, sustainability of the projects heavily depends on the continuous supervision and instruction during the start-up stage. This institutional constraints may be a obstacle for the project sustainability.</p>
Analysis	<ol style="list-style-type: none"> 1) Counterpart organizations have constraints due to frequent personnel change. 2) Insufficient supervision at the initial stage of the project may affect its sustainability.
Lessons	<ol style="list-style-type: none"> 1) There is a necessity to establish a system to provide continuous and close supervision on the projects under the present institutional framework.

No.	D-2
Stage	Overall
Issue	Insufficient Communication among communities
Case	<p>As it is mentioned previously, very few communications are made among communities or among municipalities. Because of the poor communication, there are many cases that the people in the surrounding area do not know about the pilot projects in the model areas. With this condition, the demonstration effect will not work as it is expected.</p> <p>On the other hand, communication among governmental and/or administrative side is also insufficient. Although each organization has very useful program such as PROAM, seedling provision program under INAB, technical assistance by ANACAFE, FONAGRO, etc., they are not adequately utilized.</p>
Analysis	<ol style="list-style-type: none"> 1) Poor communication among communities/municipalities affects the demonstration effect of the pilot projects. 2) Insufficient communication of governmental side results in the under-utilization of useful programs.
Lessons	<ol style="list-style-type: none"> 1) Poor communication will be a constraint for any kind of projects which aims at demonstration effect. Active information distribution has to be made by the governmental side. 2) A system to improve information exchange among governmental organization would be necessary to utilize useful programs fully.